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The MSB Journal

The MSB Journal

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Originally when I decided to put out *The MSB Journal* I was thinking that it would be a quarterly publication. That was the plan...really! Well...so much for plans :-).

After a bit of mulling things over, and comments and suggestions from you the readers I thought I would just send them out as I am able to complete them.

This month we have some minor changes based on the content I was able to put together. And a special thanks to those of you who have sent in content. Hopefully, in the future we'll see more of this from the readers.

One special addition to this issue has been a section on Contributors Pictures. I hope that for future editions you will send in some pictures of your models so that others can see what other modelers are doing out there. They don't even have to be of completed models. Works in progress are just as good.

Also, I'd like to mention that if you have a modeling group that is holding some kind of special event this year, send us the details and we'll do our best to get the word out.

Okay, on to the Journal.

Happy Reading!

Winston Scoville
The MSB Journal

P.S. Be sure to pass on the word about *The MSB Journal* to your friends and fellow modelers.

Letters to the Editor

Have questions? Comments? Or are just looking for information? Let us know by sending an email to msbjournal@modelshipbuilder.com

Future Ship Modeler

A big thank you for the first issue, I am completely new to ship modeling, but have wanted to build a ship model for many years, first I bought Longridge's book on HMS Victory, then the two volumes by Harold A Underhill on Plank on Frame models more than 20yrs ago, I have since bought more in the last few months, Shipmodeling Simplified by Frank Mastini and The Art of Shipmodelling by Frolich, plus a few others, I also subscribe to Hubert Sicard's site, Shipmodelling for Dummies, which I think is a great resource, I have decided on a Model Shipworld kit of Bluenose as my first model (I do have a modeling background, RC aircraft and model engineering) so I feel it is a good choice, not too complicated, but enough to test me. As for input, being new I don't feel in the position, but I will surely ask questions if need be, once again THANK YOU, Frank

(Thanks Frank, a mere email is enough of an input. It lets us know that this is a worthwhile project. MSBJ)

From Greece

Thanks and congratulations for the first issue of your journal. EXCELLENT WORK AND INFORMATIVE STYLE. May you reach issue XXXX and see what you've started take a life of its own. Congratulations again!
Vasilis Tsonides, (Chalkis, Greece)

(Wow! Imagine, a mere 20 years ago it would take a couple of weeks to receive a letter from Greece here in Canada! Today....a few seconds! Thanks Vasilis, we hope the same thing! ☺ MSBJ)



Kit Bashing

I've been modeling these wooden ships now for about six years and have completed three kit models and am now working on another one and have completed one scratch built ship and I'm now making a scratch build of a battle station of the USS Constitution and am also kit bashing a Constructo riverboat into a real Mississippi riverboat. All the while, I've been a member of several model forum, and have read countless books and articles on the web, but I've seen very little on the subject of kit bashing. Through my own work, I've learned a lot when it comes to bashing a kit, but I'd love to see how others have taken on this concept. This would be a great article if someone is up to it. Thanks, CB Thompson

(Great idea there CB. Any takers out there? Let us know! MSBJ)

Congradulations on an outstanding initial edition of your journal. I am sending information regarding it to some of my friends who are just starting out in the model shipyard hobby. I wish you much success with your new publication. I look forward to the next edition.

By the way....you have an interesting website. Keep up the good work.

Bob Lafferty

(Thanks Bob. Keep spreading the word. The more interest there is the better it can be in the long run. MSBJ)

So You Want to Build a Model Ship

“The quality of your Tools can determine the quality of your model!”

In the last issue we had a look at how to get started in building model ships. In this issue we are going to start discussing some of the basic tools that you need. We'll continue in future issues with more tools.

Contrary to what most people seem to think before they get started in building model ships, you do not need a lot of tools to get started. There are some basic tools that you will have in your tool box that you will use for every build you do. The rest, you can accumulate over time as you find you need them. As well, there are many jigs and things that you can build to help make various tasks easier.

If there's one piece of advice that I could pass on right here at the beginning, it's that you should shop around. Not so much looking for the deals (though that is important too), but rather for the quality. A good quality tool will last you a life time (not to mention save money in the long run as well) and even if you decide not to build models it will remain in your toolbox ready to use for whatever project you may need it for. There's nothing worse than a chisel that can't hold it's sharpness. It can and usually will make a mess of the work you are trying to accomplish giving you less than the desirable results.

Though I make mention of specific tools by specific manufacturers in this article it is not to say that they are the only ones out there that make good quality tools. It is merely an extension of my experience with the tools I have come in contact with in the brief time I have been modeling.

Lets get cutting

So where do we start? Most of the tools we will talk about you probably already have in your toolbox. The main difference between what you have now and what you need to build model ships is in their size for there are a lot of large scale tools that are useless to you as a model builder merely because of their size.

One of the first tools you will need is a Hobby Knife. They come in varying sizes and shapes with a multitude of different blades.

Here's just a few:



Hobby knives also come in a wide variety of price ranges and quality as well.

For example, the Veritas® Carvers Knife below is designed to use standard disposable scalpel blades and even comes with 12 razor-sharp high carbon blades.



Veritas® Carvers Knife

For the basic price of this knife you can pick up two or more of the above kits. However, over time, you will find that it is a reasonable price to pay for a tool of such quality. Made of anodized aluminum, it features a solid brass Collette which makes changing blades a breeze. The oval shape of the handle means that it's not going to go rolling around your workbench or off it onto the floor, or even worse, into your leg!

More cutting

There a time and a place to use the proper cutting tools to do the job, so another tool you'll need is a Razor or Jewel Cutters Saw. These too come in varying sizes and price ranges. One of the most popular saws with modelers seems to be those made by X-acto.

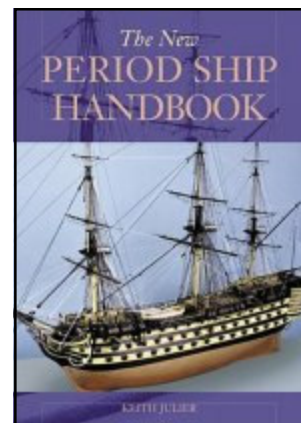


X-acto Razor Saws

They can be purchased at any well stocked hobby shop or craft store at a reasonable price.

While there, (you didn't travel all that way just to pick up one of these saws, right?) you may as well also pick up a miter box. A very handy item to have. A lot of modelers will develop their own style of miter box tools over time (see issue I of the MSB Journal Jigs & Things for an example).

In the next issue we will examine a couple of more tools for your workshop.



New Period Ship Handbook

by Keith Julier

A completely revised edition of the Period Ship Handbook, originally published in 1992. The basic modeling instructions have been comprehensively updated and nine of the eleven model projects are brand new, as are all the color and black and white illustrations. New models include HMS Victory and the Victory's Launch, the Lady Nelson, the Clara May and HMS Mars.

Available at our online store

www.modelshipbuilder.com



Halifax

This month on the cover of The MSB Journal we are featuring a model kit by Bob Hunt at Lauck Street Shipyard LLC.

The "Halifax" kit is Lauck Street Shipyards second true plank on frame kit in the Craftsman style. The kit is based on the plans drawn by Harold M. Hahn with his permission. It is a stylized kit and is not meant to be an exact replica of the actual ship.

Some changes in the ship's design were made to enable lesser experienced modelers the opportunity to build a true plank on frame model without the need for special power tools, lots of shop space or considerable model shipbuilding experience. However, these changes do not take away from the beauty of an admiralty style model.

Here are some of the notable features of the Halifax true plank on frame kit:

- » 1/4" scale (approximately 14" long)
- » Includes plans for rigging
- » Brass belaying pins
- » 2 photo CD's included
- » Hahn style building jig included
- » 11 sheets of original printed plans
- » Fittings includes resin cast parts
- » Full color practicum, printed and bound
- » All parts CNC milled
- » Deadeyes and brass to make chainplates included

The price for this kit is \$650.00 plus \$30.00 shipping and handling.

Can't afford to buy the kit outright? Not to worry. Lauck Street Shipyard also offers a payment plan which is rather unique in the modeling industry. Simply make minimum payments on your model of \$100.00 at your convenience until it's paid in full and then they will ship your kit to you.

To learn more about this true plank on frame kit go to www.lauckstreetshipyard.com

Be sure to drop Bob a line and let him know how you found out about his site.

Frame Lofting Practicum

Part II

A simple method that will allow you to loft frames for a built-up ship Model

Clayton Johnson – <http://claytonships.blogspot.com>

The first thing that you will have to do when coming up with frame tracings if you haven't already through your research, is to establish the thickness of your frames, from the inside of the hull to the outside. Many times your plan will give you at least a hint of frame thickness. Otherwise you may just have to look at general practice. In the case of the Wasa plans that are available right now, you are given several cross sections that denote thickness.

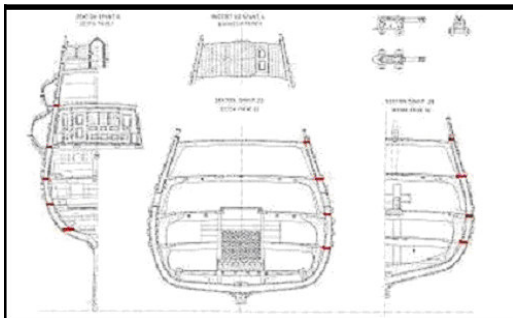


Image Courtesy of Statens Maritima Museer and drawn by Eva Marie Stolt

If you examine the frame drawings above, they show the frames as being the same thickness at the same relative latvational point. I used the deck levels for this determination since the frames seemed to stay the same thickness at each deck line even though the decks slope up towards the stern and up less obviously towards the bow. You will need to study your plans and figure out these relationships before you start drawing. At the least you will need to figure out a few reference lines as to where you are going to make thickness measurements and determinations. Notice how I drew in red lines to denote where I took common frame width measurements from. All of this will fit in to our discussion in a minute.

For the purposes of this practicum, I am going to show you how to draw a frame at the bow of the ship where there is a lot of bevel because of the hull shape changing rapidly. These are the tougher kinds of frames to draw since, at the middle portion of the ship, the bevels almost disappear and the frames are square.

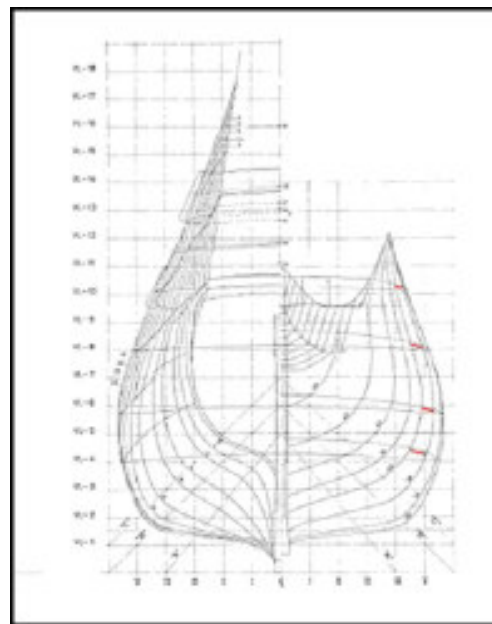
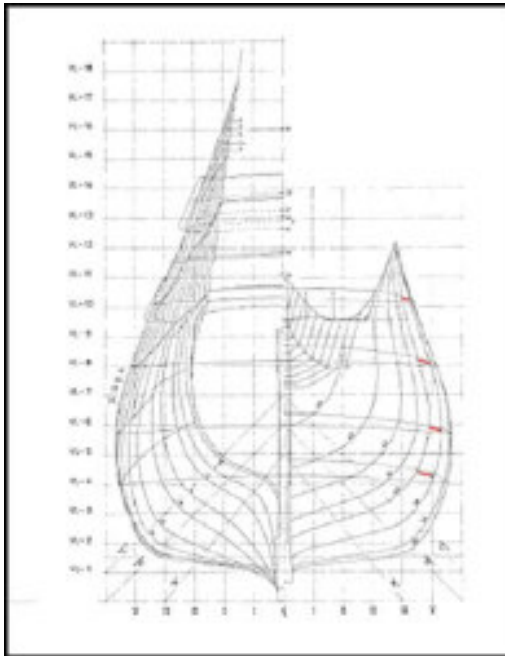


Image Courtesy of Statens Maritima Museer and drawn by Eva Marie Stolt

In the above picture I have drawn the red lines along my deck reference points just to show you how one part of the plan corresponds to another. And to show you as well where, on the hull line diagram, that we are going to be drawing our frame. Notice it is in between hull section #38 and #40. (you may have to click on it to get a larger version)

Notice in the framing diagram on the next page that we came up with in the last section based on our knowledge of shipbuilding practices of the time, that between section #38 and section #40, there are four frames. They are numbered 86 through 89. You can click on this picture in order to get a larger, more detailed view.



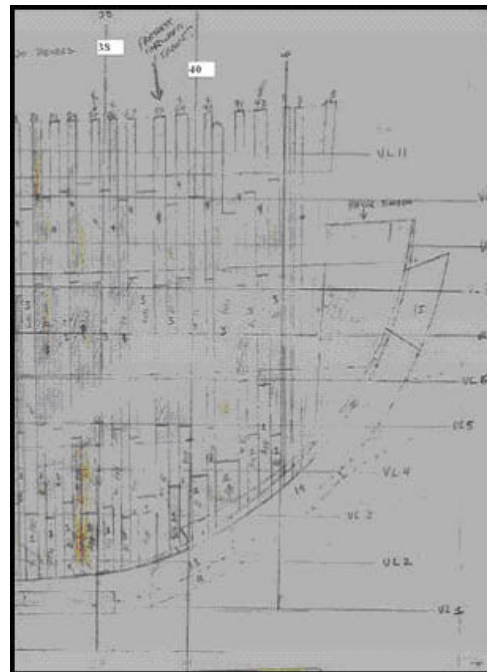
*Image Courtesy of Statens Maritima Museer
and drawn by Eva Marie Stolt*

In the above picture I have drawn the red lines along my deck reference points just to show you how one part of the plan corresponds to another. And to show you as well where, on the hull line diagram, that we are going to be drawing our frame. Notice it is in between hull section #38 and #40. (you may have to click on it to get a larger version)

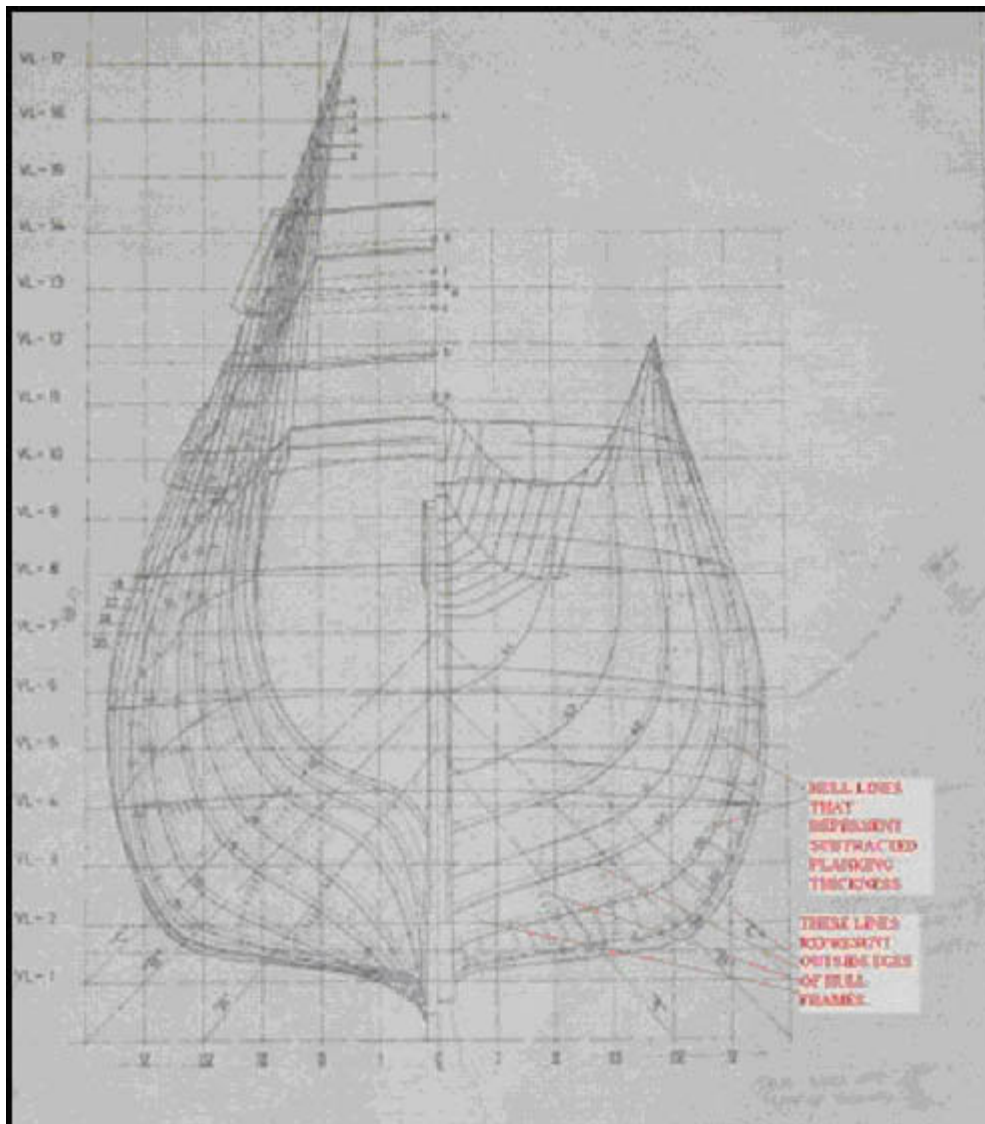
Notice in the framing diagram on the next page that we came up with in the last section based on our knowledge of shipbuilding practices of the time, that between section #38 and section #40, there are four frames. They are numbered 86 through 89. You can click on this picture in order to get a larger, more detailed view.

So, between hull sections #38 and #40 on the hull shape diagram we need to put four frames. This is achieved in two steps. First, since most plans have their hull shape lines on the outside of the planking, we need to subtract the width of the outside planking and add

a line on the inside of section lines #38 and #40 that denote the outside surface of the frames. The thickness of the outside planking at the scale that I am working at, and hence the amount of space that I had to move the line towards the inside of the ship happened to be about $3/32$ ".



The second step is actually taking the distance between the two new lines that you drew on your plan and dividing it up equally through measurement so that there are four lines that will denote the outside edge of each of the frames between the two hull section lines. Notice in the below diagram, since I started from the midship section and worked forward, the aft line that subtracts the planking thickness will not be an outside edge of a frame in this series. It was the forward, outside edge in the last series of frames between hull sections #34 and #38. Notice in the below picture how almost every section is divided up in this way since this picture was taken after all of the frame tracings were drawn.

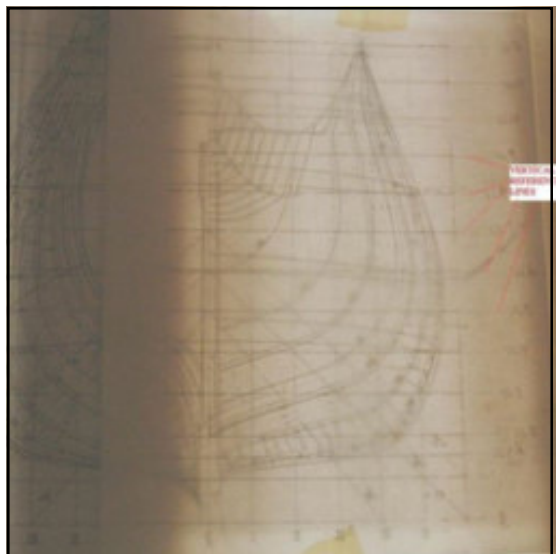


*Image Courtesy of Statens Maritima Museer
and drawn by Eva Marie Stolt*

I divided the distance between hull lines up in many different places using a ruler, made tick marks on the division lines, and then connected them by hand.

The next step involves taking our plan with the divided up sections and placing it on the light table. I like to tape the edges down so it doesn't go anywhere. Next, take a piece of blank computer paper and lay it over the hull line drawing. Get this piece of paper where you want it and tape it down as well.

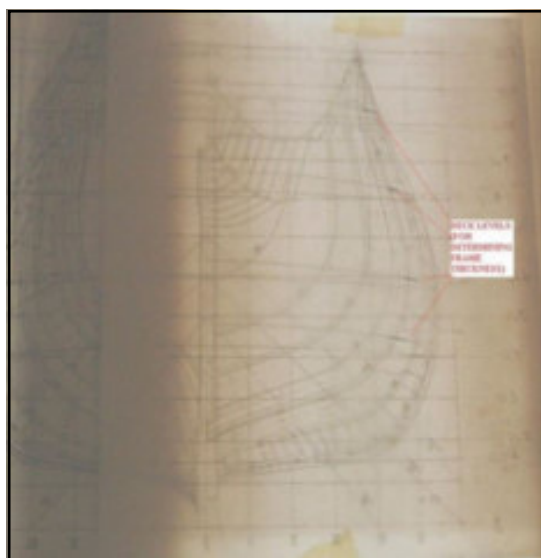
Then turn on your light table and draw in horizontal reference lines as you see them through the paper. These are denoted as "VL" lines on the plan.



Remember that I went over how I was going to use the level of the deck in order to reference my frame thickness? The levels of these decks are the next things that need to be drawn.

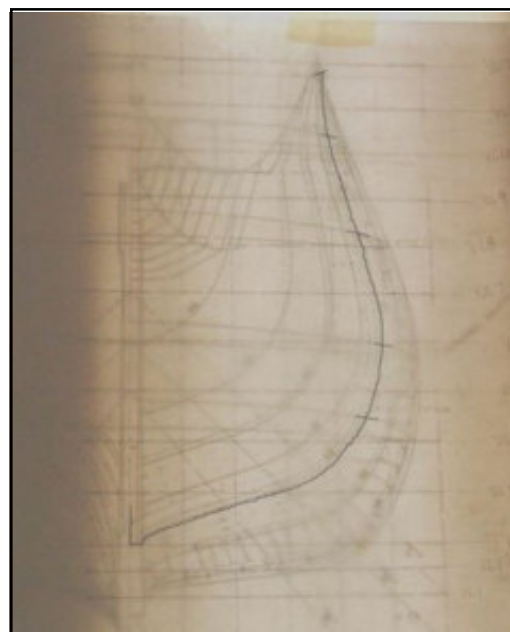
I apologize in advance for the chunky/uneven nature of these drawings. I did the drawing in paint so that I could give you a clear digital image and present the main concepts.

The frame tracing at the end of this section is much better and will be most like what your end results will be.



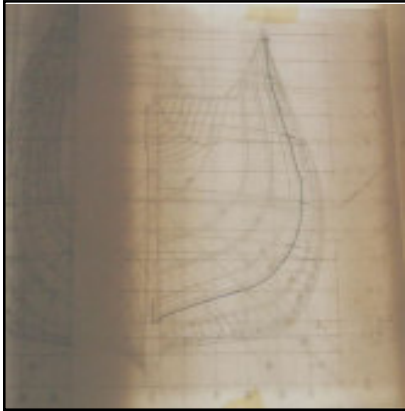
Now, for the next step, we need to remember what frame we are on. There were four frames in between hull sections #38 and #40. These frames are numbered 86 to 89. For this practicum we are going to draw frame #88. This means that we have to look at the third line in our sequence that divides the space evenly between these hull sections. This is because frame #88 is the third frame in this sequence.

In order to start actually drawing the frame, we start by tracing this third line from the beginning of the sequence as is shown below. Notice also, the centerline of the frame is drawn on the diagram at the center of the keel.

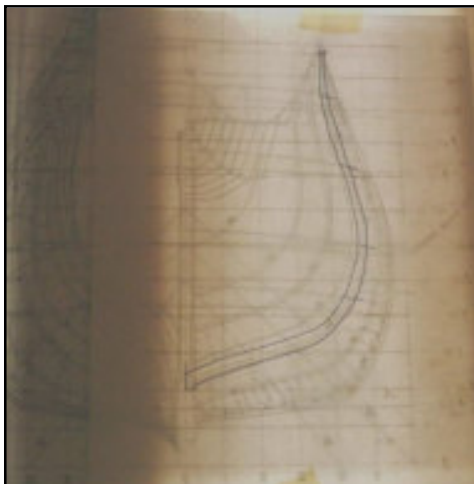


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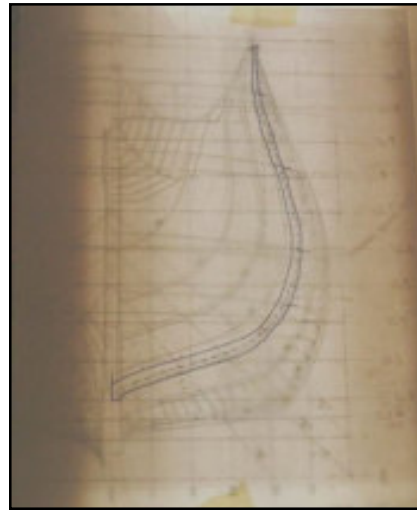
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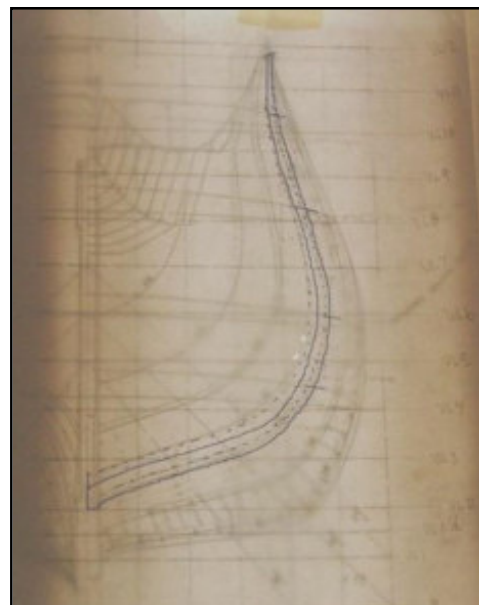
Next, we need to remember our frame thicknesses at the reference lines that we designated for them. Measure along each reference line to the thickness of the frame, remember that in this case they were the levels of the decks, and make a tick mark on the inside edge of the frame. Do this along each of your references. Now you will have the inside edge of the frame once you connect your tick marks. Additional tick marks can be made between the references by going back and measuring your cross section references. This will give you more to guide your hand as you connect your tick marks.

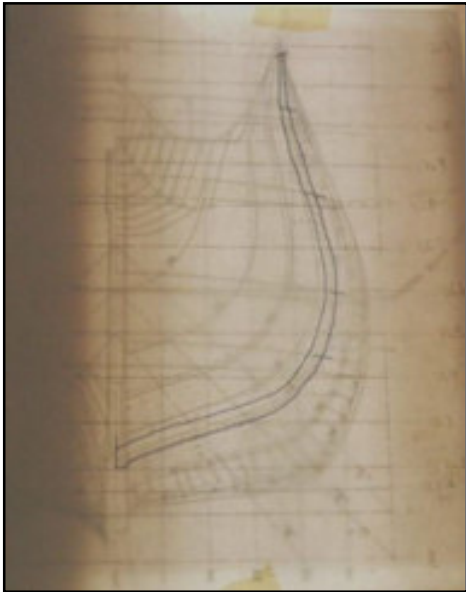


Now, it is time to draw in a bevel. Remember that we are at the bow of the ship and on the port side. Along the floors, the hull is coming up and along the sides of the ship the hull is turning in. We show this by placing a dotted line to represent our bevel at the location of what will be the very aft outside edge of the next frame. Or in other words, it will be at the next line that divides the space between hull sections #38 and #40.

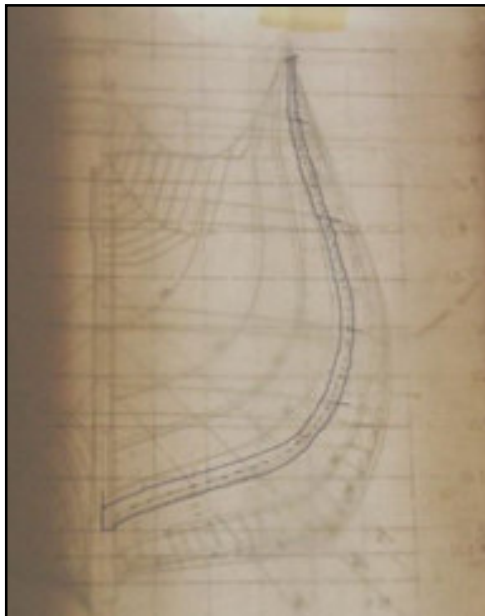


Next we want to add the inside bevel. To represent this, we draw a dotted line along what will be the inside aft edge of the next frame

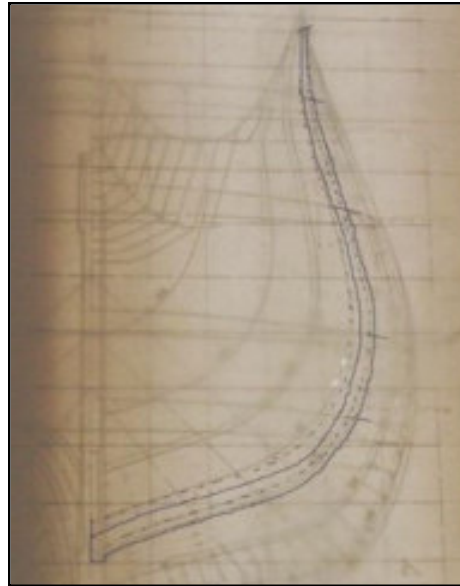




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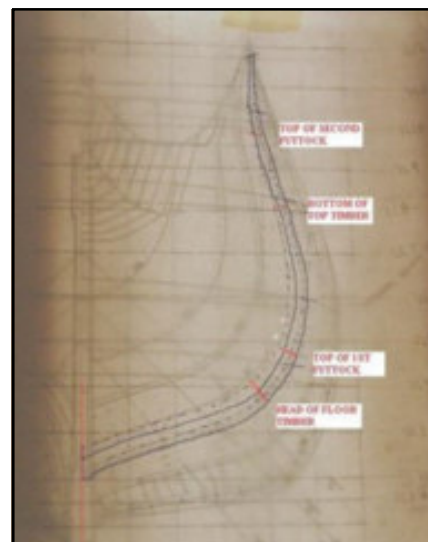


Next we want to add the inside bevel. To represent this, we draw a dotted line along what will be the inside aft edge of the next frame.

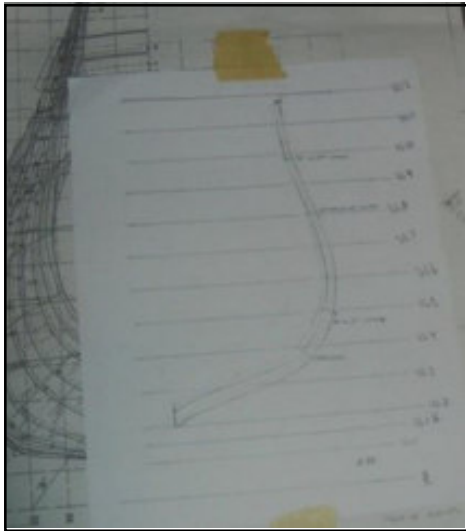


It is important to realize that for the other side of the ship, the bevels for the counterpart frame will be to the same degree but will be decreasing/increasing on the opposite side.

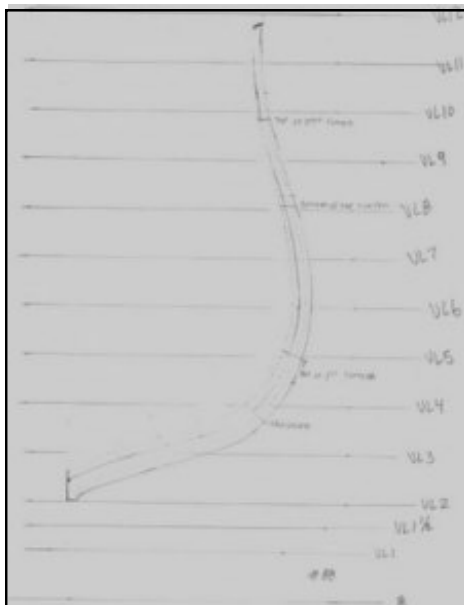
The below picture shows the locations of the ends of the framing members drawn in red. In order to get these we look at our framing diagram and note that the top of the second futtock ends right below VL 10, the bottom of the top timber ends slightly above VL 8, the top of the first futtock and the bottom of the second futtock is right around VL 5, and the wronghead or end of the floor timber is around VL 4.



Now, we can turn our light table off and our frame tracing is complete.



The above picture shows the frame still on the light table and the below picture shows it as a scanned image. Click on either to get a bigger, more detailed view.



Now, repeat this process with all of your frames and you will have a full set of frame drawings for your model!

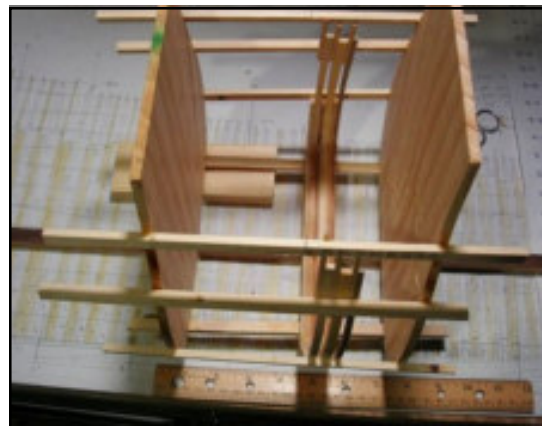
It should be mentioned here that if your model is unlike the Wasa in that it has cant frames, you will not be able to draw them using the method outlined thus far. You may have to

use traditional frame lofting methods or simply use the Charles Davis method that is outlined in the next section and shape your cant frames to the moulds.

When all of your frame tracings are complete, you will have the fun part right in front of you: using them.

I first cut each frame tracing out. Then I traced a framing member, such as the floor timber, on a billet. This billet had to be slightly thicker than, and the same kind of wood as the desired result. Next, I cut the framing member out on the scroll saw. I then took the framing member and put it through my thickness sander to get it to the desired dimension.

I went through this process on all of my framing members from the bow to the stern. There are 8 framing members in a frame on my model and 92 frames. This comes out to 736 framing members! There are actually more if you count the fashion piece, hawse timbers, and filling pieces that go between the fashion piece, hawse, and the first full frames.



On the keel of my model, I drew in hull sections and positions of floor timbers for reference as they were on my framing plan. If you click on the above picture you may be able to make out some of the lines on the top of the keel. The most obvious thing about this picture is that there are pine moulds cut to hull lines at proper locations along the keel. These were

installed by drilling small holes in the keel and the moulds, inserting small nails and gluing them down with cyano acrylate. Then, before the glue dried, it was made sure that they were square to the keel and straight up and down by checking with building squares.

You will also notice that there is pine lath going from one mould to the other. This is to ensure that the outside edges of the frames were controlled so as to be placed in the proper location. This is a version of the Charles Davis method that he describes in his book, "The Built-up Ship Model".

Besides being a great method, it coincidentally ended up approximating the way that the real ship was framed. The Wasa was framed in the Dutch method which entailed planking the vessel before laying in framing members. Also, on the lath is marked locations of top timbers taken directly from my framing diagram.

The next picture shows the framing operation in a more advanced state. I was a little surprised that the bevels I drew on my frame tracings ended up working so well when it came to matching the slope on the lath between moulds and frames. Notice how I am pulling the frames that were just glued in close to the lath that controls them with c-clamps. Also, how I used a regular repeating pattern in the woods that I selected for framing. I varied the woods and used a repeating pattern so that the solid parts of the framing would show discern framing members. The selection of woods that you will use will have to do with the visual objective that you have for your model.



The next picture shows a view towards the stern of the ship looking into the hull before another mould is added. You can see that due to the preliminary work of drawing our framing diagram and frame tracings, our frames need little sanding and sit with a smooth run fore and aft on both the inside and out.



And the completed framing.....



In the next issue of The MSB Journal we start another multi-part practicum
by Clayton Johnson on Carving.

The Great Lakes Model Boat Association

"MODEL EXPO 2007"

To be held at the Kitchener City Hall
in Kitchener, Ontario Canada

June 30 - July 1.



This event is held every 2 years. The 2005 event attracted 117 entries.

Hosted by the Golden Triangle Marine Modellers, the event is open to all ship models whether scale or R/C.

Categories include, Naval, Pleasure, Working, Sail, Ships-in-a-Bottle, Standoff Scale, Miniatures (1/500 and smaller), Submarines. More categories will be added if required.

Each of these categories is broken down into Kit, Semi-Kit and Scratchbuilt groups with First, Second and Third place awards.

There will be a Best of Show Award, Peoples Choice Award, and a Best Example of R/C Animation Award.

There will be narrated scale running exhibitions on the City Hall reflecting pool Saturday and Sunday.



For more info please contact:

Jack Kipfer - Ph: (519)884-0960

Bob Farrant (905)270-0874

Address: GLMBA, 559 Killbear Court, Waterloo Ont., N2V 2R9

Email- glmba@rogers.com

Have an event? Let us know.



Bobcaygeon "FUN FLOAT"

Saturday, July 7, 2007
10:00 a.m. - 4:00 p.m.

***A Fun Day for All Types of
Scale Ship Models***

**Riverview Park
Mill St., Bobcaygeon
Across from Forbert Pool**

Come and participate in a great day for scale ship models, sailboats and submarines in a great location. "Parade of Ships", regatta course for those interested in trying Precision Sterring and Predicted Log, lunch Barbecue.



For more information contact:

Dan Sinstead
Ph: (705) 738-1335
email: danmodel@peterboro.net

Clubs & Organizations with a Web Presence

Each month we display a list of clubs and organizations from around the world which you may find useful in your modeling. You will find everything from general modeling clubs to websites where you can pursue research on projects you are working on. You can check at the MSB website for a more complete list (www.modelshipbuilder.com/resources/links.html).

Confederation Marine Modelers

www.simplesite.com/confederationmarinemodelers

*A remote control model boat club located in Hamilton, Ontario Canada.
Meetings held the second Tuesday of each month at the Hamilton Steam Museum on Woodward Ave.*

For more information contact: Doug Grinyer – dgrinyer1@cogeco.ca

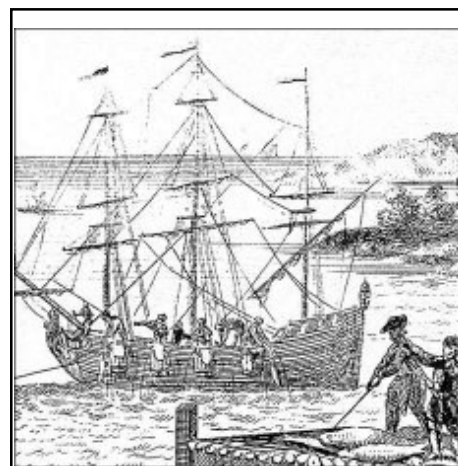
Ships from the Past

Contemporary illustration of the Armada campaign of 1588. The ship centre right is thought to be "Revenge"



Early 17th century action between Spanish and Dutch ships. The Spanish vessel (center) is probably similar to the "Apostle" class.

Ships such as this one often frequented the coastal waters around the island of Newfoundland on a seasonal basis during the 17th and 18th centuries. Ship detail from a French woodcut of unknown origins. In 1710, a similar scene appeared on the Herman Moll map of North America with the English description, "A VIEW OF A STAGE & ALSO YE MANNER OF FISHING FOR, CURING & DRYING COD AT NEWFOUNDLAND."



Jigs & Things

This issue we have a few more helpful jigs & things for your workshop. Most of which you can build yourself. Again, this month they come from Mr. Hubert Sicard at Model Ship Building For Dummies www.shipmodeling.net.



Here we have a simple office carosel which you can pick up in most stores that have an office supplies section. Great for storing your basic tools and thing.

Here's another handy little setup that Hubert calls The Crab. It's great for when you are working on the rigging of your model.



Galleon San Francisco (aka Florencia)

*“Being a brief description of a Spanish galleon
during the Spanish Armada of 1588”*

By: Clayt Rakes



After acquiring Artesania Latina’s San Francisco kit and reading the brief description of this galleon on the box, I quickly developed an interest in both Spanish galleons and the Armada of 1588. Over the next couple of weeks I searched the internet in vain for information on the San Francisco. I was surprised to find virtually no information on this particular galleon, or others that participated in the Armada.

After conducting some research and reading several books (see the bibliography at the end of this article) I was able to accumulate details about this ship’s relatively brief existence. It is a compelling story that you may find interesting whether or not you plan to build this model or are interested in maritime history.

The Spanish Armada of 1588 (also known at the ‘Invincible Fleet’ or the ‘Enterprise of England’), was a fleet of over 100 ships and vessels sent out by King Phillip II to invade England. Due to multiple opposing factors such as the type of weaponry and tactics used by each side and extreme weather conditions the invasion fleet failed and only about 70 ships returned to Spain. The San Francisco was an active participant in this fleet, and her history is an interesting one. What follows is what I have been able to piece together from English language publications. It is no surprise that there are many publications in Spanish on this same topic; yet, I was not able to produce a reliable translation from any of them.

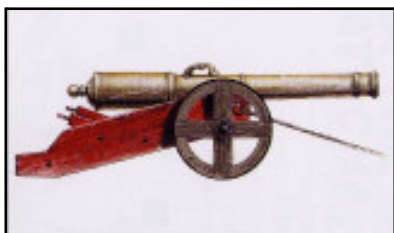
The galleon San Francisco began her existence as the Florencia, in fact some texts refer to her by that name for her entire career. The Florencia belonged to the Duke of Tuscany, who was using her to take advantage of the spice trade that was disrupted in 1585 by the siege of Antwerp. After arriving in Lisbon in 1586



the Florencia was held by Spanish authorities, and eventually impounded in mid-1587. While being held in Lisbon many captains and admirals visited the Florencia, some of who commented on her 52 “brass” guns and admired how well she was constructed. After being requisitioned, the Florencia was re-named San Francisco (or San Francesco) and added to Duke of Medina-Sidonia’s Squadron of Portugal.

The type of guns the San Francisco most likely carried is an interesting point. During the late sixteenth century naval armament production included the use of materials such as cast iron, brass, bronze, and wrought iron. Unlike many other European countries, Spain was still using predominately wrought iron guns on its ships. These were made of iron rods or strips that were held together with iron bands. If the San Francisco had brass (or bronze) guns it would have been quite modern by Spain's standards and it would have been thanks to the investment of the Duke of Tuscany.

In addition to the guns, the carriages that were likely used are of interest. A typical period British ship would have been using a four-wheeled carriage. This is because by the end of the 16th century many countries, such as England, were beginning to move away from boarding tactics to a focus on standing off and battering the enemy. Spain, which still considered using a broadside of heavy gunnery as a brief and preliminary action prior to boarding, was still using two wheeled carriages. These looked mildly similar to contemporary field artillery pieces and were difficult to aim and reload on a ship. But it is possible that if the Duke of Tuscany had invested in modern guns for the Florencia, he would have also insisted on four-wheeled carriages.



Most sources note that the San Francisco carried 52 guns, this number would have included all armament from swivel guns to the largest cannon. Whatever type of guns the San Francisco originally carried, by the time she took part in the Armada 1588 she may not have possessed all of her



original armament. This is because the Armada was so short of guns that it was ordered that they were to be taken from well-appointed vessels and redistributed throughout the Armada.

During her participation in the Armada, the San Francisco was sailed by Captain Bartoli, who also sailed her for the Duke of Tuscany before the Spanish impounded her. The San Francisco was commanded by Captain Gaspar da Sousa. Unlike English ships of the period, Spanish ships were under the control of the commander of the soldiers – not the mariner captain. As mentioned, the San Francisco sailed as part of the Squadron of Portugal.

Many resources agree that the San Francisco was one of the best, if not the best, constructed and armed galleon in the Spanish Armada of 1588. She is known to have taken an active role in many of the Armada battles, and performed notably well. After the Armada's return both Captain Gaspar da Sousa and Medina-Sidonia commented on how well and often the San Francisco participated in the fighting. One resource points out that Medina-Sidonia wrote a letter to the Duke of Tuscany commending the San Francisco and how well she performed.



Following the failure of the Armada, the San Francisco returned to Santander (Spain), with nine other ships including the flagship. Unfortunately, the San Francisco was so damaged that she was salvaged for guns and lumber, then left to rot on the shore. Her Captain Bartoli died the following day, presumably from wounds acquired during action against the English.

Some sources (treasure ship books usually) claim that the San Francisco (or sometimes the Florencia) sank in Tobermory Bay on the Isle of Mull, Scotland where she was sheltering from the storm that destroyed so many ships of the Armada. Some claim she sunk as a result of the magazine being fired by raiders looking for pay chests or by locals mad at the Spaniards for refusing to pay for food and water that they had taken. An Armada ship did sink in Tobermory Bay, but it was more likely the San Juan de Sicilia. The San Juan de Sicilia was formerly the Brod Martolosi, a merchantman embargoed by the Spanish in 1586.

Maritime history would not be the same without the excitement and mystery that surrounds the galleon. Many countries produced galleons, but Spanish galleons tend to be singled out and romanticized in both fact and fiction. The San Francisco is just one window into this fascinating part of our shared history; but it is an excellent example of this unique ship.

The galleon San Francisco:

960 tons
 52 guns, which would include swivel guns, etc.
 400 solders
 86 crew

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- The Confident Hope of A Miracle, 2005, by: Neil Hanson
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- The Spanish Story of the Armada, 1899, by: James Anthony Froude
- Spanish Galleon 1530-1690, 2004, by: Angus Konstam and Tony Bryan
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- Artillery Through the Ages, 1949, by: Albert C. Mancuky
- A History of Firearms, 1955, by: W. Y. Carman

Pictures

1. "English Ships and the Spanish Armada August 1588" Unknown artist
2. Typical Spanish naval gun of the time. Spanish Galleon 1530-1690, Konstam
3. Sixteenth-century engraving of a Spanish galleon by Albrecht Dürer.
4. "Defeat of the Spanish Armada 8 August 1588" by Philippe-Jacques de Louthembourg 1796

Sailing Ship Rig

Graham McBride
Maritime Museum of the Atlantic

The sail plans of sailing vessels were many and varied. Beside differences in original design, a ship might undergo a number of changes, depending upon the whims of her owner, captain, or builder, the trade she was used in, or local traditions. These changes were introduced to improve sailing qualities and to provide a rig that could be handled by a smaller crew, thus paying higher returns to shareholders.



The silhouettes of vessels overleaf represent different rigs of ships on the east coast of North America during the mid 1800s to the early 1900s, a period in marine history often referred to as the "golden age of sail".

Sailing ship rigs can be divided into two broad categories: the "fore and aft rig" (left), in which the sails lie along the same plane as the ship's fore and aft line; and the "square rig" (right), in which the sails are rigged athwart (across) the ship. Each rig had certain advantages.



The Fore & Aft Rig

The fore and aft rig, or schooner rig, required only a small crew, and was generally used in the coastal and fishing trades. Ships with this rig could point higher into the wind and were usually more maneuverable when working in the changing winds along the coast. The rig was not limited to coastal schooners, and big fore-and-afters could be seen plying across the Western Ocean bound for European ports, the West Indies, or South America.



Sloop A fore and aft rigged vessel with one mast is a sloop. In the early 1800s some large sloops traded with the West Indies, but most sloops in the 19th century were small inshore fishing vessels. In the 20th century, sloops became the most popular rig for yachts.

Grand Bank Fishing Schooner Schooners have two or more masts with fore and aft sails. Similar to the famous Bluenose, our example, in addition to all the normal lower sails, carries a main gaff topsail and a fisherman's staysail set between the masts.





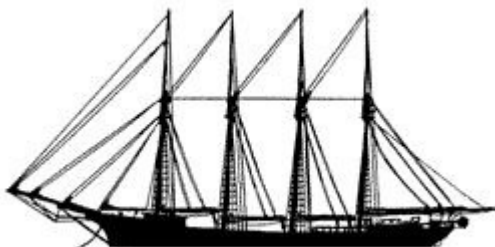
Two Masted Fishing Schooner in winter rig. Her topmast and all light upper canvas have been struck, and sent ashore.

Square Topsail Schooner a combination of fore and aft sails and small square sails. They were popular for coastal trading in the early 1800s. Prince Edward Island built a number of topsail schooners and many were sold in Great Britain. A version with raked masts, called the Baltimore Clipper, was much favoured by privateersmen in the War of 1812.



Coastal Schooner, the work horse of our coastal trade. She was probably not much more than a hundred tons, and carried everything from timber and coal to bricks, general cargo, and a load of hay to offshore island communities. Our schooner is shown with only a main topmast, but many also carried a fore topmast. Note the yawl boat towing astern.

Ketch A two masted sailing vessel where the mizzen mast is ahead of the rudder. The rig is similar to a schooner but the main mast (the tallest mast) is the first mast, not the second mast. Ketches were common in 19th century Europe but rare in Nova Scotia until they became very popular for yachts in the 20th century.



Four Masted Schooner shown at anchor. This design attempted to reduce individual sail area, raise tonnage, and still manage with a small crew. In the early days sails were hoisted by hand, but gradually the gasoline hoisting engine was introduced, saving work, wages, and food. She could operate with eight hands, and reached 500 to 700 tons. At the turn of the century these schooners were used in the coastal trade between Canada and the United States, the West Indies,

South America, and some trans-Atlantic voyages were made to Europe and West Africa. Nova Scotians built and operated between seven and eight hundred big schooners, but by World War I most had passed out of the picture. Along the New England coast a number of five and six masted schooners were built, plus one seven masted, the steel hulled Thomas W. Lawson.



Tern Schooner a three master built in great numbers all along our shores between 1880 and 1920. These vessels were cargo carriers of between 200 and 400 tons, requiring a crew of six to eight. Our Tern is shown with all sails set except staysails between the masts. As the years went by these softwood vessels would become waterlogged, sails would wear out, and spars break. With the inroads made by the steamer, the old schooners were hard pressed to find a cargo. A few did survive until World War II.

The Square Rig

The square rig was normally an offshore rig used by vessels making long ocean passages and taking advantage of the prevailing wind and current patterns of the globe. These ships varied in size from the small handy brigantines and brigs of a couple of hundred tons to the great full rigged ships and barques of over two thousand tons. The square rig was also seen in the coastal trade, where brigs plied their trade up and down the eastern seaboard.

Brigantine, a two masted vessel square rigged on the foremast, with fore-and-aft sails on the mainmast. The drawing shows a typical Bluenose softwood vessel of about 220 tons, similar to the Spencers Island built Amazon which later became the famous mystery ship Mary Celeste. The brigantine is shown with two staysails set between the masts.

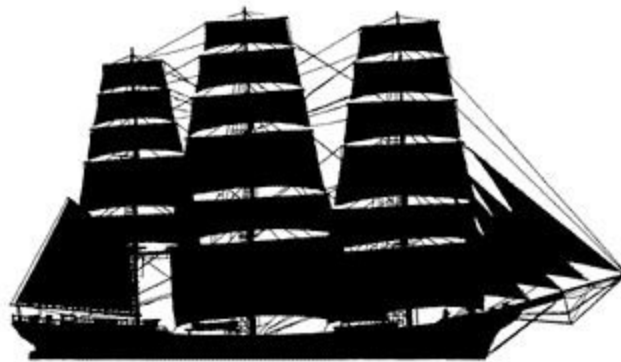


Brig, a two masted vessel square rigged on both masts. The brig is a very old and efficient sailing rig, and the class was still in use up to the very end of commercial sailing ships. Only a few brigs were built in Nova Scotia yards, but they were very common in European waters.

Barquentine, a vessel with the foremast rigged square, and the other masts rigged fore and aft. Our vessel is similar to the Maid of England of 750 tons built at Grosses Coques in 1919. She was the last Canadian commercial vessel to carry a square rig, being abandoned at sea in 1928. Only a small number of this type were built locally.



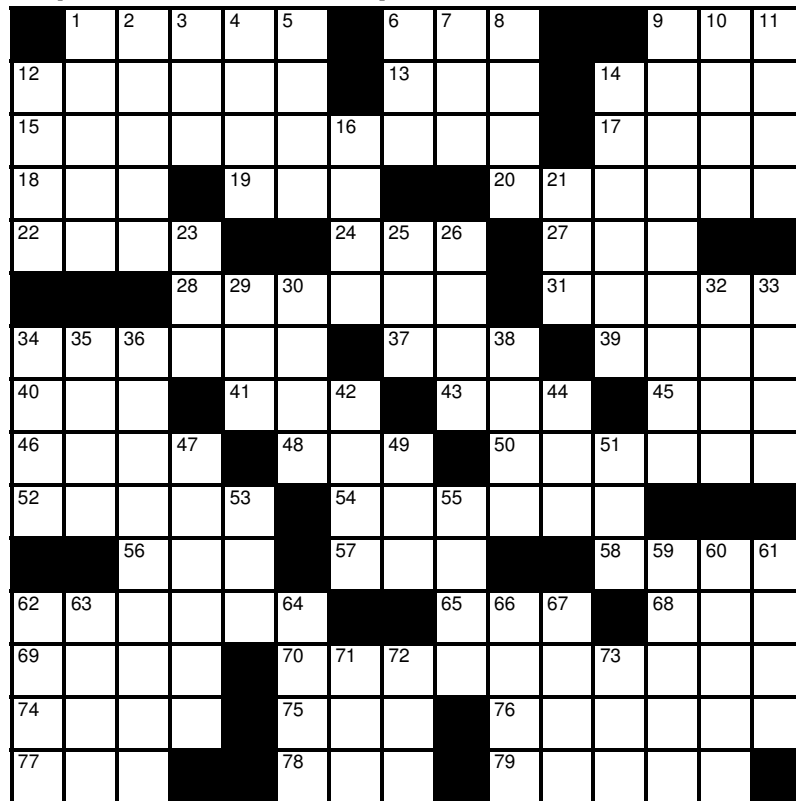
Barque or Bark , usually a three masted vessel, the fore and main masts square rigged and the mizzen mast or after mast rigged fore and aft. The four masted barque was a relatively common rig on the oceans, but only two were built in Canada. The John M. Blaikie was launched in 1885 at Great Village, and the Kings County launched in 1890 at Kingsport. The barque was a popular rig, and more of this type were built than all other square rigs combined. The big Maitland barque Calburga was the last British North American square rigger of large tonnage to be on the Canadian registry; she was lost off the coast of Wales in November 1915.



Full Rigged Ship, square rigged on all masts. Staysails could be set between the masts. Outboard of the square sails might be set studdingsails, and above the royals (uppermost sails) might be set sails with such names as skysail, moonraker, Trust to God, or Angel Whispers. The ship William D. Lawrence, built at Maitland N.S. in 1874, was the largest wooden sailing ship ever built in Canada. Towards the end of their careers some ships were reduced to barque rig. Many were "sold foreign" and many others simply were "lost without trace" or abandoned at sea.

Within the decade of the 1890s and the early 20th century the disappearance of the British North American square rigger was swift. Iron, steel and steam, plus high insurance rates and low freights caused most owners to dispose of their fleets. For some years they tramped the oceans of the world under foreign flags, until finally giving up.

Shipmates of the Old Navy



Across

- 1 "Sweet" herb
- 6 Getaway
- 9 "... two if by ___"
- 12 Large fleet
- 13 Square measure
- 14 Calf meat
- 15 Butcher's assistant, in the old Royal Navy
- 17 Dinghy necessities
- 18 Arab's outer garment
- 19 Allow
- 20 Brother of Artemis
- 22 Gambling mecca
- 24 Astern
- 27 Oklahoma city
- 28 Ship's captain, in the old Royal Navy
- 31 Drench
- 34 Push, as in a crowd
- 37 Electrified swimmer
- 39 "Hear ye!"
- 40 "Yuck!"
- 41 Once around the field
- 43 Spike of corn
- 45 Always, to Burns
- 46 Three-time Vardon Trophy winner Foster
- 48 Decompose
- 50 Range of mountains
- 52 Exchanges for money
- 54 Ship's cook, in the old Royal Navy
- 56 Philosopher ___-tzu
- 57 The sun
- 58 Take five

- 62 Repress, as feelings
- 65 Timber tree
- 68 "___ will be done"
- 69 Verbalized
- 70 Ship's carpenter, in the old Royal Navy
- 74 Full of zest
- 75 Farm biddy
- 76 Unit of electric current
- 77 Northern deer
- 78 Possess
- 79 Kind of drum

Down

- 1 Payola, for example
- 2 Capital of Jordan
- 3 Film director Peckinpah
- 4 Pastoral composition
- 5 Load up, as a ship
- 6 Resinlike substance
- 7 Noah's boat
- 8 Flat tableland
- 9 Ship's know-it-all, in the old Royal Navy
- 10 Viscount's superior
- 11 Likewise
- 12 Slightly open
- 14 Black magic
- 16 WWII beach
- 21 Launch area
- 23 Frequently, in poetry
- 25 Fixed charge
- 26 Bonsai, for one
- 29 Whole schmear
- 30 Rend
- 32 Crystal-ball gazer
- 33 Pound who wrote *The Cantos*
- 34 Earthenware bottles
- 35 Fairy tale monster
- 36 Yarn-spinning oldster, in the old Royal Navy
- 38 Endure
- 42 Seedcases
- 44 ___ de Janeiro
- 47 In a willing manner
- 49 Besides
- 51 Goof
- 53 Former French coin
- 55 Applaud
- 59 Old anesthetic
- 60 Divvy up
- 61 Printed characters
- 62 Tender
- 63 Russian mountain range
- 64 Resound
- 66 Whirlpool baths
- 67 Sacred song
- 71 Cut down, as a tree
- 72 Hostelry
- 73 Tax pro: abbr.

A Little Trivia

WHICH BLOCK GOES WHERE?

By Gene Bodnar

The average sailing ship modeler installs hundreds of blocks on a typical model. If the modeler is building from scratch, much time is expended in making them to scale and placing them in their proper locations in the rigging.

There are many varieties of blocks, with one reference listing more than fifty different types. Some blocks serve a very specific purpose and can be found only in certain areas of a ship. The following list contains fifteen of them. Can you match the block with its proper location on a ship?

- | | | |
|---------------------|---------------------|--------------------|
| 1. ___ Sister block | 6. ___ Tack block | 11. ___ Cat block |
| 2. ___ Top block | 7. ___ Crowfoot | 12. ___ Heart |
| 3. ___ Bee block | 8. ___ Monkey block | 13. ___ Deadeye |
| 4. ___ Spring block | 9. ___ Dee-block | 14. ___ Rack block |
| 5. ___ Jewel block | 10. ___ Waist block | 15. ___ Bollock |

- A. Amidships on the bulwarks.
- B. Connected to a ringbolt.
- C. At the end of the main and foretop yards.
- D. At the anchor.
- E. On either side of the bowsprit.
- F. At the lower end of a shroud.
- G. On the bowsprit for leading running Lower yard.
- H. Bolted in a channel to reeve a lift.
- I. Over the clew of a sail.
- J. At the tackle pendants of the topsail yards.
- K. At the center portion of a topsail.
- L. At a suspended awning.
- M. On the side of a mast cap.
- N. At a stay.
- O. Attached with a strap and swivel to a gear.

Answers for last Issues Crossword



Answers to "Which Block Goes Where?"

1-J, 2-M, 3-E, 4-B, 5-C, 6-I, 7-L,
8-O, 9-H, 10-A, 11-D, 12-N, 13-F,
14-G, 15-K

Dremel 750-02 Minimate

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4.8V Lithium Cordless
Rotary Tool

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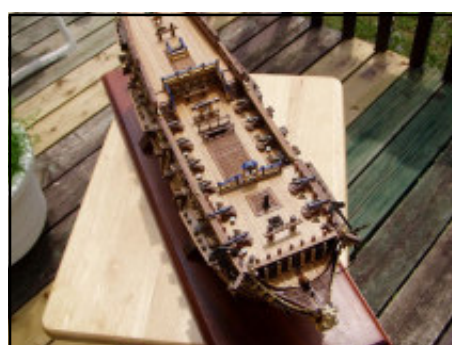
"We started counting all the uses for this little dynamo, but we stopped at 967. We like it for delicate tasks and finer work because it isn't as powerful as its big brothers, so it's easier to control. It's light, extremely maneuverable, the switch is exactly where you want it and heck, it's just plain fun to use."



Contributor Pictures

In this issue we decided to add a little section to display pictures of some of the models that you have built. You can submit your pictures to: msbjournal@modelshipbuilder.com.

In this issue we'll start with a group of pictures that have been sent to me by my good friend Philip Eisnor of Coldbrook, Nova Scotia Canada. Keep this in mind, these are just ones he built over the past year! I'd like to complete one a year! :-)



HMS Neptune



Half Moon



La Couronne



Half Moon

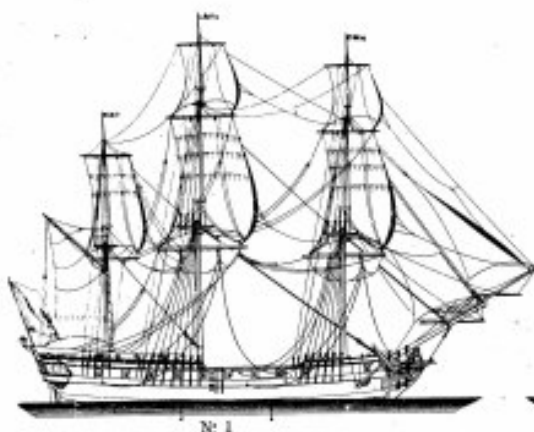
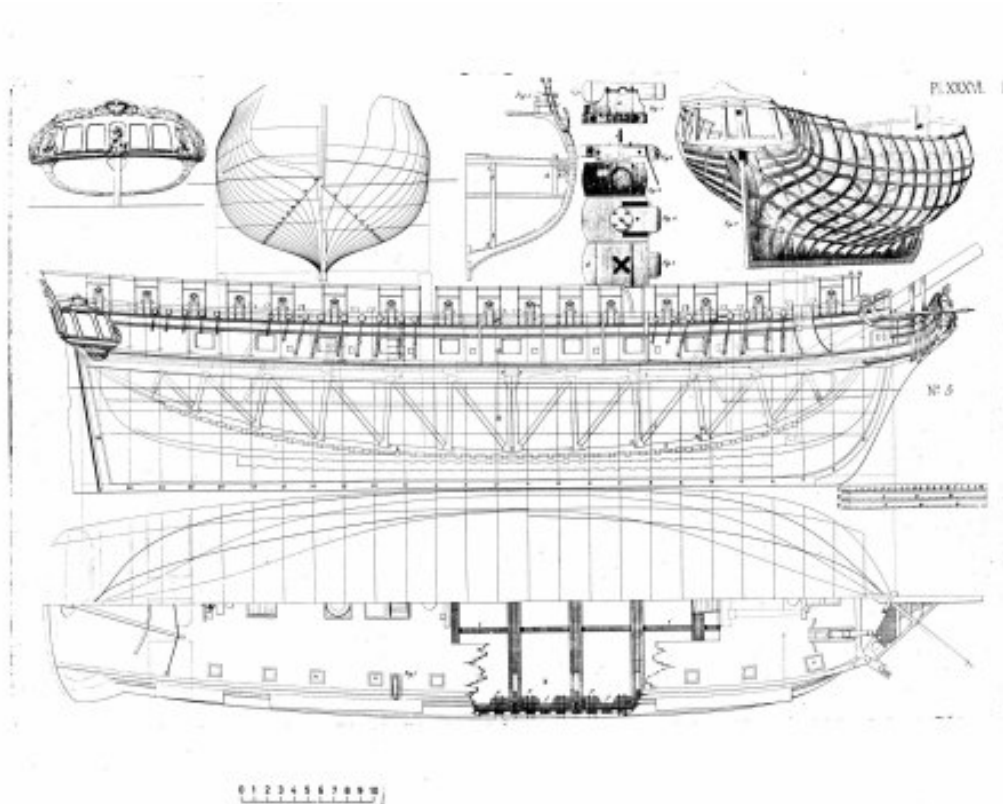
And last but definitely not the least a picture of a model built by Philips father in 1942 of their yacht at the time the "Mist".



We'd love to display some pictures of your models here. You can send them to msbjournal@modelshipbuilder.com.

Frigate Rigged - Privateer

Plan XXXVI from Fredrik Henrik af Chapman's *Architectura Navalis Mercatoira*. High resolution graphics can be downloaded at www.modelshipbuilder.com/resources/the-msb-journal.html



Frigate Rigging

Info from English Translated Index

Plan XXXVI

Rigging: Frigate Rigging

Guns on deck: 20 - 6 pd shot

Quarter & Forecastle: 2 - 4 pd shot

Swivel Guns: 32 - 3 pd shot

Length between perpendiculars of stem and sternpost: 116 $\frac{2}{3}$ '

Moulded Breadth: 30 $\frac{2}{3}$ '

Draught of water abaft: 14 $\frac{1}{4}$ '

Height of Gunports above water at midships: 4 $\frac{3}{4}$ '

Pair of oars: 7