

Volume I Issue VIII

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The Matthew Project

Off the Drawing Table and into the Workshop

The MSB Journal

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Front Cover
Photo
The Matthew

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Editors Notes



Well it looks like another summer is about to come to an end. All too soon if you ask me. Seems as though you blink and its gone. On the brighter side of things though, we have all fall and winter to put some more focus on our builds! :-)

This month has been a busy one around here. We're going to be starting our build of The Matthew, a project that has been ongoing for some time now as those of you who have been around the site for a while.

As always, we're still looking for those of you who wish to contribute some articles, pictures, tips & techniques or anything modeling related for that matter that you think

others might find interesting and/or useful with their modeling. You don't need to be an expert either. Most often its from the novices and intermediate builders that we can learn the most. If not from their experience, then from their questions. So if you would like to help out, drop me a few lines at winston@modelshipbuilder.com.

I hope you enjoy this issue, and will let you get right to it. While you're doing that I'll get to work on the next issue!

Winston Scoville
www.modelshipbuilder.com

The Matthew Project

Off the Drawing Table and Into the Workshop

The concept of building any model starts in the minds eye. Something grabs our attention and interest. A driving force tells us, “hey, I tihnk this would make a good modeling subject”.

This driving force is further fueled when there is a personal attachment to it. In this case, my personal interest was in wanting to know more about the province I was born in (Newfoundland, Canada).

From the time I learned in school of the Viking settlement found by Norweigan Historian Helge Ingstad and his daughter at L’Anse aux Meadows in 1960, I have always been fascinated by the sea. Seeing replicas of some of the boats they travelled in has always amazed me.



In 1997, I was in St. John’s Newfoundland when the replica of the Matthew built in Bristol England arrived to celebrate the 500th anniversary of the arrival of John Cabot. After being able to board this tiny ship I wondered in awe at how such a small ship could travel across the ocean (not to mention and back again) and even more so at what kind of person it took to sail in her. They were truely brave souls....even today.

From that moment, I had pretty much decided that some day I would like to have or build a model of this ship as a partial reminder of my heritage. It didn’t take long to determine it would have to be built from scratch as no models kits exist that I know of.

It also didn’t take long to figure out that this wouldn’t be an easy task. From what research I have been able to do, I had discovered that there is not a lot of information out there about ships from this period in time other than scattered bits and pieces.

I had learned that Bonavista, Newfoundland had built a ship of the type that would have resembled the original Matthew based on what little historical information is available. It is on this ship that this project is based.

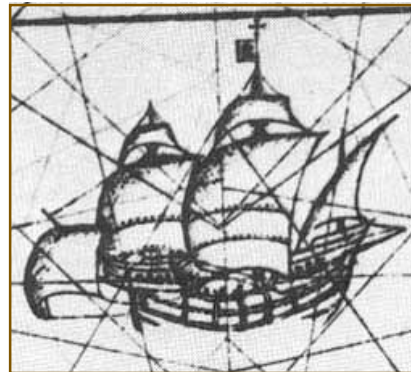
Follow along over ther next few issues as we show you how we came to build our model....

(cont’d)

The Matthew Project - Stage 1

When Winston contacted me and asked if I was interested in developing a modeling project for the ship Matthew, the first thing I had to do was to find out exactly what the Matthew was. It didn't take long to find out the Matthew was the ship John Cabot used to explore North America in 1497. This sounded interesting. A ship, with some historical significance that has no known modeling kits or plans available. What a great project. but it warranted a little more investigation.

Two ship types dominated the seas during this period the carrack and the caravel. The next step was to decide which ship type was most likely used by John Cabot. The carrack and the caravel were very similar in appearance the only difference was in size. The carrack was the super ship of the day, often having two or three decks at 625 ton and 140 foot stem to sternpost. Their primary use was huge cargo ships and ships of war, the one and only example of this type of ship is the Mary Rose.



Crewing a carrack was a major consideration in using such a vessel as an exploration ship. Maritime laws at the time required one seaman per five ton burthen of ship. You would need a crew from 45 to 80 mariners to sail a carrack. This crew would be too large for an expedition crew. So we can rule out the carrack as used by John Cabot, which leaves us with the caravel.

The caravel was used by the Portuguese and Spanish on sea routes to the East Indies and the conquest of New World. The caravel was also used for coastal trade, fishing, and the choice for exploration.

Considering the wide use and importance of the caravel very little is known about its construction and form. No remains of a 15th or early 16th century caravel have been found. The earliest specifications or crude drawings date back to 1571-1616. Current knowledge of the caravel is based on artistic renderings and fragments of information from accounts of early explorers, dockyard supply lists and a few 15th century contracts, building and refitting accounts.

From existing records we find the average size caravel from the Mediterranean region was about 50 tons and 60 feet long where they were the workhorses of the area employed in fishing, local trade or served as escorts and patrol ships, these early caravels were open boats of one mast.

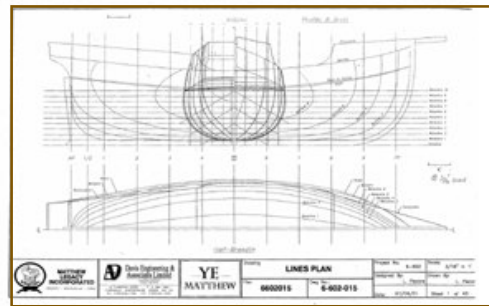
Portuguese trade with England and Ireland brought the caravel to Europe and gave rise to the northern Caravel a three-masted fully rigged ship.

Throughout the middle ages in Europe shipbuilding was a craft learned through apprenticeship, handed down from one generation to the next orally and by example in the shipyard. The master shipwright may or may not have been literate, but any plans or treatises on ship construction did not exist. Shipwrights in the Mediterranean basin built their hulls by joining each plank to the next with mortise and tenon joints. As the hull grew, frames were added to reinforce the structure, the lines of the hull were created by eye as the ship was built. When ships began to grow in size, through a slow evolution, the practice of first erecting frames on the keel, then nailing on planks, arose in the Mediterranean. A strongly-braced hull was one of the characteristic features of the caravel, enabling it to withstand hard and continued use on the open ocean which caught the interest of the northern shipwrights. The most important revelation from the study of the caravels coming into northern ports were their construction. Up to this point in time European shipwrights built ships by the shell method. It was the caravel that introduced the skeletal construction to northern shipwrights.

The Mock Up

The initial concept of this project is to create a model/kit based on the reconstruction built at Bonavista Newfoundland. One that could be built by anyone.

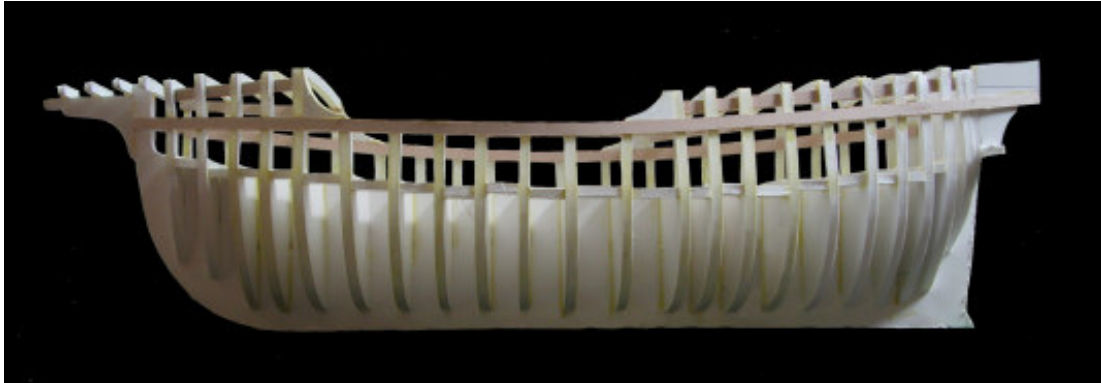
After comparing a set of plans of the Bonavista Matthew supplied by Parks Canada and the reconstructed caravel itself at Bonavista we find differences giving us a set of plans and an “as built” ship. Thus giving us two versions of a caravel and adding to that some basic historical findings, this gives us wide latitude to work in.



Matthew Lines Plans
Source: Matthew Legacy

The northern caravel is actually a hybrid of the cog, carrack and the Mediterranean caravel. There are two ways to go about creating a kit for the project, either a historically correct plank-on-frame kit or a plank-on-bulkhead kit.

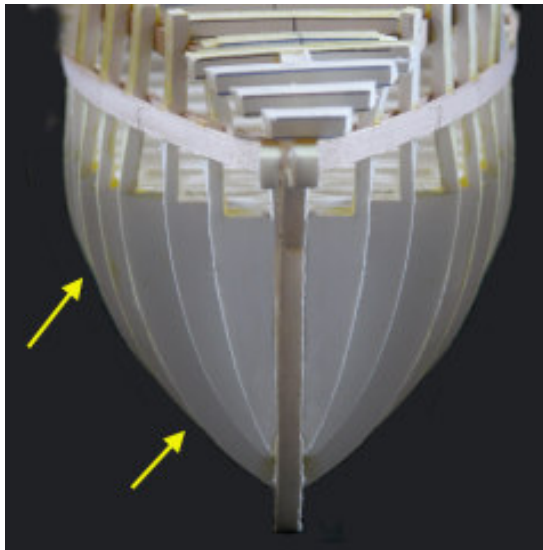
To create a historically correct framing on the model would require setting in floor timbers and overlapping the first futtocks between the heads of the floors. This old style of framing requires skills of a more advanced model builder, thus limiting the number of participants in the project. A plank-on-bulkhead kit was chosen for its simplicity allowing anyone from beginner to intermediate builders to take part in the build.



Designing the kit began with converting the original plans into modeling plans for a bulkhead hull. Taking the modeling plans the first step was to build a mock up of the skeleton using foam board. With a mock up of the ship any alterations can be made to the general form and you can see beforehand any problems.

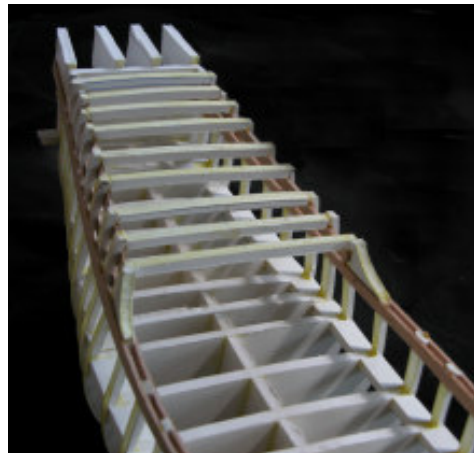
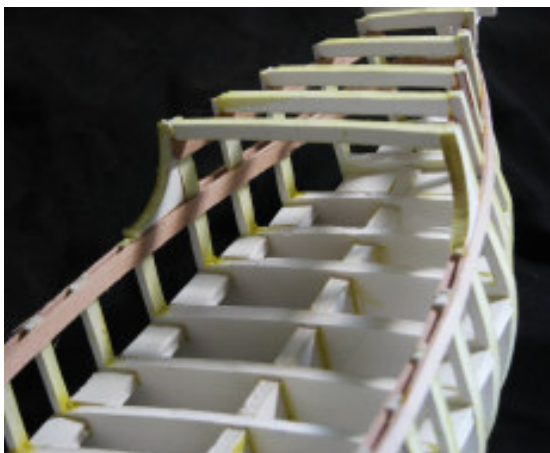
The yellow arrows are pointing to errors in the hull lines. This causes a kink in the hull shape. Either bulkheads 3,4 and 5 are too full or bulkheads from 6 to 9 are incorrect. Either way adjustments are needed.

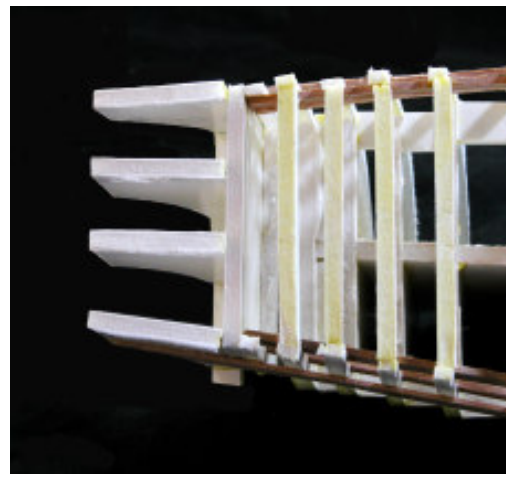
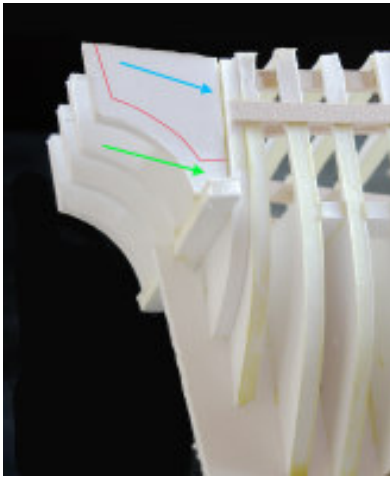
When looking at the hull from the stern we can see on the right side of the hull all the bulkheads from midship to the stern have a nice even flow. At this stage of development corrections to the bulkheads from midship to the bow are made.





Looking at the mock up, it becomes apparent the top timbers inside the bulwarks as well as those that support the forecastle and stern castle decks are all exposed. If the bulkheads are made of plywood the edge will show on the top timbers and stanchions. It is not practical or cost effective to cut the bulkheads from solid wood, for one thing the six inch wide bulkheads will tend to warp. Because the top timbers are curved and have a distinctive tumble home they actually form the shape of the upper hull and thus can not be added separately from the lower part of the hull.





Next was the construction of the stern, the red line indicates the actual stern frame. If built per plan the builder would have to set the stern frames to the exact angle and the entire structure would be quite delicate. The only point the stern frame connects to the hull is shown with the green arrow. To solve this problem the last bulkhead was made solid because it is hidden below deck and cannot be seen. Solid stern frames are then set against the last bulkhead shown with the blue arrow, this insures the correct angle of the stern and creating a strong structure to plank.

(Cont'd)

Ship Modeling Forum *Online Modeling Competition*

www.shipmodeling.net

Modelers Voting On Models

Prizes in each category

All skill levels welcome!



Categories:

- Scratch / Semi-Scratch
- Modified Kit / Kit
- Small Boat
- Open

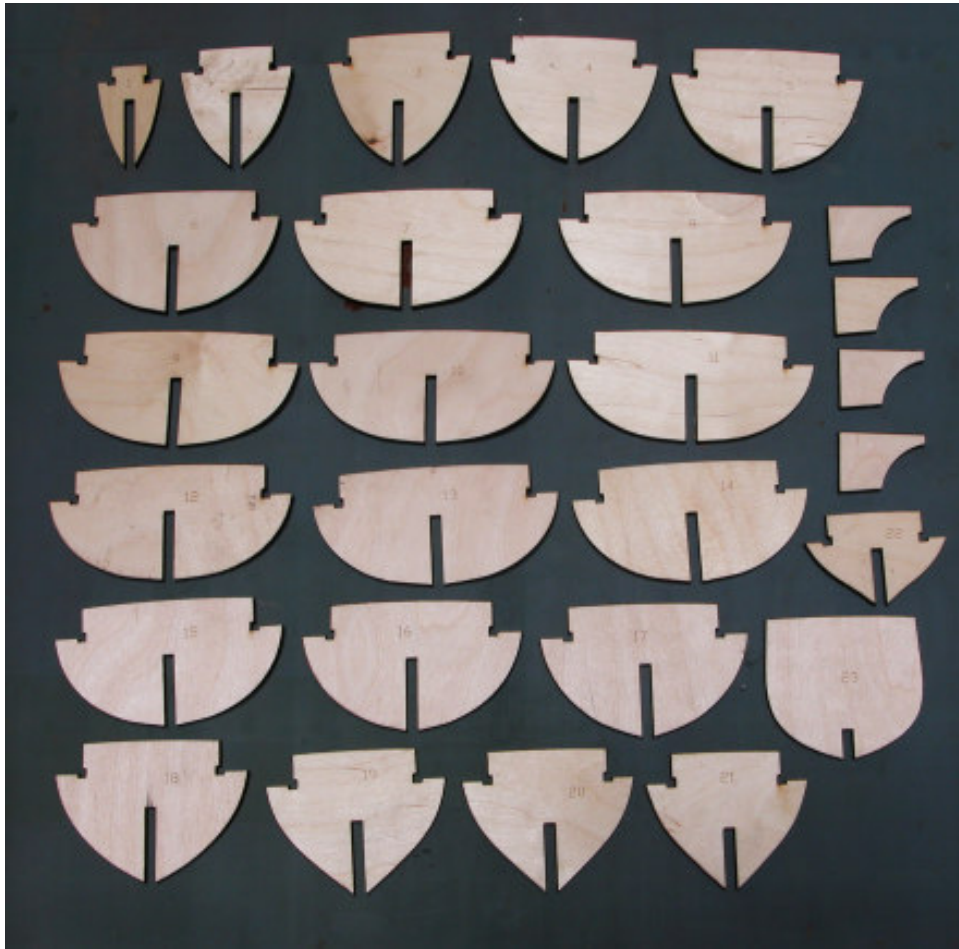
Ship Modeling Forum's first Online Modeling Competition.

Judging to October 7th - October 12th

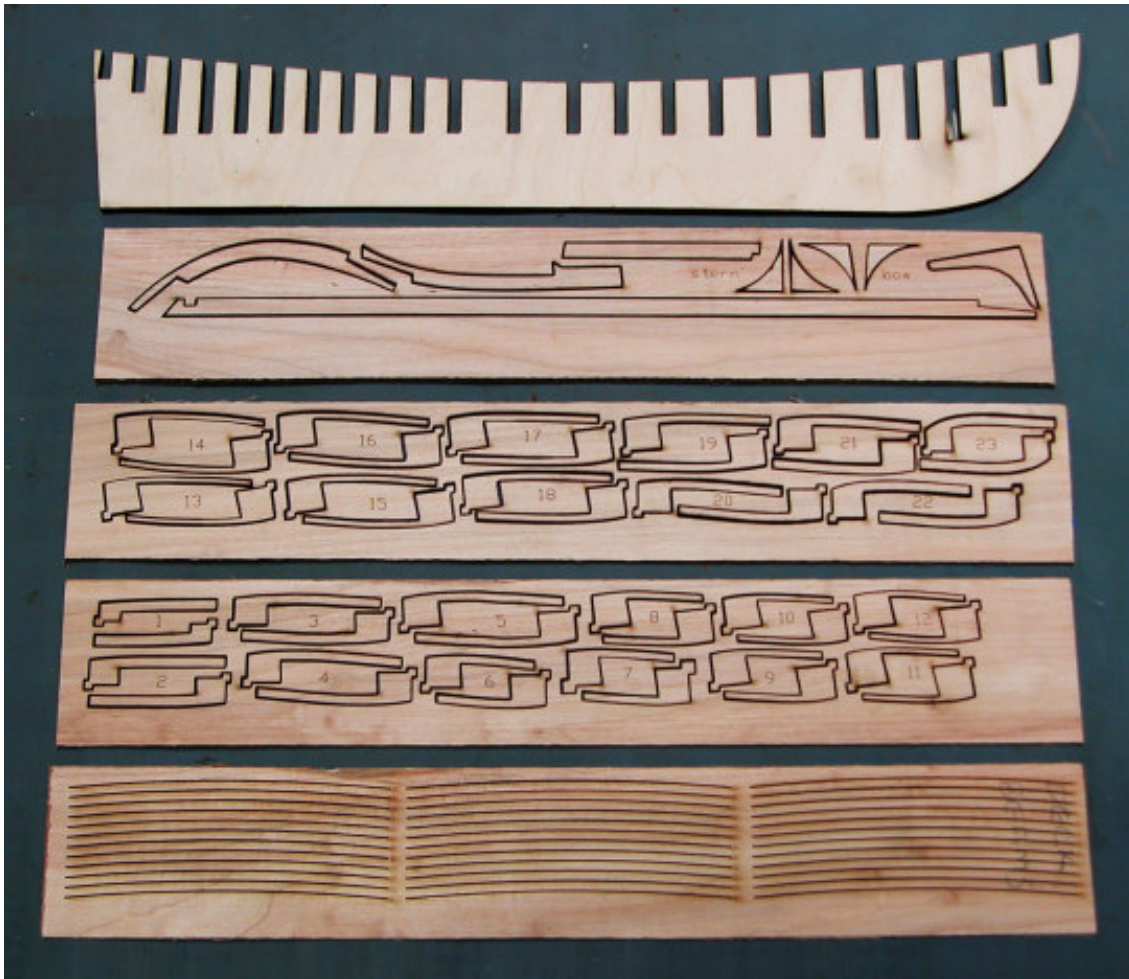
Winners to be announced and put on display October 14th

To learn more visit
<http://shipmodeling.net>

Constructing Components for the Hull Structure



Once the hull lines were corrected a cutting file is created and the bulkheads were cut. Many kits have few bulkheads which are placed far apart. This creates difficulties when it comes to planking and the hulls often require double planking or the addition of filler blocks between bulkheads. The Matthew hull is designed to have 23 quarter inch thick bulkheads creating a strong hull over which to plank. The problem of the exposed top timbers were solved by cutting the lower half of the bulkhead from plywood with a keyed notch for the solid wood top timbers. By keying in the top timber the problem of the timber slanting inward or outward is solved. A plywood profile/spline piece is cut along with sheets of top timbers, keels parts and deck beams for the forecaskle and quarter deck. You can see in the photo the key on the top timbers which fit into the keyway on the plywood bulkheads.



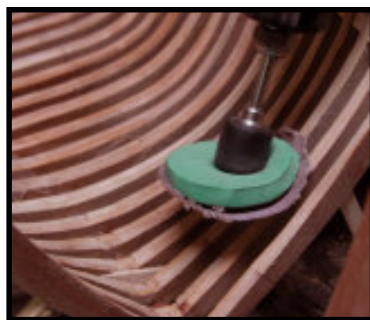
Before we begin construction a few words on tools and plans are in order. The plans are developed as the build progresses. The Matthew and ships of the period were not built from plans, the shipwright built by eye and a system and each step of construction was based on the steps before it. At this point we have the profile piece and the bulkheads, this gives us the size and general shape of the hull we can now add all the ships features based on the relative scale of the structure. Like the shipwrights of old no two ships were built exactly the same, this idea also applies here, you are the master shipwright of this model. It does not matter if the final shape of your hull matches anyone else's or if your main hatch is 1/8 of an inch farther forward. Even if a set of plans were supplied you would be building off a conceptual drawing. Remember there are no original nor authentic plans, you would be building something I totally made up based on scant historical data. One other reason for building without plans is "the hand of man" this means no matter how careful you build you will not exactly match the drawings. When a part is shown on the plans and you measure off the

plans you may find yourself struggling to get the part to fit. The reason is your model may have that "creeping measurement" that tiny little + or – the crept in 5 steps back which now added up to a misfit on some other part. By using relative scale you make that part fit the structure rather than trying to fudge the structure so the part fall as the plans show.

Anyone joining this project is done so to learn the basic structure of a ship model and how to build it, this is the main focus of the project "building a model", learning to mill wood and the use of machines are not part of this build. This project is about building a nice scale model without the need for anyone having to run out to buy a miniature table saw, scroll saw, thickness sander and a host of power tools. We wanted people to be able to join in and have fun with the build at a reasonable cost. All you will need is a few hand tools and a power Dremel tool at the most (totally optional), everything else has been done.

Tools

One item you will find most useful is a sanding disk for the Dremel tool. I have not seen these offered but no worry you have more than you need around the house. Almost anything can be used to do any job at hand. Below are examples of material from green foam the type mouse pads are made from to felt and a fiber backing to an old leather belt to a hard plastic disk. Notice the sandpaper is cut larger than the disk, this is done so the edge of the disk can be used. Examples of how the home made disks are used are shown in the next four pictures.



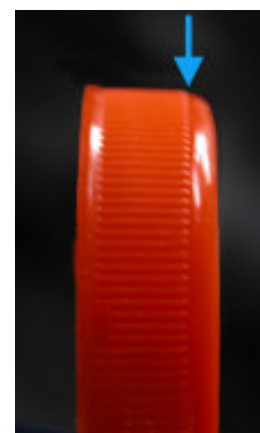


For the Matthew project all we will be needing is a hard plastic disk and here is the simple process of making them.



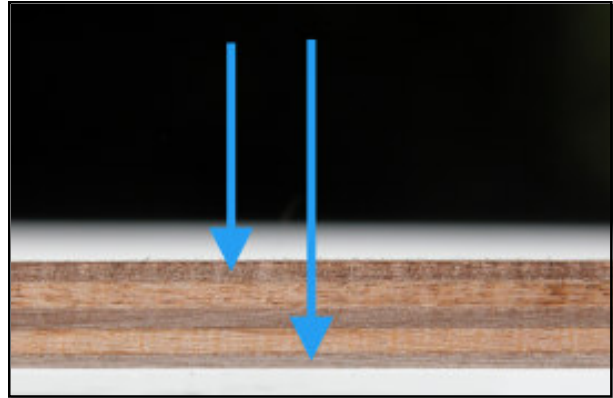
First step is finding a suitable bottle cap to make a disk from. Look for the little indentation in the center of the cap, this will allow you to drill a hole dead center for the mounting screw. Caps come in all sizes and a variety of thickness and stiffness. Some caps have a larger indentations like the second sample.

Some bottle caps I will cut at the edge where the top curves over shown by the blue arrow. Leaving the curved edge allows the sandpaper to roll over the edge and it can then be used as a cutting surface. The process is very easy and all you need to do is either cut off the sides or sand them off, then drill the center hole for the mounting screw.



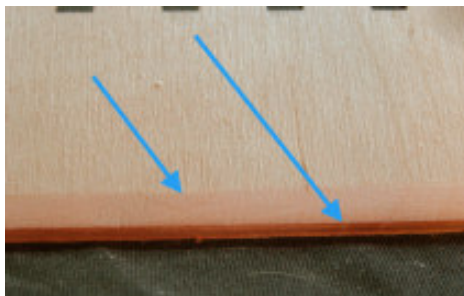
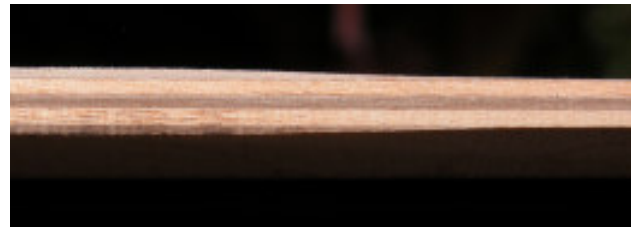
Starting the Build

Starting with the center profile piece there is a little sanding that needed to be done. On an actual ship's hull the sanding we are doing is called the rabbit. This rabbit is a "V" shaped groove cut along both sides of the keel and stem for the planking ends to fit into. In this case we are going to create the rabbit on the plywood profile piece. By using the two outer plies shown by the blue arrows we are going to create a beveled edge.



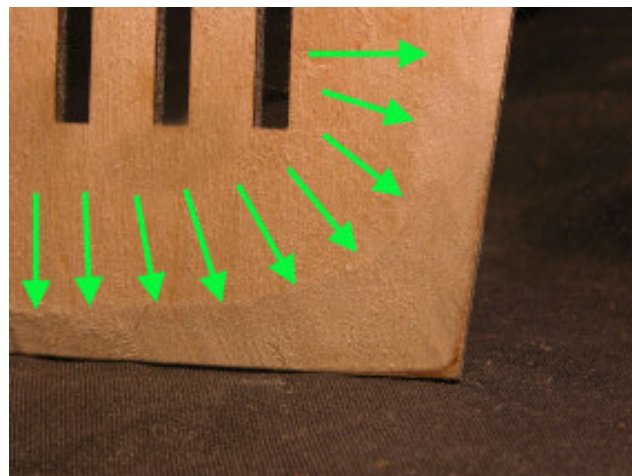
At the stern of the profile piece a little more shaping is required in the deadwood area to allow the planking to come flush with both the Sternpost and the keel.

To the left of the picture we see the full thickness of the plywood and the gradual reduction over the length of the deadwood area.



The idea here is to create a bevel along the edge of the plywood profile piece about 1/8 wide. Once again the blue arrows show the edges of the bevel.

All along the stem and keel the bevel is kept at a constant 1/8 as the bevel reaches the stern deadwood area the bevel fans out as shown by the green arrows. On an actual ship this area would be made up of timbers and knees a few inches thinner than the width of the keel. The stern 1/2 frames were attached to the sides of the deadwood.



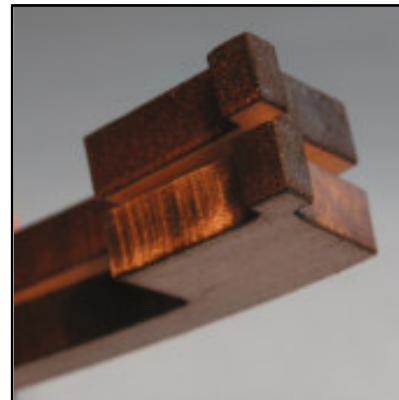
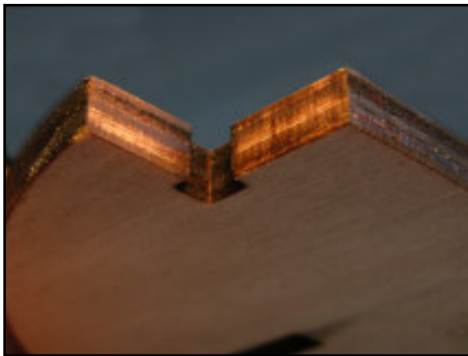
The rabbit is created when the keel is glued to the profile piece so the planking can come to rest on the inner edge of the stem, stern post and keel.



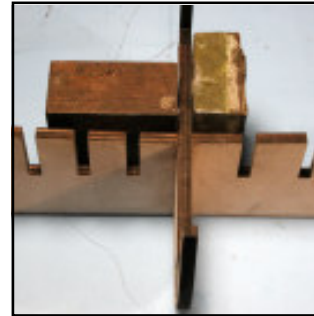
Building The Bulkheads



Using a sanding disk on the Dremel tool I hit the inner edges of the plywood bulkhead and the solid wood top timbers. As you can see I didn't sand the edges clean, just enough to remove the loose char. The fit between the top timbers and the bulkheads are not a tight fit, there is a little wiggle room between the parts. Each top timber has extra material added to it so any slight wiggle will not matter because the final shape and size will be sanded when the hull is shaped.



With all the bulkheads assembled its time to build the hull. We begin with bulkhead number 11. This is the midship frame. All the other bulkheads will be built off the midship section so be sure bulkhead 11 is square to the profile piece. I have 1 x 2 x 3 inch steel square blocks I use which come in handy for a number of uses one being to square up the bulkheads.



Depending on the humidity the bulkheads may or may not fit tight in the groove. Just incase a little sanding is needed a sanding paddle can be made from a scrap piece of wood about 3/32 thick, some two sided tape and 60 grit sandpaper. It takes just a few swipes down the edges of the groves to get a nice fit.

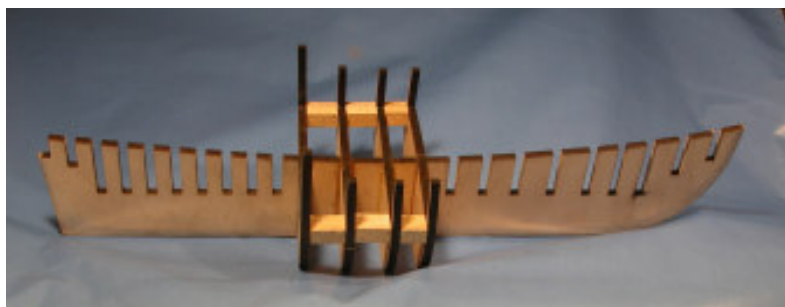


Glue is not applied to the inner edges of the slots, the fit is so snug most of the glue will be squeezed out. A fillet is used on both sides of the joint between the bulkhead and the profile piece. A little black was added to the glue to show the fillet. A fillet is a very strong joint and it will hold the bulkhead in place quite nicely.



Begin with bulkheads 10,11,12,13 these form the midship section of the hull. The idea here is to construct a solid, square section in which we can continue adding bulkheads in both directions, clamping them to the midsection as we go along.

Clamps will be needed to hold the blocks in place while the glue sets. After setting 3 bulkheads stop and make sure you are still square to the profile piece. Besides



clamps rubber bands work just as well. You may encounter a few stubborn bulkheads or a slight warp in the profile piece, this can be taken care of with stronger clamps or rubber bands.

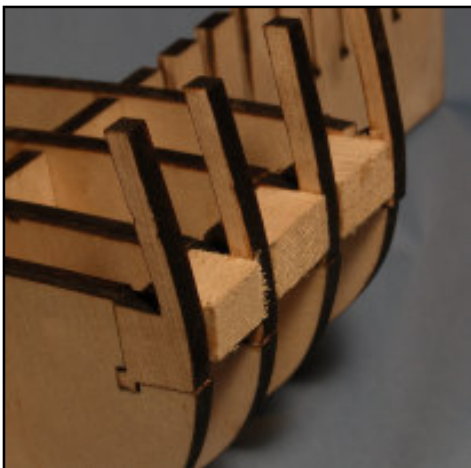
Filler Blocks

The blocks are an important element in the structure, not only do they make the hull rigid but also provide a landing for the decking. In actual ship construction lodging knees were added where the deck meets the hull and at every hatch. If we were to add knees the shape would be like the photo below.

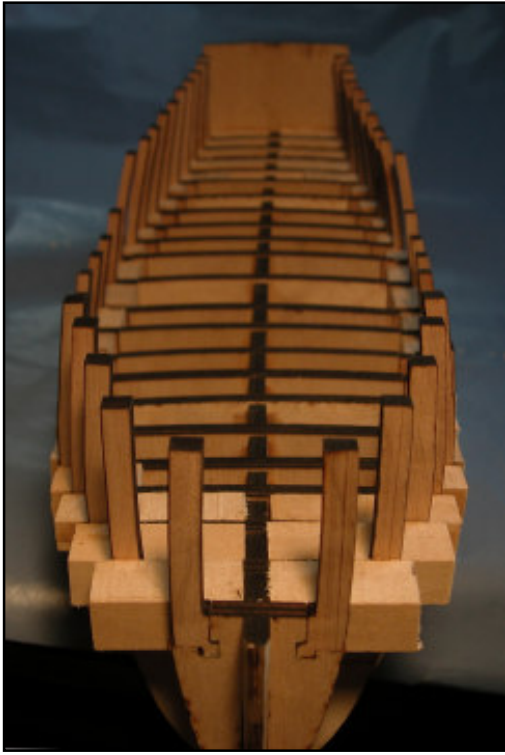


In this project structural elements are not eliminated but rather simplified when they are covered and out of view.

In order for the bulkheads to remain square to the profile piece the blocks have to be cut fairly accurate. A measurement is taken at the center of the bulkhead where it meets the profile piece. When the blocks are cut they are placed at the center to check fit. The blocks should just hold in place without glue, requiring a gentle tap to knock them out.



Keep in mind the the bulkheads are getting smaller as you work your way to the bow and stern, and the deck has a sheer. The blocks will be stepping up and inward. Make sure you place the blocks so the can be shaped to the deck sheer and the hull form.



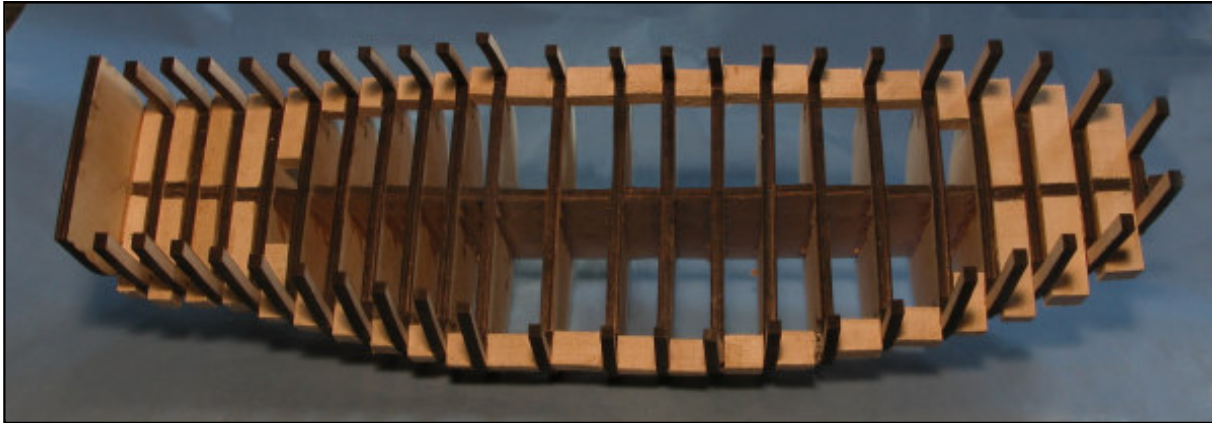
At the bow and stern the hull changes drastically from bulkhead to bulkhead so blocks large enough to form the final shape are used. Rather than use smaller blocks at the bow, the entire space was filled in. There is a steep sheer to the deck at the bow. Each block was lined up with the bulkhead in front of it. When the deck is sanded to shape these blocks will be shaped to form a smooth sheer.



The finished hull with all its blocks in place form a strong structure which is necessary in order for it to withstand the grinding and sanding to shape the hull. Many of the plank-on-bulkhead kits will have less than half the amount of bulkheads used in the Matthew hull. Because the bulkheads are spaced so far apart double planking is necessary to form the shape of the hull. In the Matthew hull, where the hull planking takes the most twisting and bending aft of midship the bulkheads are closer together as opposed the midship where the planks will lay almost flat. Notice the stern has not been added to the hull at this stage of construction. The stern will be added once the hull has been shaped.



Looking at the hull from the top you can see how the blocks are stepped and how the blocks will form a ledge for the ends of the deck planking.



Well, that ends this section of the Matthew Project. In the next issue we'll move on to stage two where we'll be covering shaping the hull.



Model Ship Show

(Free Admission)

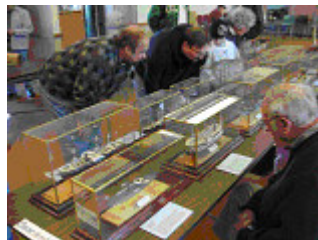
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From the files of ShipWreckCentral



The USS Housatonic

The U.S.S. Housatonic was launched November 20, 1861 in the Boston Navy Yard and commissioned there on August 29, 1862. She was a screw sloop-of-war: 207' in length, with a beam of 38' and a draft of 8'7". She had a complement of 160 officers and men. Her armament consisted of one 100 pound parrott rifle; three 30 pound parrott rifles; one 11" Dahlgren smooth bore; two

32-pounders; two 24 pound howitzers; one 12 pound howitzer; and one 12 pound rifle.

The officer in charge of the Housatonic was Captain, Charles Pickering, U.S.N. The Housatonic joined in the attack on Fort Wagner July 10, 1863 which began the continuing bombardment of the Southern works at Charleston, S.C. On the night of September 8, 1863, she participated in the failed assault on Fort Sumter which led to the capture of Frederic James and a dozen of his shipmates.

The Housatonic was sunk by the Hunley and has the sad distinction of being the first warship ever sunk by a submarine. The ships of the Union blockade generally eliminated the Hunley's threat by staying out of range. On February 17, 1864, though, they got a little cocky. The Union gunship, USS Housatonic anchored well inside the inlet at Charleston.

At 9:00 PM the Hunley left Sullivan's island, and headed toward the Housatonic. The crew of nine was commanded by Lt. George E. Dixon, a Confederate cavalryman who had been wounded at Shilo. Because of his background as an engineer Dixon was attached to the Hunley project during his recovery.

Because of the primitive ballast system on the Hunley, it was not able to submerge much below the surface, and so left a wake. An alert lookout on the Housatonic saw it's approach and warned the Captain. The Captain ordered the ship moved, but multiple anchors complicated that order. Soldiers on board shot rounds of musket bullets at the Hunley, but they just bounced off the sides.

The "harpoon torpedo" plunged into the side of the Housatonic below the waterline. The Hunley then reversed itself, backing away from the ship, leaving it's 135 lb explosive charge inside. A rope unraveled as the sub backed off, then tightened and pulled a mechanism that exploded the charge.



The Housatonic sank within minutes, taking with her two officers and three enlisted men: Ensign E. C. Hazeltine, Captain's Clerk C.O. Mezzey, Quartermaster John Williams, Second-Class Fireman John Walsh, and Landsman Theodore Parker.

You can learn more about the U.S.S. Housatonic, and the H.L. C.S.S. Hunley at www.ShipWreckCentral.com

Be sure to check ou the videos on Clive Cusslers' recovery of the Hunley while you're there!

Replicas

Gotheborg

On the 12th of September 1745, the Swedish East Indiaman *Götheborg* headed for her home port after almost two years of sailing the world's oceans. The ship suffered heavily from storms, and the crew were exhausted but full of expectation. But alas, the triumphant homecoming would end in catastrophe. With a pilot on board and before the very eyes of encouraging Göteborgers in small boats and on the beaches, the vessel ran aground in the middle of the entrance to Göteborg harbour - and sunk with her entire cargo.



Learn more about the Gotheborg and her Replica at:
<http://www.soic.se/>



Learn more about the
 "HMS" Rose at
<http://www.tallshiprose.org>

Rose

Today's "H.M.S." *Rose* is a replica of a mid-eighteenth century Royal Navy frigate which figured in the Colonial and Revolutionary history of the United States. While she is a replica of a British Colonial era vessel, today's *Rose* is an American ship and she is documented or registered as such. Although she is sometimes referred to as "H.M.S." *Rose*, her official documented name is simply *Rose*. It is important to note that, in referring to today's *Rose*, the initials (for 'His Majesty's Ship') are always enclosed in quotation marks to indicate that they represent more of a nickname than any official designation.



Rigging Material for Ship Model Builders

from Eugene Larson's Shop Notes



There are about as many thoughts and opinions on the “best” rigging line as there are model builders. Therefore, the following is meant to present thoughts to you on some possibilities for sources for rigging materials. If anyone reading this has additional ideas please contact me and I will include them here as appropriate.

After constructing and testing your ropewalk (see Shop Note on this web site), you are now ready to use good material such as linen to lay up the required rope for a model. The model rope laid up on a ropewalk will have an appearance similar to the full-scale rope, and will be much better than large diameter single thread material available in sewing shops. Even much of the old, out-of-production and highly coveted Cuttyhunk fishing line does not have a nice laid up appearance to it. Most of what I have from several years ago looks squashed and flattened. One caution should be noted. The number of turns in the rope laid up on a ropewalk is about half of the full-scale counterpart. In other words, if the full-scale rope has 14 strands per foot, the model rope might have only seven per scale foot. This difference is not noticeable, and is far outweighed by the better appearance. However, when doing splicing, such as an eye splice with this model rope, a three tuck splice will be about twice as long as its counterpart in the full scale rope. This will look odd, and the correction for the scale rope is to take fewer tucks.

The coveted linen line is difficult to find. It is sold in bulk to linen mills, but small bobbins are usually not available. As a decent substitute polyester, poly/cotton, and some cotton will do, but granted, linen is the best if it can be found in the thinner diameters.

In preparing for the NRG Conference demonstration I found it advisable to test different thread material in order to make an informed judgement on some of the better products to purchase. The results are given below, but first some general and detailed comments from some renowned model builders.

The following is quoted from NRG Director **Phil Krol** of Wheaton, Illinois:

A good alternative (to linen) is Egyptian cotton, which differs from regular cotton in that it has long fibres. Two good brands of tating thread in this material is DMC Cordonnet Special, and Anchor Cordonnet Crochet (made in Germany), generally available in stichery stores and especially those catering to the bobbin lace folks. Both the DMC and Anchor come in 10 diameters from #10 thru #100. Three strands of #100 yields .018" to .020 depending on counter weight used in twisting. They also have finer Egyptian cotton such as 80/2, 3 strands of which will twist into .010". That is as small as I go in twisted line, as any smaller, you can not see the twist, so there is no point in

trying. Just use the finer material as is. This Egyptian cotton I speak of takes dyeing beautifully, and produces first rate rope, and is readily available.

The NRG volunteer for shopnote editing, **W. Kelley Hannan** of Dedham, Massachusetts, says,

While linen is the standard, I have used surgical silk because it is available in smaller diameters. The source is Deknatel, Inc., 600 Airport Road, Fall River, MA 02720, 508-677-6600. The last time I ordered size 600 was the smallest available. I measure that at 0.005. It comes in black or white in spools of 100 yards. It lays up very nicely. Rigs as easily as linen.

Comments by **Rob Napier**, former Editor of the *Nautical Research Journal*, former Secretary of the Guild, and career ship model professional. (9/99)

I do not have a "primary alternative" to linen. I am not a linen purist. I use whatever comes to hand that will do a rigging job well, whether building or repairing a model. This is what happens when you do lots of rigging repair. You learn that linen was not the defacto line used in ship model work. People used anything they had. In model ship repair, you have to match existing work so you learn to have a lot of other fibers around. I've rerigged models with everything from commercial fisherman's heavy cotton or polypropylene gangin (pronounced gan'-jin) line to fly tier's nylon. In addition to linen, I have used braided nylon fishing line, cotton kite twine, crochet cotton, cotton and nylon carpet thread, furrier's cotton, silk veterinary suture, buttonhole twist, silk and cotton embroidery twist, monofilament fishing line, carpenter's cotton chalk line, sailmaker's dacron cord, hemp marlin, sewing threads of all types, etc., etc., and several types of wire.

Fly tiers' nylon is very fine and strong and comes in a bevy of colors. I don't know any brands, but check with Cabela's or L.L. Bean's or the like.

Regular cotton-polyester sewing thread is ubiquitous and sometimes works pretty well for me and can be used right alongside other lines with success. It comes in a gazillion colors. It can be colored and slight fuzz can be laid down in the traditional manner with beeswax. Avoid fuzzier types.

I like working with silk because it is hard. But it is also slippery. Its elasticity lets you set rigging up taught without too much strain. I bought tons of silk from Model Shipways years ago when they first offered the silk veterinary suture as a substitute for the rapidly vanishing Ashaway Cuttyhunk linen fishing line. With luck, the quantity will last my lifetime.

Actually, the obsession with linen line surprises me. I agree that it is wonderful in the

right applications. However, the passion for it works against modelers to an alarming degree. Because a modeler might think linen is better, he might go to terrific lengths to use it simply so he can say he used it. But linen is only better if it makes the model “work” better; in and of itself it does not make a model better. Because the linen which is generally available today in the United States is so poor, and because of the linen mystique, modelers tend to purchase and use poor, soft-laid, fuzzy linen thinking it is good because it is linen. Then they show the models and don’t necessarily win prizes or make sales. I have not found a domestic high-quality linen line source that is reliable and that will sell in small quantities.

Modelers would be better served to study the sizes, textures, and colors of real rigging in person or in artwork or photographs so they can see what it looks or looked like on the prototypes of the vessels they are portraying. If they visit actual vessels, they should study rigging at close range and from a distance. Remember that viewing a model is like viewing a ship from a distance. Then they should look for the material that will do the right job. Look beyond hobby oriented mail order catalogs and shops. Look in hardware stores, notions stores, sporting goods stores, tackle shops, leather worker’s shops, tailor shops, cobbler’s shops, chandlers, anywhere that line or string or thread is used or sold for holding things together.

Believe it or not, I have occasionally found at flea markets good line on large spindles used in manufacturing. Sometimes it is slightly, meaning irregularly, discolored, which adds flavor for some types of atmospheric modeling. I have found cotton and linen and nylon thus, hard laid, no fuzz — good looking rope-like line.

A LOOK AT THREAD MATERIALS

As has been stated there are many places to look for suitable materials for rigging ship models. Linen is not the only material that will produce high quality rigging. In fact some linen is worse than many of the alternatives

While picking up dry cleaning I noticed the seamstress area and on the shelf of the work bench there were large cones of thread. I asked where they were purchased, and I was told that they order them from a supplier. This supplier could be pursued further, but perhaps a request to the seamstress to order some cones for “ship model rigging” would be acceptable. At least it is worth a try. The various types available could be looked at on the workbench, as well as the variety of colors. It should be easy to find a thin, smooth appropriate color. The larger cone is the way to purchase thread since so much of it is used up on a rope walk. The small spools do not last long.

A New Find

The photo shows recently discovered high quality YLI's 100% Glazed Cotton Quilting Thread (**left**) in 1500 yard and 400 yard spools, hard surface and unwaxed, but containing some washable starch. Twenty four colors are available, but the best are white (015), ecru (002) and black (020). They have a smooth surface, and the diameter is .008".



There is also shown Heirloom Cotton Thread (**right**) in 200 yard spools which is available in natural (020) and white (021). The diameter is .005" for the 70/2 size and .004" for the 100/2.

For the miniature warship buffs, shown **third from right** is a cone (1500 yards) of "Invisible" soft, fine (.004") nylon in smoke color (249004)

The thread is available from Beacon Fabric & Notions, South Pasadena, FL. Free catalog.

Web site link: <http://www.beaconfabric.com/>, e-mail: sales@beaconfabric.com

Phone orders: 1-800-713-8157

The following table has been compiled by me based on experience with preparing a demonstration of the rope walk. The highly scientific approach; feel in fingers, a calibrated eyeball, and a single opinion, has yielded some suggestions for where to start. The point of the exercise was to determine if there is anything available that will produce the desired results.

The best approach is not to necessarily look for the specific brands listed below, but to look in many places, spend a dollar each for spools of thread, and experiment yourself to obtain the rigging you need.

Avoid the white threads. There are cream colors that are very suitable for running rigging. The blacks are all good colors, except for the shiny black. I did find some very dark brown thread that is excellent for representing tarred rigging. It has to be held next to black to be sure it isn't black. Look for Gutermann CA 02776 in polyester or cotton, color 596.

One criteria, however, is that the finer the starting thread the better the end product. Anything over .012 inches is probably too heavy to produce good rope on a rope walk.

MATERIAL	SIZE	MAKER	RATING	REMARKS
LINEN	.012	Old, from Model Shipways	Very Good	
COTTON (100%)	.008	YLI Quilting Thread	Excellent	From Beacon Fabric (see photo above) No fuzz
COTTON (100%)	.004	Heirloom	Excellent	Also in .005, from Beacon Fabric (see photo above) No fuzz
COTTON (100%)	.009	Gutermann CA 02776	Very Good	
COTTON	.011	Coats T16	Very Good	Glace finish, hand quilting
COTTON/POLYESTER	.012	Coats, Dual Duty	Very Good	cotton covered for buttons and carpet
COTTON/POLYESTER	.011	Coats T8	Very Good	dual duty cotton covered poly, Glace finish for quilting
COTTON/POLYESTER	.009	Mettler hand quilt waxed 997	Very Good	33% cotton, 67% polyester very good
NYLON	.012	Conso #69, color 751	Very Good	heavy duty
SILK	.010	Pearsall's - J.P. 210	Very Good	Chinese Twist Silk
LINEN (marked 6/60)	.016	From a large spool of unknown source	Fair	a little too heavy to lay up
LINEN	.012	Fawcett	Fair	a little rough (large spool)
COTTON (100%)	.016	Cabella 30, (France)	Fair	slight fuzz
COTTON	.010	Coats Super Sheen	Fair	Heavy Duty mercerized with Silicone, slight fuzz
POLYESTER (100%)	.009	Gutermann CA 02776	Fair	slight fuzz
POLYESTER/COTTON	.009	Mettler 137 #40	Fair	slight fuzz - waxed for quilting
POLYESTER (100%)	.009	Mettler 1161 Metrosene plus	Fair	slight fuzz
POLYESTER (100%)	.010	Magnolia Mill	Fair	slight fuzz
LINEN (marked 3/4)	.020	From a large spool of unknown source	Poor	a little too heavy to lay up
POLYESTER (100%)	.009	Maxi-Lock 32599 natural	Poor	fuzz Maxi-Lock brand

References

There have been articles in *Nautical Research Journals* on ropewalks, all very informative and accurate. You might want to read them for further reference.

- 17:124-128 “How to Make Model Rope” by Harold Hahn (Also in NRG’s *Ship Modelers Shop Notes*)
- 28:7-8 Ropewalk by George Dukes in article “Restoration of *Ville de Paris*.”
- 36:98 A brief description by Lloyd Frisbee in article “A Model of 32-Gun Continental Frigate *Hancock*”
- L2:102-104 Ropewalk for the Modeler by William Honey (Also in NRG’s *Ship Modelers Shop Notes*)

Other references include:

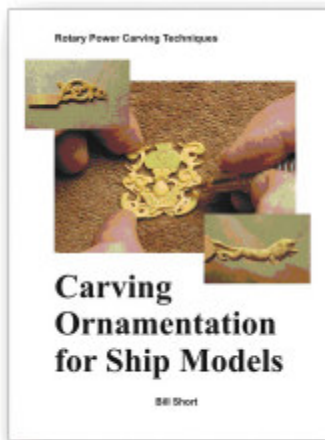
- *The Ropery*, Visitors Handbook, The Historic Dockyard, Chatham, Kent ME4 4TE, 1991, available at 1.50 English Pounds. 3.50 English Pounds total including postage and packing. Will accept International Reply Coupons (postage) for payment. Recommend writing first to confirm quantity.
- *The Anatomy of Nelson's Ships* by Longridge, C. Nepean
- *Modelling the Brig-of-War IRENE*, by Petrejus, E. W.
- *Ships of the American Revolution and their Models*, by Hahn, Harold M.
- *Ship Modeling from Stem to Stern*, by Roth, Milton
- "Make Your Own Rope", by Huettner, Daniel F., *Ships in Scale* magazine, September/October 1985
- "Miniature Rope", by Rose, Dr. Robert M., *Ships in Scale* magazine, November/December 1987 and following three issues.

Sources of materials for rigging are numerous.

Rotary Power Carving Techniques

by Bill Short

Carving Ornamentation for Ship Models



A spiral bound booklet with an acetate cover, stiff board back, full colour cover page and the rest of the 52 pages are printed in black and white with high quality photos on 70# Hammermill paper. It will lay flat on your bench and can be folded over on itself to a one page size.

The booklet, which covers in detail, carving with rotary tools and dental burs, is available for immediate shipment. It is 52 pages and has over 50 high definition digital photographs detailing the step-by-step carving lessons in both bas-relief and carving-in-the-round.

The selling price of the booklet including air mail postage and handling is:

Destinations in the USA and Canada \$30.00 US Funds
Destinations in the UK and overseas: \$36.00 US Funds
*Prices effective July 1, 2007

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Introduction
Chapter 1 The tools available to rotary carve
Chapter 2 Wood selection for carving ornamentation
Chapter 3 Visualization
Chapter 4 How to rotary carve
Chapter 5 Carving complex shapes
Chapter 6 Finishing the carving
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Now also includes a bibliography of very good reference books on ornamentation which covers the methods used in carving several of the complex carvings found on my model of The Sovereign of The Seas.

Payment must be in the form of a US Money Order or International money order in US dollars. As I am not a business, my bank cannot handle personal checks in other currencies, or other forms of payment. As you already know, it is not advisable to send cash in the mail for obvious reasons.

Mail your payment at your convenience to:

Bill Short
3 Karsam Court, SS1,
Niagara-on-the-Lake, Ontario
L0S 1J0
Canada

For more information email:
modelshipwright@sympatico.ca

Ships from the Past

S.S. War Rifle
(American Freighter, 1917), left

S.S. War Bayonet
(American Freighter, 1917)



U.S. Naval Historical Center Photograph.

In port, possibly in the New York City area when they were inspected by the Third Naval District on 26 December 1917. During 1918-1919 these two ships served, respectively, as USS *Lake Bridge* (ID # 2990) and USS *Lake Superior* (ID # 2995). The latter also had World War II Navy service as USS *Tuluran* (AG-46).



The **HMCS Kelowna** was a Bangor class minesweeper in the RCN during WWII. The ship was built and commissioned as part of the RCN's Pacific fleet and patrolled the BC coastline protecting Canada's west coast maritime frontier.

More great pictures of ships from our past can be found
at various places on the web
Naval Historical Center (US) - www.history.naval.mil
The Naval Museum of Manitoba (CA) - www.naval-museum.mb.ca

On the Cover



On the cover this month is a picture of the Hull Structure of “The Matthew”, an ongoing modeling project at www.modelshipbuilder.com

Navy Board: Skeletal Models



Boyne, circa 1692



20 Gun Ship, circa 1712

Source: National Maritime Museum



Model Ship Builder Website Updates

At the website this past month not much has been going on at least visibly. We've updated, added and checked some Links on our Links page. Over the next couple of months I'll be changing this section around quite drastically. we've had a lot of requests for links over the past while, and it's getting to be a bit much to maintain unless I break things down into smaller sections.

Also, though you can't see it I've been working out the installation of a discussion forum. This forum will not be for the general public, but is rather to be devoted to Projects going on at Model Ship Builder....such as....The Matthew Project. Though more a technical person than most it's still been a challenge! :-)

Another upcoming project for this winter is to move The MSB Journal onto webpages. We've had a lot of people suggest that this would be preferred method of viewing the Journal. Enough to warrant seriously considering doing it. Not to worry though for those of you who prefer it, we will still have it available in PDF format.

We're also looking for modelers who would like to display their models in our Model Builders section. So, if you, or someone you know is interested please contact me at winston@modelshipbuilder.com.

Winston Scoville
www.modelshipbuilder.com
Home of The MSB Journal

Contributor's Pictures

(Send your pictures to msbjournal@modelshipbuilder.com)



Here's some more update pictures on Mike Pendlebury's Monster Mersey Lifboat Build!

This baby is HUGE!
I wonder if Mike's wife will let him put this one on the mantle ! :-)

Next are some pictures of a cross section of the HMS Triton by Igor. This is Igor's first scratch build. I'm sure we'll be seeing some nice models coming from him the future.
Awesome job Igor!!!





Jim Watts has sent in an update on his refurbishing of the hydroplane. Jim added "Here are some photos of the motor after I polished it, repaired the slightly bent prop., tightened the steering control balls and lubed the moving parts. I washed it and blew out the fins with compressed air.





The Test Tank



What Ship is This????

Know your ships? Here's a little trivia for you. Send your guesses to msbjournal@modelshipbuilder.com and check back in the next issue to see if you were right!



Last Issue

No one was able to figure out this one last month!

“U.S. Ship Ohio, Bearing the broad Pendant of Commodore ap. Catesby Jones.-Was built in New York in 1820. Tonnage 2542. Rate 74 Guns.” New York: Wm. Endicott & Co., ca. 1849.

Model Ship Forums

Join a modeling community today!

Ship Model Forum - www.shipmodeling.net

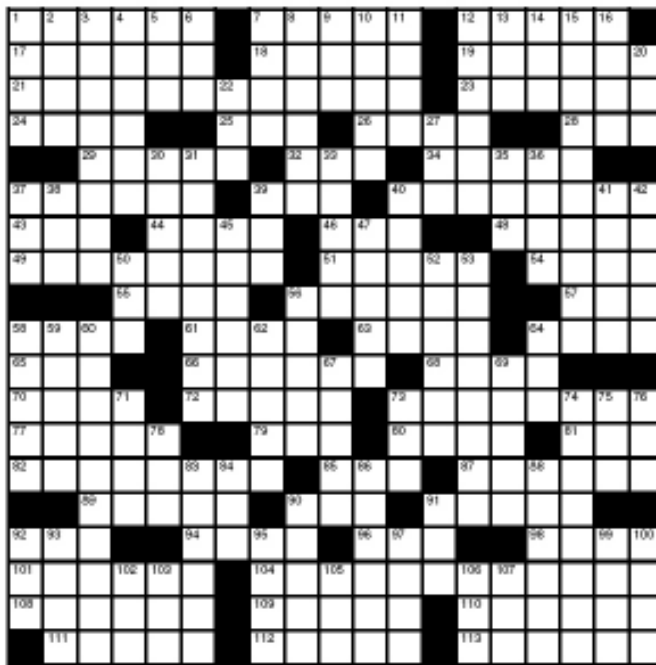
Model Ship World - www.modelshipworld.com

DryDock Models - www.drydockmodels.com

Model Boat Mayhem - www.modelboatmayhem.co.uk

Lauck Street Shipyard Forum - www.lauckstreetshipyard.com

Fictional Ships - by Gene Bodnar



Across

- 1 Old, experienced sailor
- 7 Beloveds
- 12 Loop of a rope
- 17 Guarantee
- 18 Kind of ink
- 19 Isolation
- 21 Ship in Mr. Roberts
- 23 Backslides
- 24 Scallion-like vegetable
- 25 French sea
- 26 Flipped performer
- 28 Computer monitor: abbr.
- 29 Dishonest trick
- 32 Get something with effort
- 34 Kind of sponge
- 37 Money hoarders
- 39 "Big ___" (famed clock of London)
- 40 Jules Verne's ship
- 43 Surprise in the hole?
- 44 Dot on a map
- 46 Kimono add-on
- 48 Secret rendezvous
- 49 Blushing
- 51 Amount baked, as cookies
- 54 Item on a cowboy's boot
- 55 ___ Bator, Mongolia
- 56 Admiration
- 57 ___ Lanka
- 58 Architect Albert
- 61 Ancient Peruvian
- 63 Slips
- 64 Kind of bean

- 65 Long-tailed cuckoo
- 66 Tied a hangman's knot
- 68 Napoleon's place of exile
- 70 Gnat, for example
- 72 Stand out
- 73 Blades fitted to rifles
- 77 Yellow-fleshed fruit
- 79 William the Conqueror's half-brother
- 80 Early auto manufacturer Ransom Eli ___
- 81 Away from the wind
- 82 Captain Blood's ship
- 85 Fork out money
- 87 Wound antiseptic
- 89 Ancient region of Africa
- 90 Conducted
- 91 Nemeses
- 92 Numerals on a grandfather clock
- 94 Three, to Cato
- 96 Gone by
- 98 Battle of Dien ___ Phu
- 101 "Humoresque" composer
- 104 Bolitho's ship
- 108 Military greeting
- 109 Slack off
- 110 Dress styles
- 111 Appointed
- 112 Drench
- 113 Affirmatives

Down

- 1 Humboldt's Gift author Bellow
- 2 Latin 101 verb
- 3 Appraised
- 4 Big name in spices
- 5 Cinnabar, for example
- 6 Hair styling cream
- 7 Craps cubes
- 8 Main course
- 9 Oklahoma city
- 10 Washer cycle
- 11 Replete
- 12 Cat ___ (Fonda-Marvin film)
- 13 Balin or Claire
- 14 Republican Party of the U.S.A.
- 15 Ramage's ship
- 16 Row of seats
- 20 Superlative ending
- 22 Baseball official, for short
- 27 ___ broche (cooked on a skewer)
- 30 Legal proceedings
- 31 Ship in a Herman Wouk novel
- 33 Radio features
- 35 New York Giants hero Mel
- 36 Evergreen trees
- 37 Spoil
- 38 Skating surface
- 39 Four-poster, for one
- 40 Saltpeter
- 41 Exorbitant interest rate
- 42 Scratches left by a glacier
- 45 British heavyweight champ Lewis
- 47 Curbed

- 50 Amusement
- 52 Breakfast grain
- 53 Hornblower's ship in Forester's first novel
- 56 Comforted
- 58 Letter before lamda
- 59 Close by, poetically
- 60 Ship in Treasure Island
- 62 Hot chocolate
- 64 ___ Marino (one of the smallest republics in the world)
- 67 Get married secretly
- 69 Atomic particle
- 71 Forbidden
- 73 Word before Scout
- 74 Omissions of sound
- 75 ___-gallon hat
- 76 Watch
- 78 Intricate trap
- 83 Clobbered
- 84 ___-tzu
- 86 Turns a book into a movie
- 88 Dust and rubble
- 90 Imaginary place for neglected things
- 91 Long fluffy scarf
- 92 Companions of psyches
- 93 Tennis pro Lendl
- 95 Food fish
- 97 Clarified butter
- 99 Sword similar to a foil
- 100 Famed loch
- 102 Grog ingredient
- 103 Dined
- 105 Miter or buzz
- 106 Secular
- 107 Malted barley product

Dates in American Naval History

Oct. 13, 1775 - The Continental Congress establishes the Continental Navy, later the US Navy.

Oct 2, 1799 - Establishment of the Washington Naval Yard.

Oct. 8, 1812 - Boat party under Lt. Jesse D. Elliott captures HMS *Detroit* and *Caledonia* in Niagara River.

Fictional Ships Answers

S	E	A	D	O	G		D	E	A	R	S		B	I	G	H	T	
A	S	S	U	R	E		I	N	D	I	A		A	N	O	M	I	E
U	S	S	R	E	L	U	C	T	A	N	T		L	A	P	S	E	S
L	E	E	K			M	E	R		S	E	A	L			C	R	T
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M	I	S	E	R	S		B	E	N		N	A	U	T	I	L	U	S
A	C	E		I	S	L	E		O	B	I		T	R	Y	S	T	
R	E	D	F	A	C	E	D		B	A	T	C	H		S	P	U	R
		U	L	A	N		E	S	T	E	E	M			S	R	I	
K	A	H	N		I	N	C	A		E	R	R	S		S	O	Y	A
A	N	I			N	O	O	S	E	D		E	L	B	A			
P	E	S	T		E	X	C	E	L		B	A	Y	O	N	E	T	S
P	A	P	A	W			O	D	O		O	L	D	S		L	E	E
A	R	A	B	E	L	L	A		P	A	Y		I	O	D	I	N	E
		N	U	B	I	A		L	E	D		B	A	N	E	S		
I	I	I			C	O	S	I		A	G	O			B	I	E	N
D	V	O	R	A	K		H	M	S	P	H	A	L	A	R	O	P	E
S	A	L	U	T	E		A	B	A	T	E		A	L	I	N	E	S
	N	A	M	E	D		D	O	W	S	E		Y	E	S	S	E	S



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