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On the Cover
The Lightning

An extreme clipper ship built in 1854 by Donald McKay, East Boston, for the Black Ball Line (James Baines & Co.), Liverpool. Her dimensions were: 226'×44'×26' [loa 243'] and tonnage: 2084 tons

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Tidbits from the Past *by Gene Bodnar*

"The Loblolly Boy"

The loblolly boy was the non-professional assistant to the ship's surgeon. The title appeared in the Royal Navy in the 1500s and existed for nearly three hundred years. In 1833, the title was changed to sick berth attendant, and by the 1890s the nickname Sick Bay Tiffy gained popularity. The title Loblolly Boy was also used in the U.S. Navy from the late 18th century until 1861, when the new title became Surgeon's Steward but required more stringent training requirements. In 1866, the title became Apothecary, and it was changed again in the 1870s to Bayman, and finally, it became Hospital Corpsman in the early 20th century.

The U.S. Navy's first loblolly boy was John Wall, who served as assistant to surgeon George Balfour aboard the USS Constellation, signing on June 1, 1798.

The picture shown here is that of an apothecary treating a sick ship-mate aboard USS Boston in 1888.

To a seaman the word "loblolly" means a sort of thick, medicinal porridge to which pieces of vegetables and bits of meat are added and boiled in a pot, and it was fed to the sick to assist in their recovery. It was also called burgoo or spoon-meat. It was generally concentrated into a solid form, both to preserve it and make it easy to carry around. One of the jobs of the loblolly boy was to feed his patients; hence, his name.

The word is composed of two separate words, "lob" and "lolly." The Yorkshire word "lob" means to "boil" or "bubble." The word "lolly" is an archaic English word given to soup or stew. Thus, the word "loblolly" came to mean anything viscous, swampy, or boggy. Today, there is a loblolly pine tree, probably getting its name from the muddy environment in which it grows. In the Southern United States, mudholes are known as loblollies.

In addition to feeding his patients, the loblolly boy was responsible for any medical task that the surgeon did not perform because he was too high in station, including restraining patients during surgery, obtaining and cleaning the surgical instruments, disposing of amputated limbs, and emptying and cleaning toilet utensils. In other words, in the hierarchy of the members of a ship, the loblolly boy was somewhere between a cabin boy and a ship's rat.

Model Ships of the Royal Museum Greenwich

Santa Catarina de Monte Sina (1510)

Scale: 1:100. A full hull block model of the Santa Catarina de Monte Sina (1510), a four-masted Portuguese carrack. The model is finished in natural wood, with individual hull and deck plankings pinned to a solid block. It is complete with four stump masts, two of which show their keyed construction. There is a bowsprit and bumpkin at the bow and stern. There is a carved figurehead at the bow resembling the head of a dragon displaying its tongue. Other deck features include gratings, bulkheads with doors and ladders for access to the poop deck. The model is mounted on two crutches pinned to the original baseboard.

Source: Royal Museums Greenwich

SS Kyle

The SS Kyle is a 220 foot sailing vessel that is aground in the harbour of the Town of Harbour Grace, Newfoundland and Labrador, Canada. The SS Kyle was part of the Alphabet Fleet, a fleet of ships owned by the Reid Company that served the Newfoundland and Labrador coast. It was named in accordance with fleet tradition of the Reid Company of Newfoundland which stated that their ships must bear the name of a Scottish town.

The ship was constructed in April 1912 by Swan Hunter, Newcastle upon Tyne, England. Though her primary use was the transportation of goods and civilians from Carbonear to Labrador, she also transported soldiers from Newfoundland to Canada during World War II, and was an icebreaker in the winter as she was equipped with a heavy front end designed for such purposes. She was known by Newfoundlanders as the "Bulldog of the North". While she may not have been the largest boat in the Reid Company's fleet, she was the fastest, and played a role in ferrying passengers and cargo in Newfoundland and Labrador.

She ran ashore in February 1967. Since her grounding on the shores of Riverhead, Harbour Grace, she has had several owners, from the Earle Brothers Freighting Company, Dominion Metals, and the Government of Newfoundland.

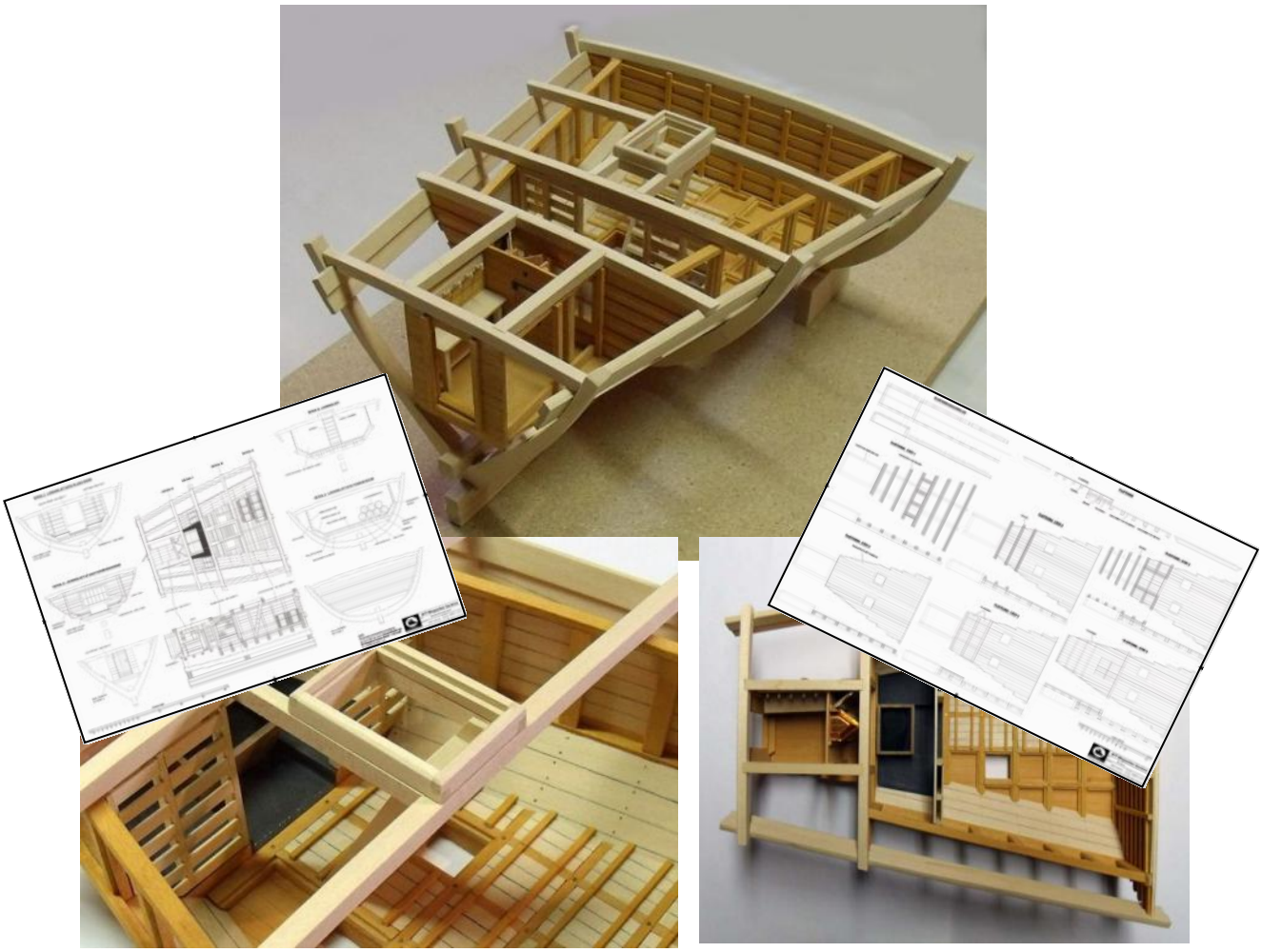
While plans to have the vessel moved to the town of Salmon Cove, Newfoundland, and turned into a museum were aborted due to financial implications there is a resurgence of interest in recent years due to the historical nature the ship played a role in on the Newfoundland and Labrador coast.

SS Kyle as she currently lays banked on shores of Harbour Grace

Source: Various

Aft Magazine Section Model Plans

Another Exclusive from Model Ship Builder



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FRAMING OF A HULL—Part III

by William B. Worthington

The final part in this series of articles will start with Zachariah Hillman and his three sons Benjamin, Zachariah and Jethro. Zachariah Hillman Sr. and his wife lived in New Bedford, Massachusetts in the 1790s and he was a highly esteemed contractor and builder of houses and ships. After his death his sons took over the family business; Benjamin followed the construction part of the business and continued as a house contractor and builder, his two brothers maintained the ship building business and formed the J & Z Shipyard where 56 ships were built from 1827 to 1862. Jethro and Zac were second generation ship builders, learning their trade from their father whose family dated back to Ellner Hillman who sailed here from England in the ship Abigail in the year 1635.

What makes the J & Z shipyard of interest is the fact the Hillman brothers' work is still here, and an examination of the framing shows the brothers were building ships the old school method. Taking a look at the framing, it is spaced apart like the early English style of building. A description of the framing from the restoration crew of the Charles W. Morgan built in 1841 in the J & Z Shipyard is as follows. Referring back to Part One of the article, the following description sounds like what Blaise Ollivier saw in English shipyards in 1735.:

"The frames are in fact held in place by the inner & outer planking. Unlike many other ships constructed where the futtocks are joined to each other in a brick-laid fashion to create one solid frame, the whaling boats relied on frames, closely spaced, with butts that didn't line up along the plank lines for hull strength. We ran into the problem of having too many frames end at the same level at one point in our planking and had to replace a number of good frames so that the spacing worked out. The space between frames is often a few inches, so the net effect of having one butt joint near the middle of the frames next to it is very much like having normal futtocks joined to each other. The payoff from the owner's perspective is that this type of construction is less fussy and can proceed more quickly than the standard joined futtocks."

At the turn of the 19th century and after the war of 1812 we can surmise there were areas of the country where shipyards were using older traditional English methods of hull framing, and shipwrights who were second and third generation builders were trained in old school methods. From the east coast to the Great Lakes and to the west coast of North America the double sistered framing became the established method of hull framing. There is no lack of shipwrecks, both underwater and sticking out of sandy beaches, from east to west coast and all around the Great Lakes and in every case the framing system is the same, double frames.

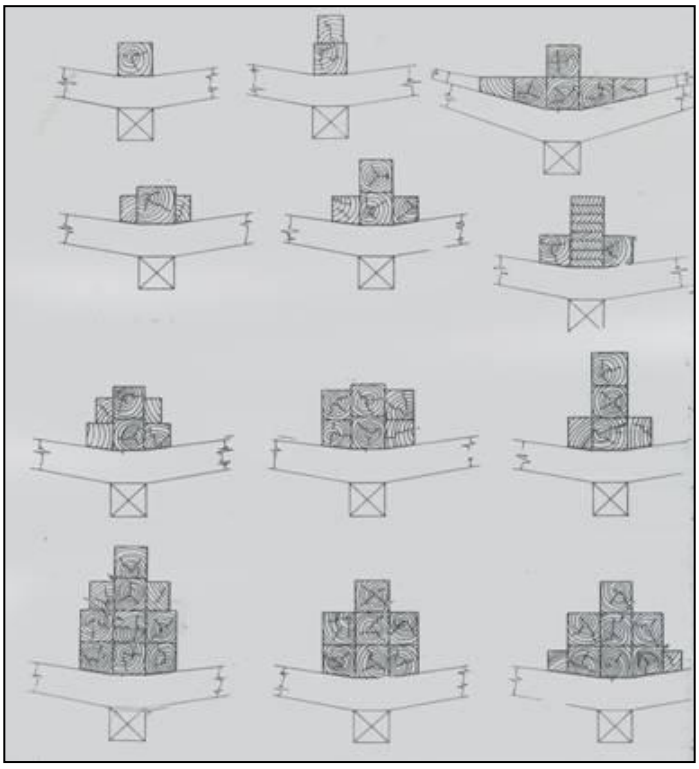
This is only a small example, there are hundreds of old bones of ships across North America dating from as early as 1565 to the end of wooden ship building.

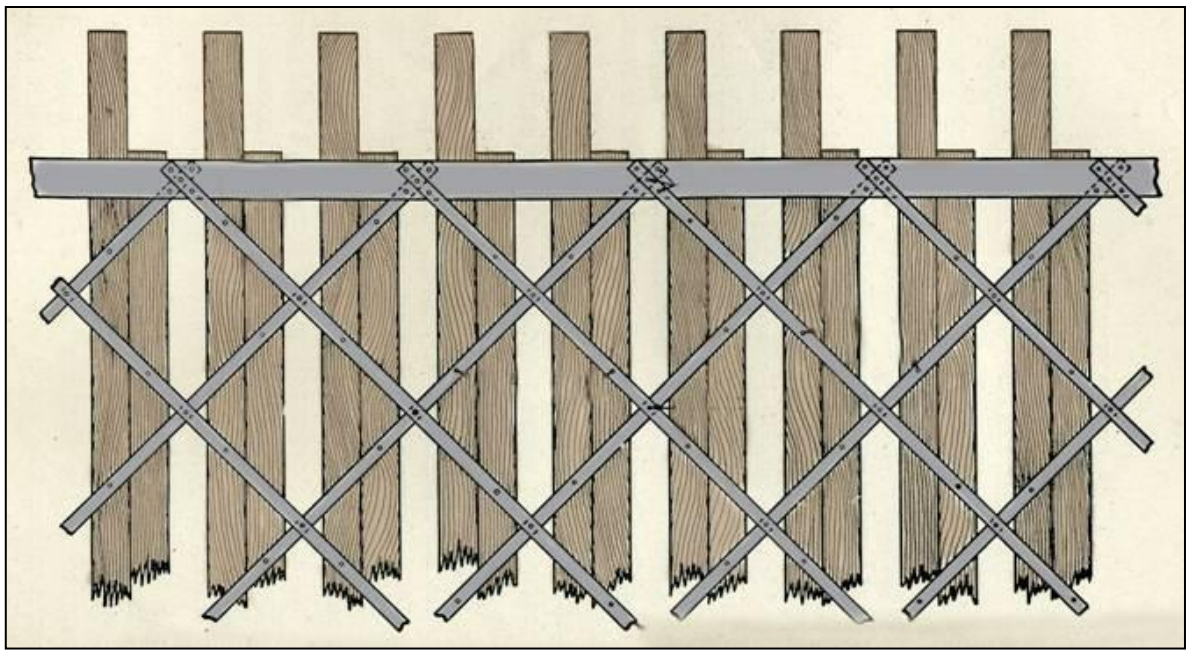
With the overwhelming evidence from hundreds of shipwrecks, it becomes quite clear the double frame system is the standard for North American built ships dating back to the colonial period. What did change from ship to ship was the size of the timbers and spacing of the frames. From the start of the North American building of war ships they were framed with heavy timbers spaced very close together forming practically a solid wall of timber. This was done for obvious reasons, to stop or at least slow down cannon balls. Depending on the intended use of the ship, its size, where it was built and the material used dictated the timbering and spacing of the frames. Looking inside the wreck of the Alvin Clark, a 105 foot lumber schooner shown in the last picture, we can see the double frames are made up of two six inch timbers with the frames placed on 2 foot centers. This would make the frames and the space twelve inches a framing common to Great Lakes schooners.

From the Great Lakes to the west coast we will take a look at another schooner built to haul lumber, the C.A. Thayer. She was twice the size of the Alvin Clark at 219 feet with 10 inch frame timbers spaced 29 inches center to center.

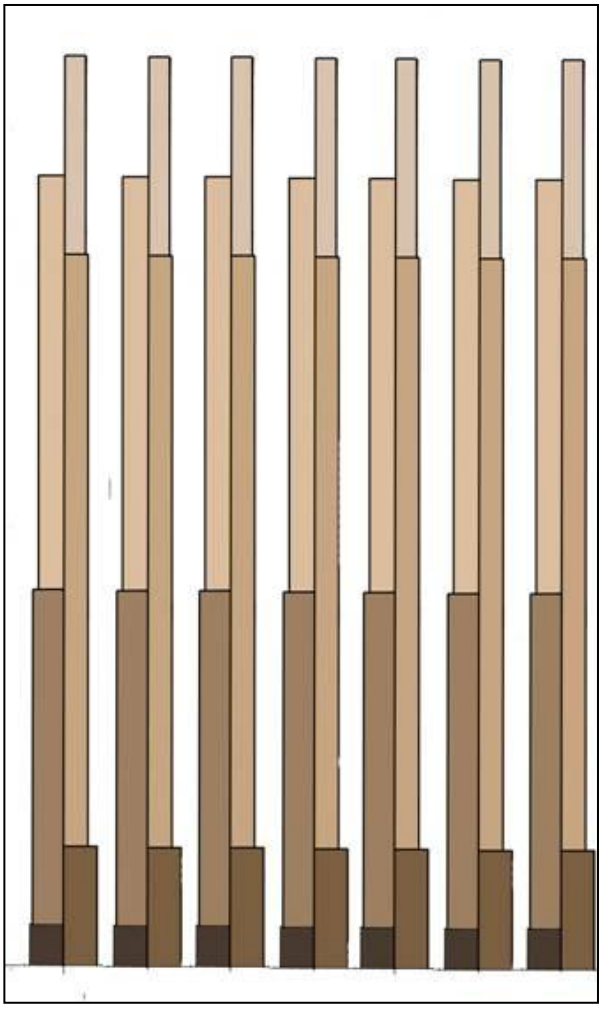
Up until the War of 1812 ships remained for the most part unchanged in size, design and construction. After the war thousands of commercial ships were built on the Great Lakes and on the east and west coasts. The industrial revolution, dramatic rise in foreign trade and a westward population expansion triggered an explosion in ship design creating more specialized boats and ships. On the Great Lakes, bigger and bigger ships were required to carry the ever increasing size of bulk cargos which in turn required stronger built hulls. Longer ship hulls created problems of the ships hogging, causing compression forces in the keel area and tension forces at the upper deck level. To try to fix the problem larger keelson structures were added to the hull. The issue with this was there is only so much timber you can add before the sheer weight and loss of cargo area begins to become a problem. A host of configurations were tried.

What happened next was a revolution in ship framing invented by the Great Lakes ship builder Frank Kirby. In the photos, you are looking at iron straps that were let down into the outer face of the hull framing. Frank Kirby's idea was to run an iron plate along the sheer of the hull from the stem to the stern. The straps were bolted to the iron ban then crisscrossed along the hull. This idea really straightened and stiffened the hull and became widely used on lake bulk freighters.



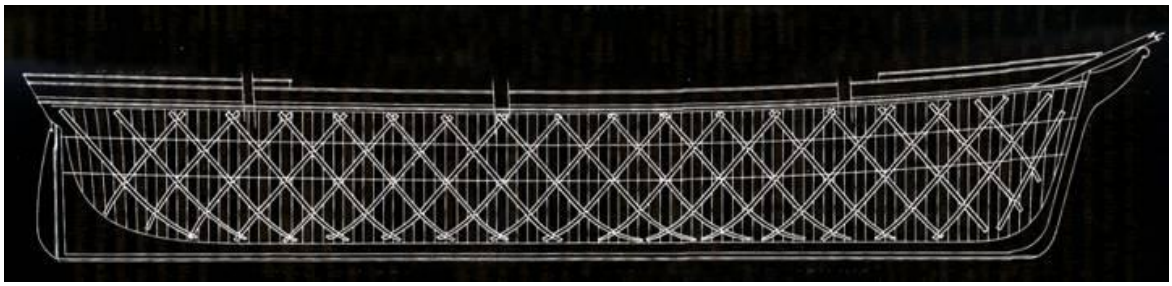


On the east coast another ship builder, a Canadian named Donald McKay born in Shelburne, Nova Scotia took the strapping idea to create one of North America's most famous type of sailing ship, the clipper ship. The average speed of a sailing ship was 150 miles a day; the clipper could sail at a speed from 250 to 400 miles a day. These ships were built for speed and to carry profitable cargos. People were eager to get to the California gold fields and would pay premium prices to get there by the fastest clipper ship. Once there, the miners would pay top dollar for the goods and supplies they needed from back east. The ships that brought the goods to California first could earn a fortune for the owners. Tea from China brought a good price in New York and London, some enterprising merchants made their fortunes by shipping ice from the ponds and rivers of New England to the tropics where it was a rare and valuable luxury, but they had to get it there before it melted. Clippers provided this opportunity and often challenged other clipper ships to races to see who could hold the title of "the fastest ship". Weight was the biggest issue for speed of the clipper ship so McKay used an old 19th century system of framing to reduce weight, but the trade off was a weak hull structure. The dimin-

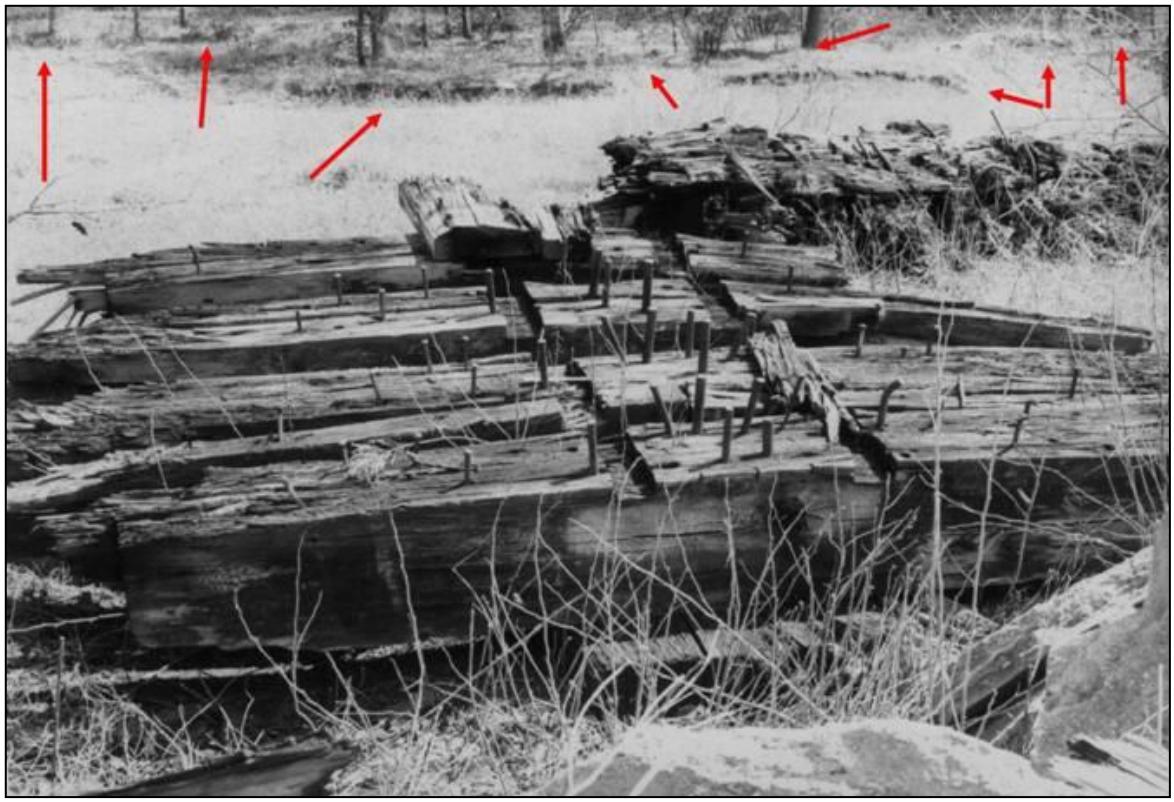


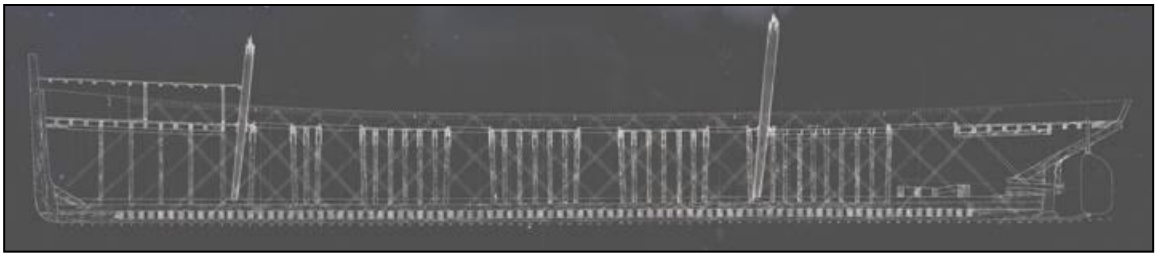
ishing sizes of the frame timbers caused the hull to sag and hog, deforming the shape and reducing the speed.

Using the strapping invented by Kirby, McKay put the strapping inside the hull under the ceiling planking as apposed to Kirby's idea of using it on the outside of the hull under the hull planking.

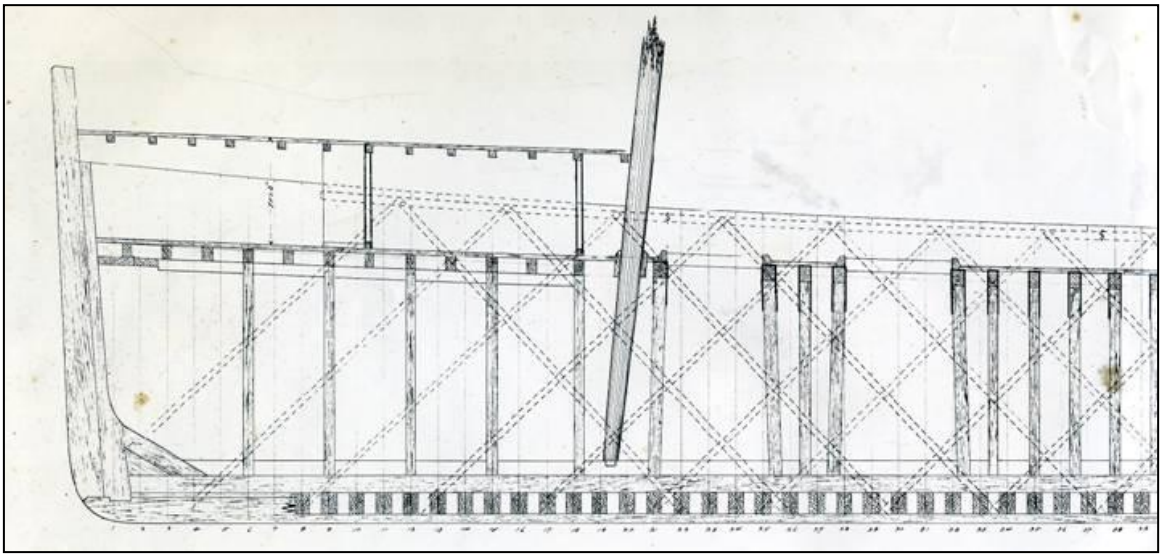


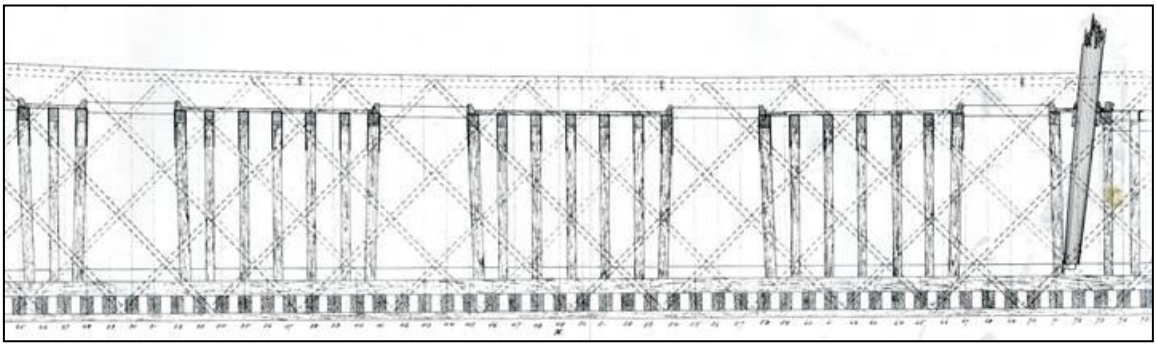
The introduction of the steam engine ended the clipper ship era and changed the way ships were framed. Ship builders now had to take into consideration the localized added weight of machinery and the stress it causes on the framing. In this first photo is a debris field of one of the last wooden steam bulk freighter built on the Great Lakes the U.S. Army Corps of Engineers removed the Argo to clear a shipping lane and dumped the timbering in a field, the red arrows show sections of the hull.

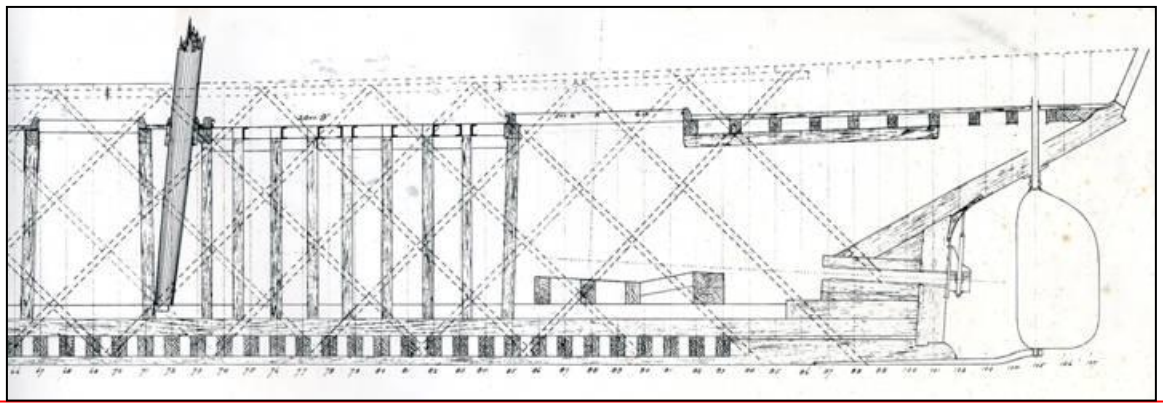




Taking a look at the micro film image of the inside profile plan of the Argo we can see the strapping drawn in and the framing along the keel. Looking closer at the drawing and at the sections of the hull we find the bones of the Argo tell a different story than her drawings.

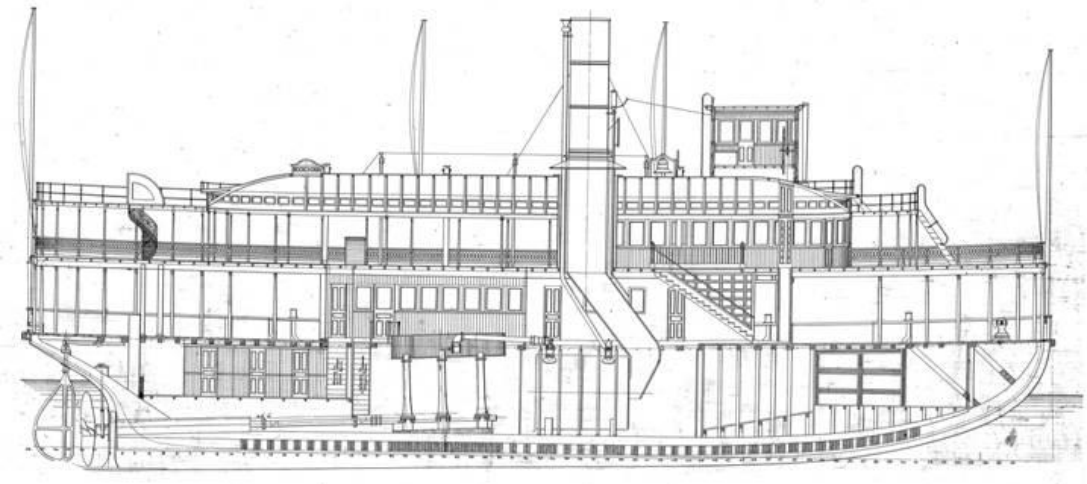






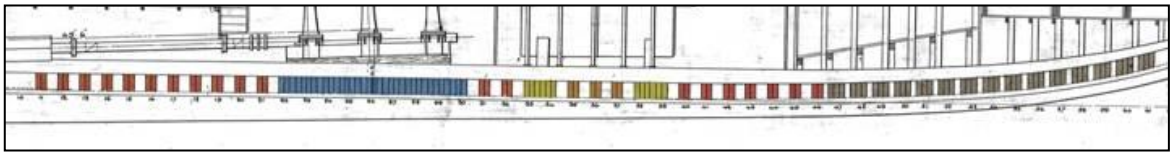
Notice on the drawings all the frames are the same size and spacing. Now let's take a look at some of those hull sections. In one section there is a double frame, then a triple frame followed by two more doubles. The keelson is still attached to the frames so they are still in their original locations. The frame to the right is closer to the triple frame than the one on the left. The next photo shows three triple frames. The spacing of the frames went from 5 inches to 7 inches and frame timbering varied from 6 to 8 inches. The Argo was one of the last

wooden vessels built on the lakes and we see in its hull the same unevenness of frame timbers and spacing as we saw in ships built almost a 100 year before. Frames drawn on plans do not always match the actual construction, something seen through out the history of ship building.



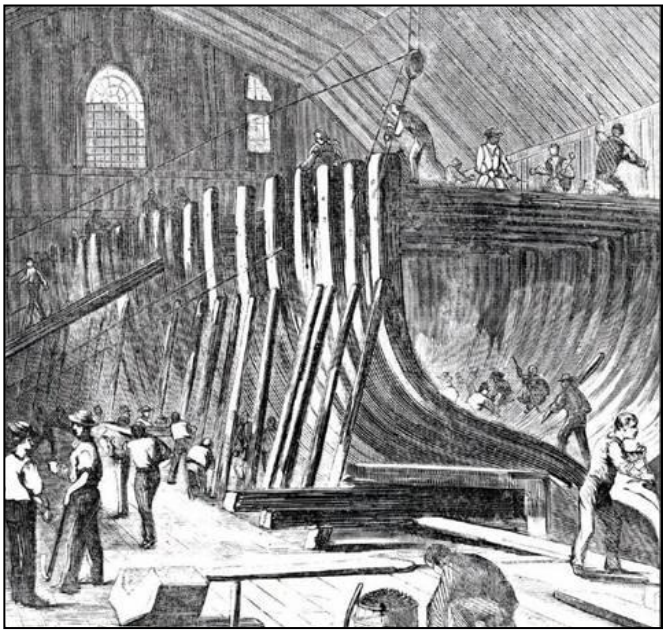
In the case of the drawings for the steam ferry Pleasure the draftsman drew different size and spacing for the framing on the inside profile drawing. This is a prime example of framing being adapting to the vessel. Taking a closer look at the framing, starting at the bow all the brown frames are triple and above these frames are the coal storage bunkers, then we have red double frames, then two sets of yellow triple, three orange double and

another two sets of yellow triple frames, this set up is the boiler foundations. Next there are two sets of red double frames, the blue frames are a solid mass for the engine foundation. Finally back to the red double frames.



No doubt this is how the Argo was built, but the draftsman did not specify the exact framing on the plans. This was left up to the builder and it must of been taken for granted the builder knew what to do as he built the hull.

In conclusion it could be said that from the beginning, ship builders came to North America from all over Europe, each bringing their own style, design and building methods. North America had no vocational or technical schools nor were there any formal apprenticeship programs for ship building. Shipyards that were in operation hired from house and barn carpenters to ship builders from a number of nationalities. Just in one shipyard French carpenters could be working side by side with Scottish or English ship carpenters. Beginnings of the American Shipwrights were rooted in empirical knowledge from many sources. Shipwrights took the best of this practical information and developed a style of ship building unique to North America by combining different methods used over a hundred year period of European ship building. As a result of this you can find an English framing method use in the later part of the 18th century repurposed in a New York shipyard by a Canadian in 1840s or French framing practices used in British ships. This mash up of ship building finally organized under the name of The American Shipmasters Association.



In the fall of 1861, a group of prominent figures from America's maritime industry gathered at the Merchants Exchange on Wall Street. As virtually all of the young country's foreign trade was conducted by ship, this group of marine underwriters, shipbuilders and shipmasters represented some of the leading forces in the national economy. Their meeting had been convened not only to protect the interests of their companies, but also to address serious issues confronting the future of their still developing industry. One issue was the establishing of rules for the construction of wooden vessels.

However, as a fictional character in *Pirates of the Caribbean* said "the code is more what you'd call "guidelines" than actual rules". Shipbuilders still built ships as more an art form than an industrialized machine-made product. From the earliest Admiralty plans to the mechanical drawings of the later 19th century were considered conceptual drawings and constructional details were always left in the hands of the builder.

A final word about the contemporary model ship community building models of historic wooden ships. Spending many hours collecting data from various sources such as web sites, forums and historical data bases it is clear the state of the art is in a state of confusion when it come to historical facts and misinformation. As an example I came across the statement "Hahn ship models are a stylized form of framing because he did not taper the frames" such a statement is in fact totally wrong. After researching his model collection the ships are all ships of war built in North America the double framing would be correct and they would not have tapered. I have come across models called "admiralty models" when in fact they are not framed in the classic style of the Admiralty model, I have seen framing in American built ships using old English filler frame construction. There are ship models labeled "historically framed" with perfectly sized and spaced frames. This is in fact a stylized form as real ships were not built with perfectly spaced frames and perfect sized timbering.

As I end this three part series I hope to have shed some light on this most fascinating subject and hobby and encourage the talented model ships builders to continue their quest for the holy grail of the historic ship model reproduced in miniature.

Historic Naval Shipyards

Penetanguishene Historic Naval and Military Establishment

The yard was originally located at the Wasaga Blockhouse in Drummond Island after the abandonment of Amherstburg Royal Naval Dockyard. Land was acquired in 1798 and a base finally built in 1813, but it was abandoned in 1815. It was reinstated in 1816 and remained on the island until 1834.

The base was later relocated near the Nottawasaga River at Discovery Bay in 1816 and served as the Lake Huron fleet of the Provincial Marine until 1834. The navy transferred the base to the army and served until 1856. The base also served northwestern supply routes and provided general surveillance of the upper Great Lakes.

The navy base and army depot comprise 15 buildings, including:

- officers barracks
- warehouses
- offices
- King's Wharf
- 3 storehouse

Vessels built or stationed here:

- Bee - gun boat
- Minos - gun boat
- Mohawk - steamer
- Tecumseh - schooner
- Newash - brigantine
- Mosquito - gunboat
- Wasp - gunboat
- unnamed frigate 1814

The base is now rebuilt as part of the Penetanguishene's Historic Naval and Military Establishment. B. Napier Simpson, Jr. 1925-1978, a restoration architect in Ontario devoted his professional life to raising public awareness of the importance of heritage conservation including the Penetanguishene's Historic Naval and Military Establishment. project,[1] now known as Discovery Harbour.

HMS General Hunter Proto-Type Model—Part 1

By Dave Stevens

In the May 2011 issue of the *MSB Journal* there is an article titled "What happened to the HMS *General Hunter* project?" authored by Winston Scoville. As the titled suggests, Winston brought us up to date on the HMS General Hunter Project to that point in time.

As a brief recap of this article, our first reconstruction of the General Hunter was based on a model on display at Fort Malden in Amherstburg and plans drawn by John Stevens both highly respected sources. Also used as reference material was an article in the *Nautical Research Journal* (a publication of the Nautical Research Guild) on the General Hunter and plans and information published in the book Warships of The Great Lakes, which used the John Stevens plans. Combined, all this information presented a pretty sound theory as to the information we needed to develop modeling plans for the purpose of building a model of our version of the General Hunter. There seemed no reason to doubt any of the information at hand.

Then out of the sands of the Southampton beach in Ontario, Canada, the wreck of an old ship was found with timbering protruding through the sand. This wreck was later determine to be that of the HMS *General Hunter*.

From the published data and only bits of incomplete information of the shipwreck along with some images that we had seen of the wreck site the first reconstruction was done. But as more field information came to light (later provided to us by the archaeological team) it was clear the shipwreck did not match the published information that we had at hand and in some cases other known historical data. In fact, the deeper we dug into the research, we began to realize even the published historical "facts" contradicted each other. For example, when various primary sources were compared it was found that primary sources tell us that we were looking at as a ship that ranged anywhere from 45 tons all the way up to a 90 ton vessel. Some primary data give a length of 54 feet but does not clarify whether it's the keel length or the length on deck. There are still a few loose ends that could be investigated further but the archaeological team is 100% sure they have the wreck of the General Hunter so leaving it at that, as they say it was back to the drawing board and a new set of drawings was eventually developed which are based on the wreck findings.

If the model were being built as a one off for display piece at a museum or historical society or perhaps for my own personal collection I would approach the project in a certain way, ending up with a model that was built more or less as the original ship to the detail.

However, after much discussion between Winston and I it was decided that we would go a step further and turn the project from developing a set of conceptual ship drawings to developing a kit that anyone could build, and that required a completely different approach. So, instead of ending up with an exact as built scaled miniature of the ship we have developed the conceptual rendering of the ship based on the actual shipwreck data. Simply put, we had to work backwards. Starting with the data from the wreck, hull lines were developed. Then formal modeling plans were developed.

The building of the prototype model could have been done numerous ways. We could have kept the information and prototype build internal and only released the final model kit with instructions. Or, we could post the progress in a build log on the Model Ship Builder website. In the last issue of *The MSB Journal* Winston has charted the course for the project.

> *"Initial research notes and drawings of the wreck site were provided by Ken Cassavoy and his archaeological team. Based on the information at hand and some additional research, conceptual drawings were developed for the model kit. The next stage in this process will be the actual construction of the proto-type model. This build was initially to be covered in a build log on the MSB site, but after some discussion we thought too much background information would be left out as build logs tend to be pretty dry. So it was decided that we would run a series of articles on the build in the MSB Journal."*

After pondering the series for awhile I didn't want to go on and on and do a traditional glue part A to part B and sand this or that type of article. Instead, I thought why not cover a wider field of general information on kit design and model ship building. If you were not interested in building the General Hunter itself, at least you might get a little bit of hmmm... I didn't know that, or at least take away some building tip that you can use on a different modeling project. I also thought that you the reader would find it interesting to see what's actually involved in the development of a kit.

So, with the drawings in hand we are off on our journey.

Laser Cutting

In days gone by there used to be something called a hobby shop where you can go into and buy model kits. What was interesting about these old wooden kits is that the parts were die stamped on a sheet of Balsa wood. For those of you who do not remember these type of kits the parts looked like those in the image to the right.

The edges of the parts were usually rounded from the pressure of the die stamp. You would not find sheet parts made of hardwood because it would take a lot of pressure to cut through hardwood often smashing the delicate parts so Balsa was the wood of choice.

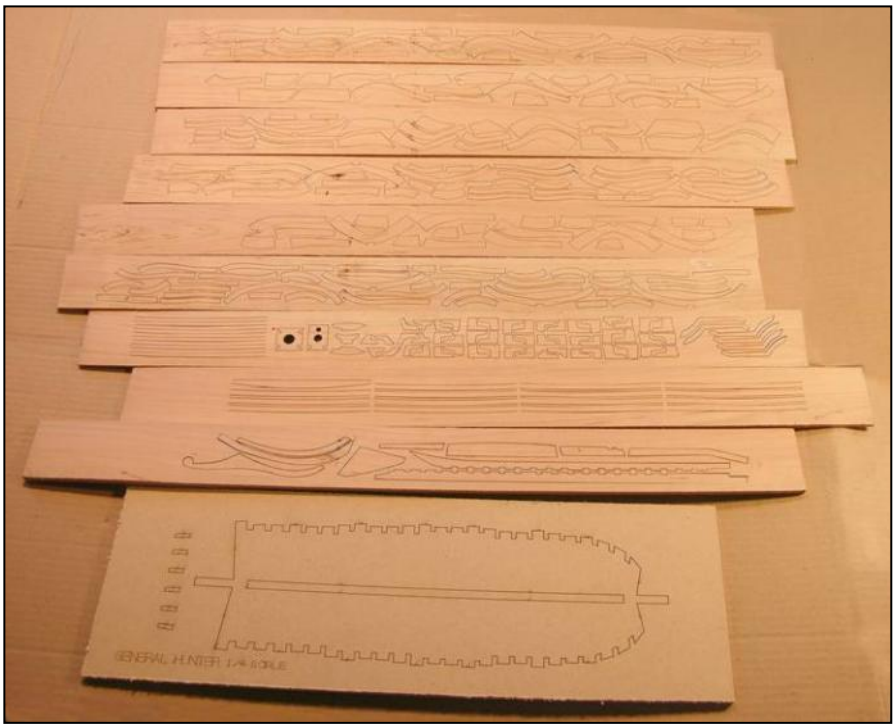
A kit like the General Hunter uses a similar approach as the old stamped balsa kits, except, in this day and age computer controlled laser cutting has replaced the die stamping and allows for a greater selection of materials as well as more precise parts. A CNC router is another choice for cutting out parts but the main drawback is that it's about a 10 times slower process and when time is money and your being billed per minute of machine time the faster you can cut the less it

costs. Another problem using a router is it uses about twice the material because the cut is much wider than the .015 of a laser so you have to space the parts farther apart.

So we have said good bye to the hobby shop, the owner in his white shirt and tie along with wooden die cut kit parts, and we've moved into the 21st century of computers and 3,000 watt lasers.

I have read various questions online over the past few years relating to laser cutting such as... how do you remove the laser burn? Once you clean off the burn will that make the parts to small? Does the laser cut on an angle? With more and more model ship kits using laser cut parts lets begin by taking a look at how parts are set up for laser cutting and see if we can answer some of these questions.

In the case of the General Hunter being designed as a kit the parts would have to be mass produced over and over so the best approach was to laser cut as many parts as possible. This would also allow a builder with a minimum of power tools to build the kit. A builder would not need a scroll saw or table saw to cut out all the parts as this step was done and all that is needed are hand tools to complete the job.



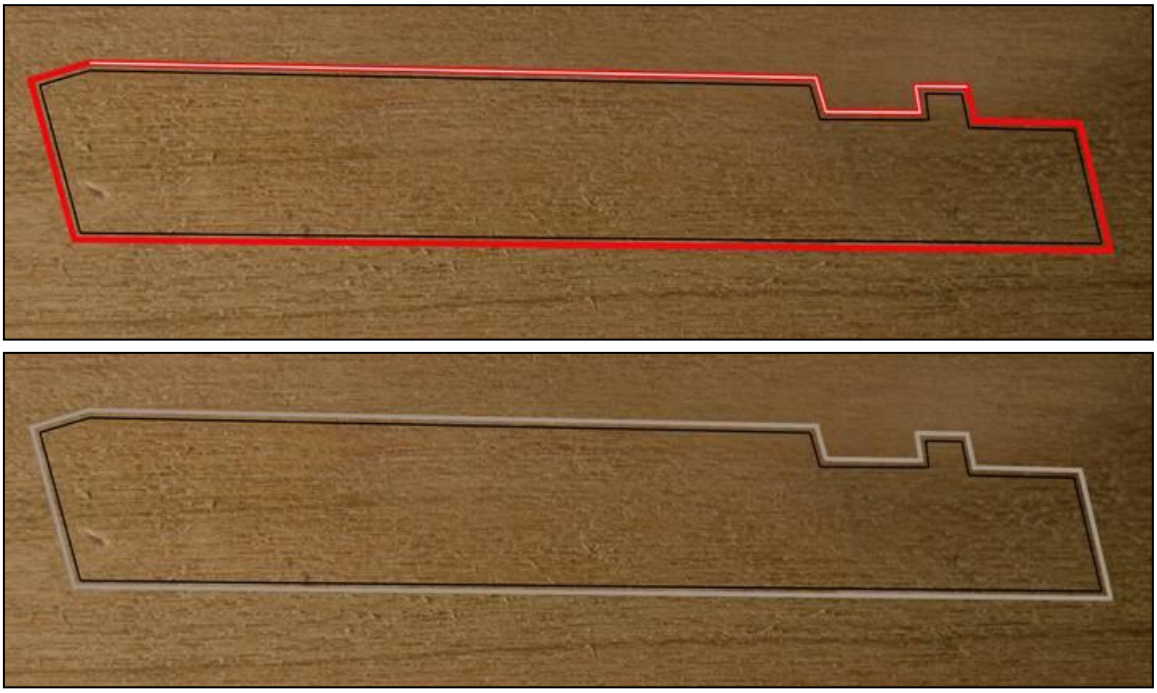
In setting up the laser cutting file on our computer we need to know what the laser does and how it works. Laser cutters come in many different wattages from as low as 20 watts up into the thousands of watts. A 100 watt laser just about cuts through 1/4 inch thick hardwood, but it has to cut slowly. The slower the laser cuts the more the laser will burn the wood. Conversely, the faster it can cut the less burn it leaves. We have learned that a laser of something around 2,500 watts power cuts through one inch hardwood, so it makes for really quick cutting speeds through 1/4 inch wood and leaves very little to almost no laser burn. It almost defies logic but in reality the more power and hotter the laser is the less it burns. The faster you can move the laser beam along the wood the less time it has to sit and burn. Incidentally, that "burn" you see on the edge is really not burned into the wood, it is a residue of charcoal soot sitting on the surface. This can be cleaned off by scraping it with a razor blade, a light sanding or even washing it off with a damp cloth depending on its severity. Depending on the laser cutter, the type of laser and the settings will depend on the final cut edge. In some cases the wood will have a slight burn on the surface but that is around 5 thousandths of an inch into the wood. You can clean all traces of the char on the edge and remove no more than a few thousandths of an inch of wood.

When parts are setup in the laser cutting file some pre planning is necessary to ensure the sizes of all the parts are correct so that everything will fit together properly in the model being built. When a laser cuts it removes material. We need to ensure that the material that is removing is not to the inside of the actual part, otherwise we would end up with a part that is too small. So the first thing we need do is consult with our laser cutter to determine exactly how much material will be removed in the cutting process. Armed with that information we can then adjust our drawings by offsetting the actual cutting line from the original drawing line.

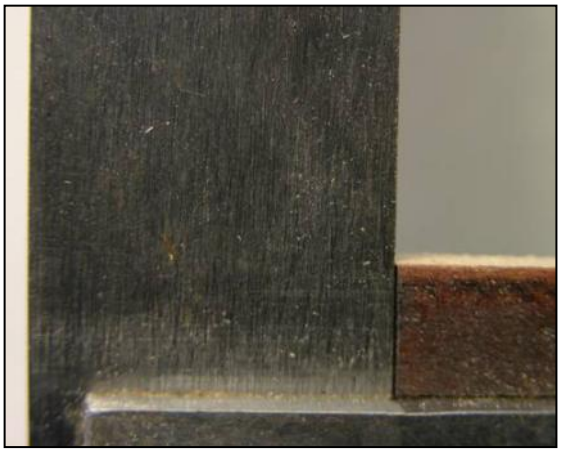
In our case that meant that the lines on the original drawings all had to be offset .15.

The image on the left above shows the final part we wish to achieve. The image to the right shows what the size of the outside cut will be.

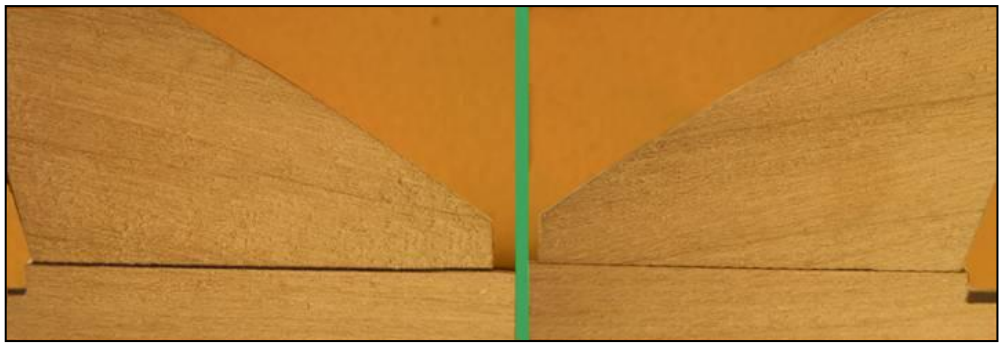
In the images below, drawn out, the parts represented by the black line is the actual part drawn in CAD, the red line represents the thickness of the laser beam. The black line is offset to the location of the white line shown in the second image to allow for the cutting beam and enough material for fitting and finishing. The final results in the second photo shows the part is cut ever so slightly bigger than the finished piece giving the builder enough room to clean the edges without worry the parts will end up to small.



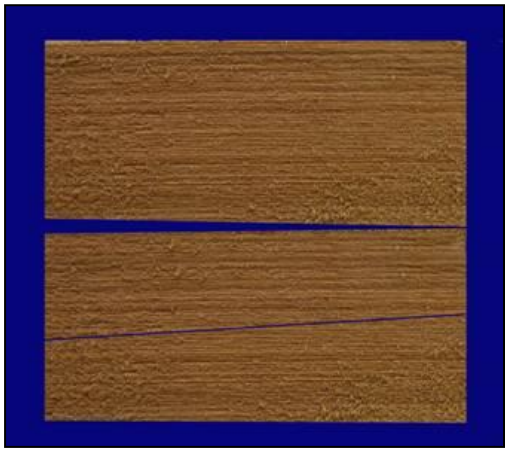
Another issue model builders are concerned about is a laser cutting on an angle. The question of a laser cutting the edge on an angle depends on the laser cutter, how they focuses the beam and how well their machine is maintained and set up. A laser beam will naturally have an hour glass shape and this will cause a slight angle to the cut, at most about 3 degrees over an inch in material thickness. When cutting material as thin as 1/4 inch the angle is so small as you can see in the close up photo to the right the cut edge is set in a square and you can't even see an angle.

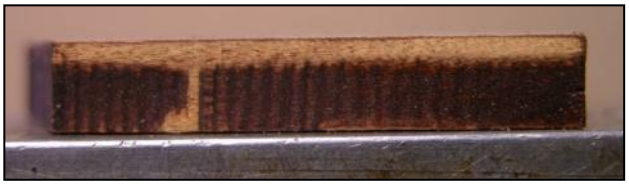


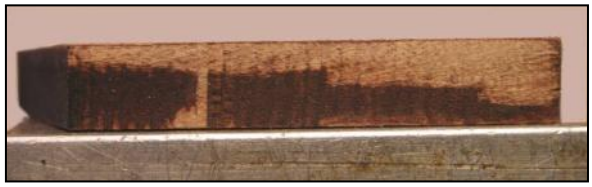
One way you can see an angle is if you set two edges together. One side of the joint where the two pieces meet is wider than the other side and this is caused by the slight angle of the cut on both pieces adding up to a wider space as you can see in the next photo.



In some cases like building a frame you can flip the pieces from side to side thus aligning the angles like the thin line at the bottom. In most cases sanding will take care of the problem. If you have a 4 inch disk sander use a fine grit paper 100 to 120 and just ever so lightly touch the edges to the sander to remove the loose soot. You don't have to sand the edge perfectly clean. If you are cleaning the edges by hand, what I do is to use a single edge razor blade and scrape the edges. First set the pieces together and find the side with the biggest gap. Now start scraping along the opposite edge where the pieces fit tight. You want to remove a little material to bring the bigger gap closer together.



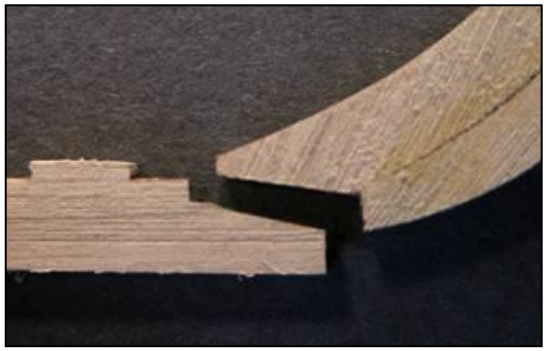


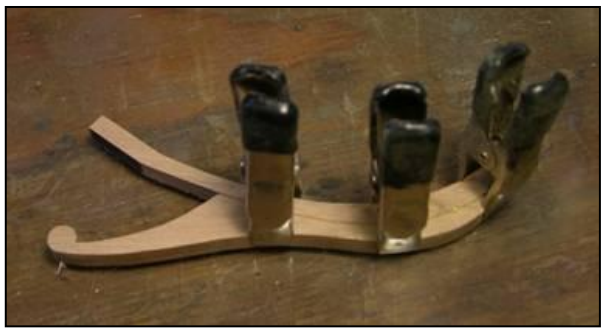


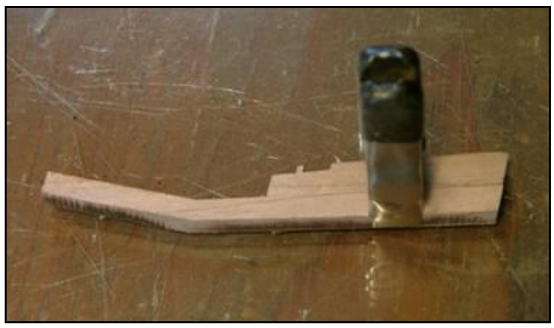
Take a few swipes across the tight edge and then widen your scraping until you move toward the other edge that has the wider gap. The General Hunter build has only a few small edges that need to be adjusted this way. For the most part the laser cut edges do not butt another.

Beginning the Assembly

The first parts to be assembled were the stem and sternpost. The reason this was done first was to ensure we have a good joint in the scarf joint where the stem meets the end of the keel. It would be difficult to get a nice fit if the stem and apron were separate pieces and trying to fit all the pieces to the jig. The same applies with the stern post.

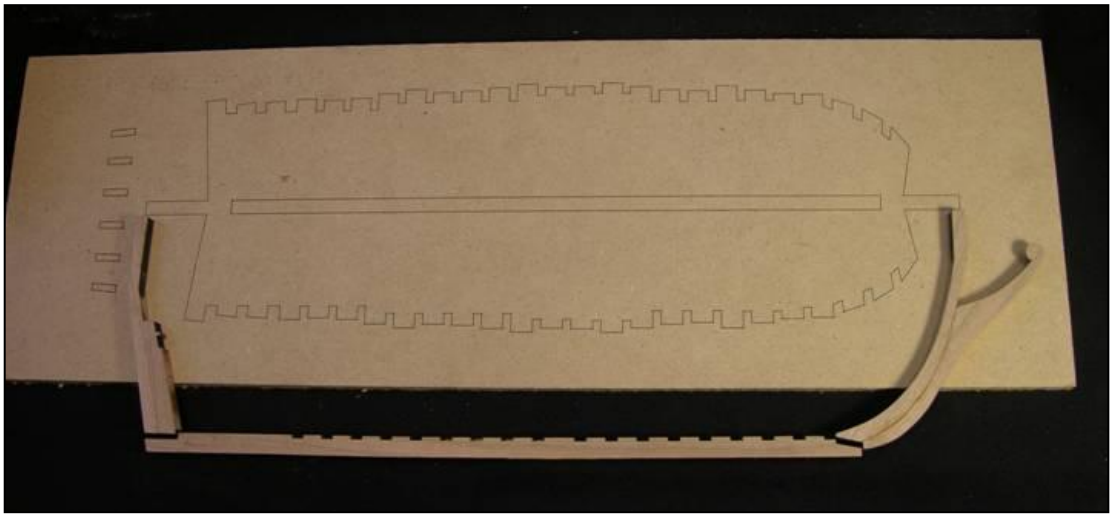






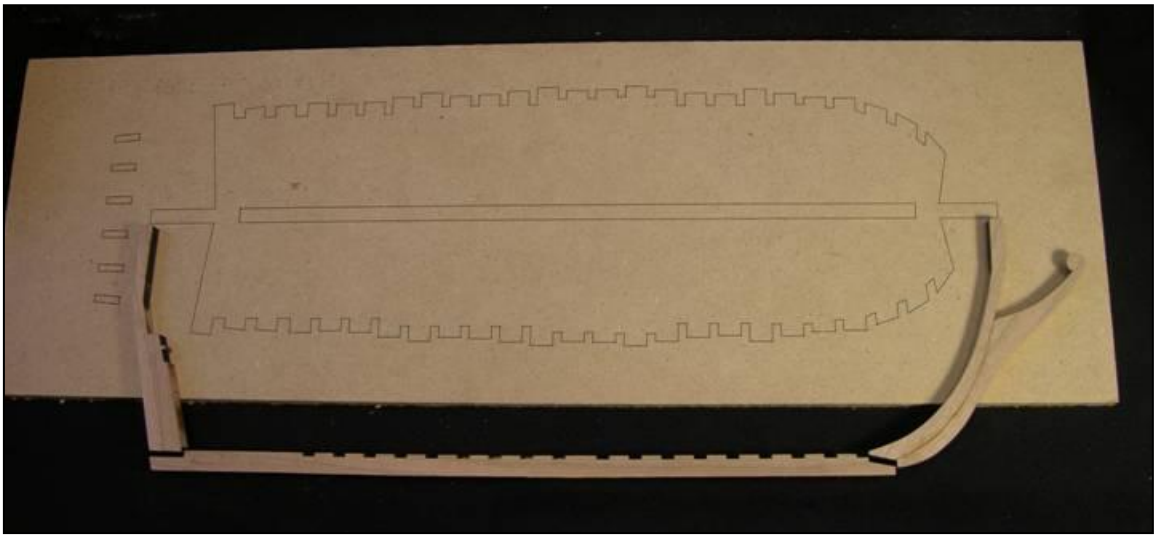
The best method for building the hull is to make use of a jig (part of the kit) which keeps everything in line and held in place. The idea here is to ensure that you are as accurate as possible in your construction right from the start, because any errors you make now will just cause more problems as you progress with the build.

Before starting to insert parts in our jig, the first thing that needs to be done is to



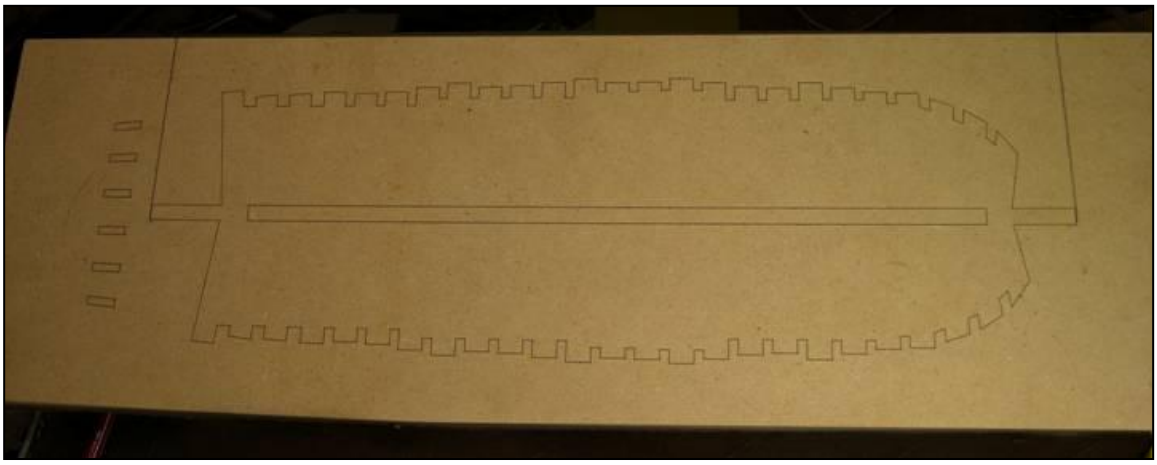
build the keel assembly, which must fit into the jig slots.

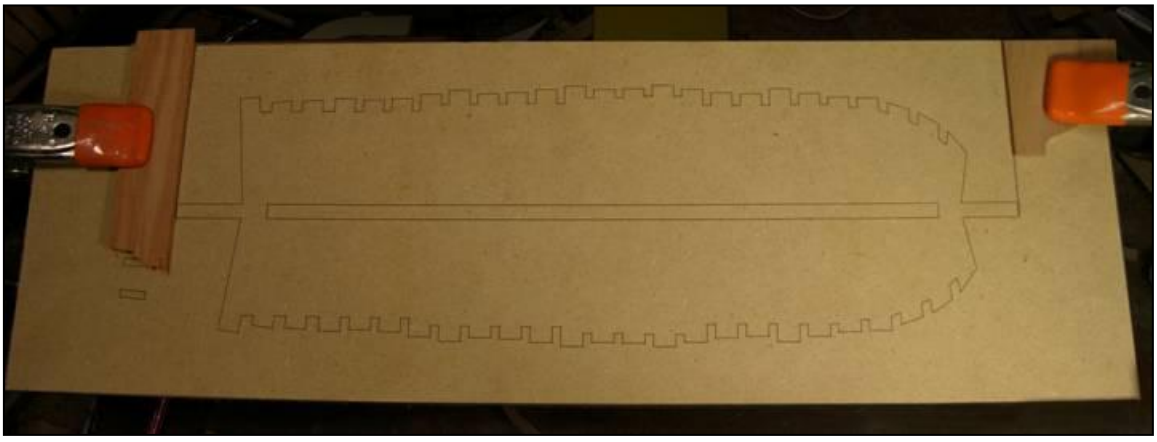
First thing I did was to draw two lines square to the front edge of the slots that the stern and stem post will sit in. Then using two scrap pieces of wood I clamped them on the

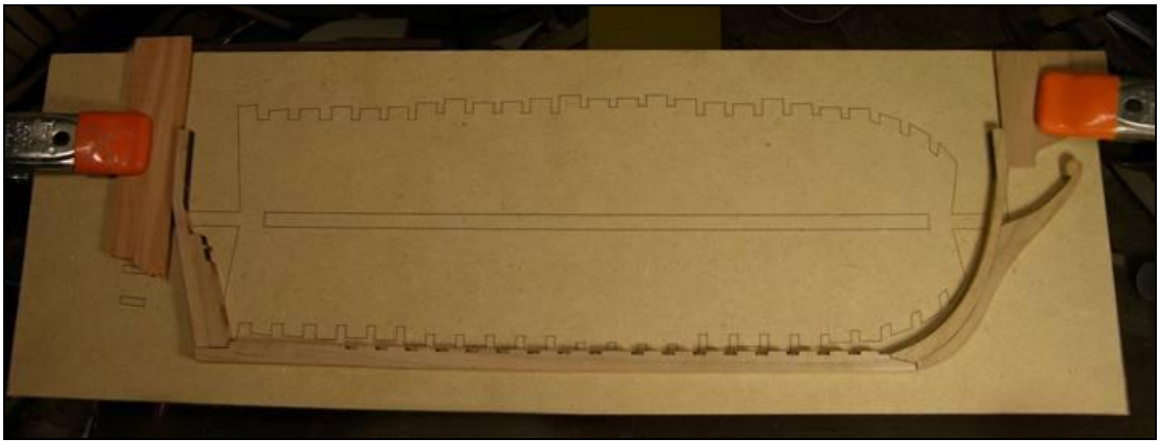


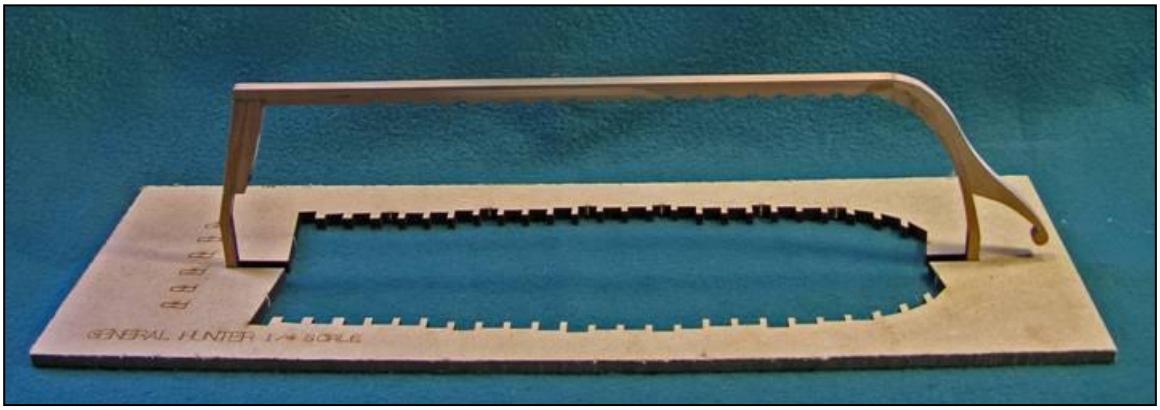
lines, This was done to make sure the stem and sternpost both have a solid edge to rest against and they don't slip during the gluing process.

Once I was content that the keel assembly fit the jig properly I then moved ahead and fit in the deadwood. As can be seen in the first photo, the angle of the deadwood is



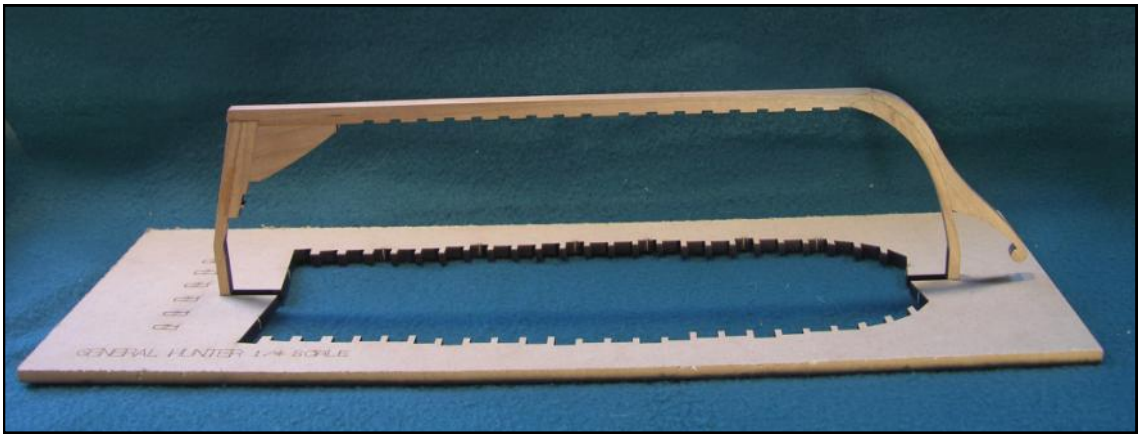






slightly off between the stern post and the keel. It is more important, however, to ensure that the keel assembly fits the jig as the deadwood can be adjusted to fit properly. This is very common with laser cut kits and the cause is just a few thousandths of an inch here or there. When adjustments were made to get a tight fit between the end of the keel and the stem, the width of the line drawn on the jig, just as little as .006 from the laser cutting the slots all add up to a slight misfit somewhere down the line and it showed up when fitting the deadwood. Mind you we are only talking thousandths which do not affect the over-

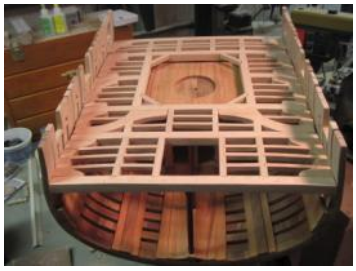
all model. This took an ever so slight touch against the disk sander and the deadwood it perfect.



We will stop here in part one of the proto-type build. The next step in this build is the building of the frames which will be covered in part two.

The Bomb Vessel Cross Section Model

An exclusive Model Ship Builder Modeling Project




"...This is the finest set of drawings I ever worked with!"
Mike. Rohrer—Proto-type builder

"These drawings are amazing! I'm looking forward to building this model"
Daniel Richardson—USA

"Extremely detailed plans for a model. I have to say, I'm very impressed. Great Job!"
Alfred Anderson—U.K.

"Plans arrived today... They far exceeded my expectations... Thank you!
Tristan Rockstrom—Canada

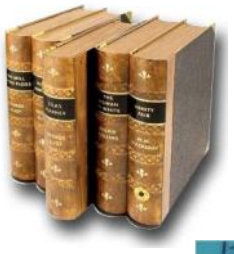
A 1:48 scale model based on Peter Goodwin's "Anatomy of the Ship—Bomb Vessel Granado and original Bomb Vessel drawings by Thomas Slade.

Contains 63 pages of detailed drawings and templates of every part of the model.

Numerous 3-dimensional constructional drawings provide you all the information you need to know to build this model. As well, it is supported by an online forum where you can ask questions, view other builds as they occur and even display your build if you wish.

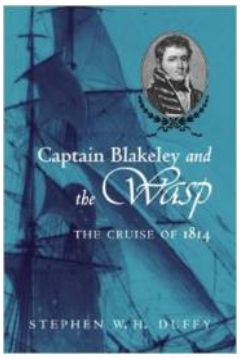
Plans: $57.50CND set + Shipping/Handling

Available at www.modelshipbuilder.com



The Book Nook

Books of interest for the Model Ship Builder
and ship building enthusiasts



Captain Blakeley and the Wasp:
The Cruise of 1814
By Stephen W. H. Duffy
Naval Institute Press (2001)
Hardcover, 348 Pages
ISBN-10: 1557501769
ISBN-13: 978-1557510769

In Captain Blakeley and the Wasp: The Cruise of 1814, Stephen Duffy tells, in a readable and coherent fashion, the story of Master Commandant Johnston Blakeley of the American sloop of war *Wasp* in 1814. Duffy draws on archival information from numerous institutions to introduce the reader to the young Blakely, from his early years serving under Thomas Truxton on the *President* and John Rodgers on the *John Adams* to his command of the brig *Enterprise* in 1811. Subsequently he is sent to Massachusetts to supervise the construction of the Sloop of War *Wasp*.

Duffy demonstrates his passion for detail and accuracy as he chronicles the building of the *Wasp* and Blakeley's struggles to outfit and crew his new ship, Designed as a commerce raider, *Wasp* was rated at 509 tons and eighteen guns with a crew of 173.

On June 28, 1814 Blakely chased and brought to battle the Royal Navy's HMS *Reindeer*, a Cruizer class brig sloop of 18 guns which had been dispatched specifically to hunt down the *Wasp*. When the battle had concluded, the *Wasp* was victorious but damaged. Blakely sailed to France for repairs. En route, with his boat operating at less than 100-percent, the commander still captured two more prizes.

The *Wasp* was back at sea by August 27, and Blakeley set course for Gibraltar, and continued cruising successfully throughout the fall, even winning a battle over the HMS *Avon*. As news of Blakeley's success filtered back to the United States in the fall, he became a hero, and Congress promoted him to Captain on November 24. Meanwhile, the *Wasp'*was long overdue, and rumors swirled concerning her fate. The British never made claims to sinking the ship, but the *Wasp* vanished somewhere on the Atlantic. The last confirmed sighting was Oct. 9, 1814 by a Swedish crew on the *Adonis*, some 225 miles SW of Madeira.

Although Blakeley was able to forward his official reports of the two battles before his ship disappeared, it is the missing "unofficial" information which provides the fog around what happened when the *Wasp* captured HMS *Reindeer* and then sank HMS *Avon*. Duffy is able to provide a cogent and informative interpretation of the available archival records, and brings Blakely to life as a tragic hero of his time. Challenged by the constraint on any student of history, Duffy was faced with the paucity of primary source accounts from Blakeley and his close associates, so he frequently was forced to resort to speculation about the thoughts of the young officer regarding various situations. Mr. Duffy has succeeded in providing not just a story of a young man who was in the right place with the right ship at the right time, but also presents a well-researched and documented study of a junior officer in the small American navy at the beginning of the 19th Century.

Reviewed by Wayne Tripp

Don't forget to check out the
Model Ship Builder Amazon Bookstore.

Badges: Heraldry of Canadian Naval Ships

HMCS Nanaimo

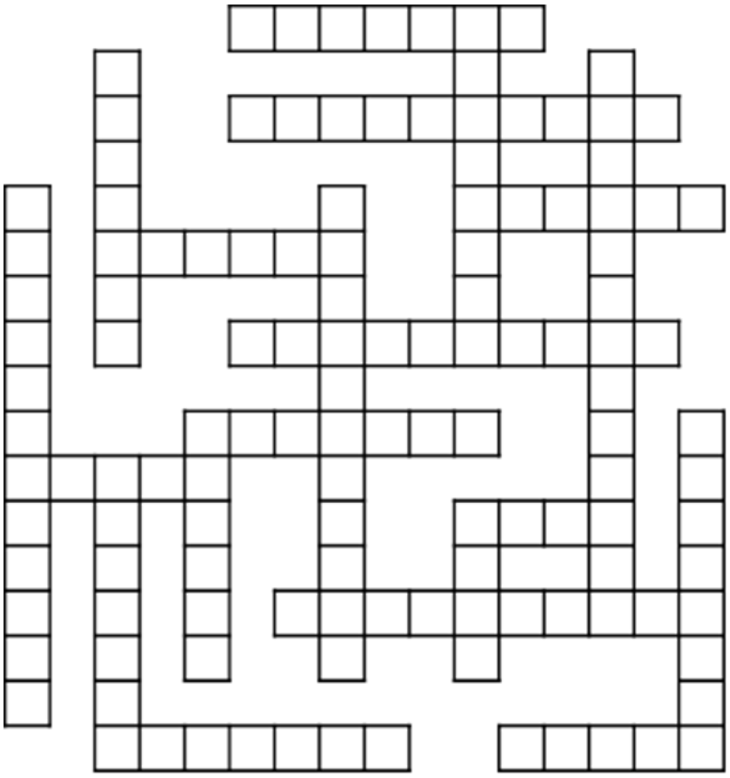
Significance: The background of blue and gold wavy lines represents the appearance of the sea on Canada's west coast as it reflects the setting sun. The Nanaimo Bastion is a famous landmark dating back to the days when the Dity was a Hudson's Bay Company trading fort.

Canadian Navy HMCSA Nanaimo (MM702) Patrol Vessel

Source: Various

Gene's Nautical Trivia

Ships of the Hornblower Novels



4-letter words
- CLAM
- CRAB

5-letter words
- FLAME
- LYDIA

6-letter words
- LE REVE
- PHOEBE
- RENOWN

7-letter words
- AUGUSTA
- ATROPOS
- HOTSPUR
- NONSUCH
- ROEBUCK

8-letter words
- CAROLINE
- CLORINDA

10-letter words
- MARGUERITE
- PORTA COELI
- SUTHERLAND

11-letter words
- RETRIBUTION

12-letter words
- WITCH OF ENDOR

13-letter words
- INDEFATIGABLE

Historical Figures in the Hornblower Novels

Match the historical figure with the novel in which he/she appeared.

1. _____Prince Karl XIV Johan of Sweden
2. _____Napoleon III o France
3. _____King George III of the UK
4. _____Secretary to the Lords of the
5. _____Admiralty William Marsden
6. _____Spencer Perceval Prime Minister
7. _____Lady Frances Dalrymple
8. _____Rear Admiral Sir James Saumarez
9. _____General Count Pierre Jacques Etienne Cambronne
10. _____Admiral Sir Graham Moore

A. Hornblower in the West Indies
B. The Commodore
C. Hornblower and the Crisis
D. The Last Encounter
E. The Happy Return
F. Hornblower and the Hotspur of the UK
G. Mr. Midshipman Hornblower
H. Hornblower and the Atropos
I. Flying Colours

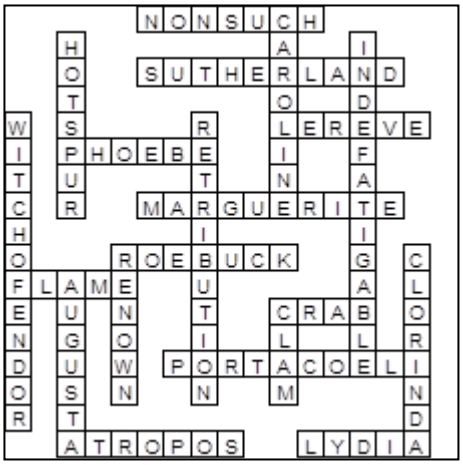
WET OR DRY?

The following nautical terms begin with "wet" or "dry." Can you name the term from the given definitions?

1. _____ Closet used for stowing foul-weather gear.
2. _____ Sailor's slang for "foolish."
3. _____ Enclosed basin or vessel with watergates capable of holding the water on the outside.
4. _____ Storage area aboard a ship where non-refrigerated food is kept.
5. _____ Magnetic device in which a card floats in a solution of 45% ethyl alcohol.
6. _____ Waterproof body covering used in diving.
7. _____ The total area of a vessel below the waterline, measured in square feet.
8. _____ Decay often associated with old wooden boats.
9. _____ A slip in which a boat is stored.

ANSWERS:

SHIPS OF THE HORNBLOWER NOVELS:



HISTORICAL FIGURES IN HORNBLOWER NOVELS:

1-B, 2-D, 3-H, 4-C, 5-I, 6-G, 7-E, 8-A, and 9-F

WET OR DRY?

1 WET LOCKER
2 WET AS A SCRUBBER
3 DRY DOCK
4 DRY STORES
5 WET COMPASS
6 DRY SUIT
7 WETTED SURFACE
8 DRY ROT
9 WET STORAGE