

The Whiskey Strake

“Believe me, my young friend, there is *nothing* — absolute *nothing* — half so much worth doing as simply *messing about in boats.*” -Kenneth Grahame, *The Wind in the Willows.*

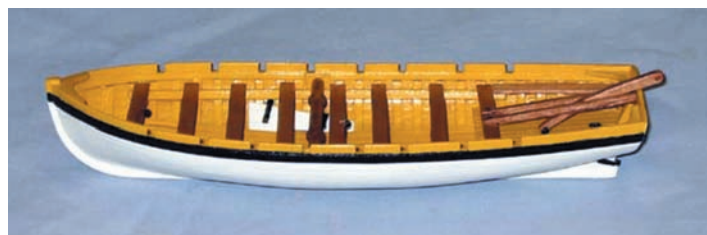
In this issue of *Warships to Workboats*, we have bookend articles about boats you can mess about *with*, if not *in*. Whether you want to add boats to your model warship, or simply want to model a working skiff, you should find useful techniques and sources of information for your project.

This issue also completes David Antscherl's fabulous primer on planking. The photos that accompany the article should provide inspiration, and an idea of what can be accomplished with practice and dedication.

Museums provide a vital research source in our search for accuracy in ship modeling. The *Vasa* Museum's Fred Hocker provides some valuable tips for getting the most from your museum inquiries. If you're inspired by *Vasa's* incredible carvings, Bill Short helps you carve your own model carvings. This issue also offers tips on printing your own flags, and serving your mainstays.

Summer has finally arrived in the Northern Hemisphere, with its longer days and warmer weather, so life should be a bit easier and more leisurely. What better time to retire to the workshop and create, if only sawdust and wood chips? And of course, you'll want to document your creation, and share it with the rest of us. And what better way than an article for *Warships to Workboats*?

-The Editor



Building Ship's Boats

By David Nelson

In the building of my 1:48 scale model of the HMS *Victory*, I kept putting off making the six ship's boats. The main reason for this procrastination was that while building the boats was not a lot different than building *Victory* itself, all of the boats' parts are smaller, and their interior is open.

This article describes the process of how I built *Victory's* boats.

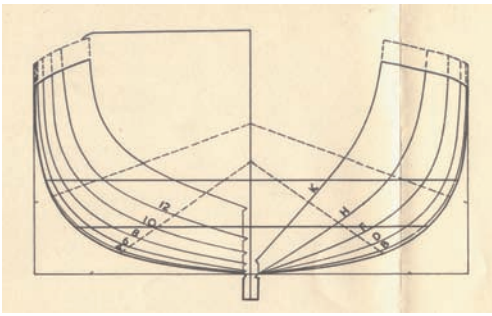
The major steps are:

1. Create the body plan, sheer plan and profile drawings to the scale you are building the boat.
2. Make a plug to be used as a mould for shaping the frames and planking the boat.
3. Make a base for the plug to give a stable working platform and to hold the frames in place.
4. Cut wood for the frames and clamp them to the plug.
5. Cut planking and glue to the frames.
6. Shape a moulding that will serve as the rubbing strake, gunwale and washstrake.
7. Cut the frames off at the top plank and glue the gunwale moulding in place.
8. Make and install the rudder, thwarts and other internal fittings.
9. Paint or finish the natural wood then sit back and admire your efforts.

Scaling the plans. In my case I used computer software to scale the plans and to create full body plans which provide both port and starboard frame shapes. If you do not have the computer resources required, you can go to a business copy center and ask them to rescale the

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plans on a photocopier.

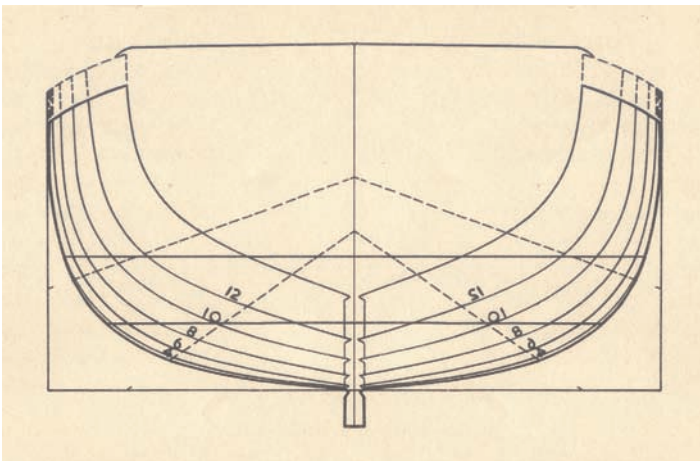
The drawings of the boat were scanned into the computer and PhotoStudio

2000 was used to rescale and edit them. You can use any photo or image editing software that allows you to rescale images and copy and paste selected parts of the image. When rescaling the drawing, both the beam and overall length must be checked to ensure it is correct.

The next step is to create a view of the body plan which gives both port and starboard rib shapes fore and aft. First, copy the body plan and paste it into an unused portion of the drawing page. Then, select the aft half of the body plan, copy and paste it into a blank drawing page. When selecting this half of the body plan it is critical that the right side of the selected area is exactly on the center line of the body plan. Use the software to flip this image on its horizontal plane. This gives you a starboard view of the aft rib set. Copy this flipped image and paste/move it to the right of the aft body plan so that the center lines at the keel of each image are superimposed. Measure the beam of the combined image to ensure that it is correct. If the beam is not right, move the flipped image to correct the beam.

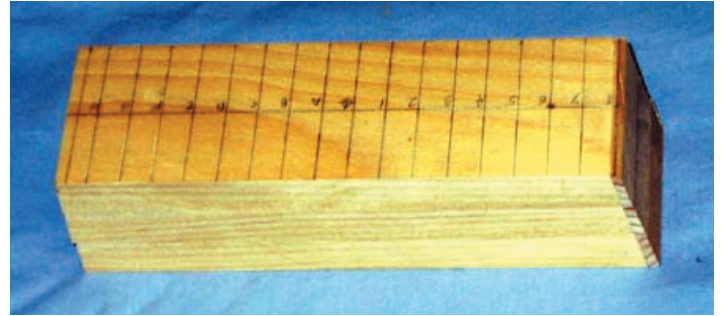
Using the second copy of the body plan you made, create a full view of the forward frame plan.

Now make enough copies of the full body plans so that you can cut out a pattern of each frame. These patterns will be open at the top and the sides should extend beyond the gunwale line to aid in positioning the pattern over the plug.



The aft rib plan

The Plug. The plug forms a mould onto which the frames are shaped, planking installed and gunwale mould fixed to the boat. Pins will have to be stuck into the plug so clear pine or other soft wood should be used.



Build up wood to create a block that is the length and breadth of the boat at its greatest dimensions. The block should be $\frac{1}{2}$ " thicker than the depth of the boat. Mark the frame positions on all four sides while it is still a square block. Mark the fore/aft center line.

Mark the angle of the stern and cut the stern of the block to this angle.

Using a pattern cut from the sheer drawing mark the port and starboard outer beam line on the upper surface of the plug. Cut the plug on this sheer line. Re-mark the frame lines on the sides of the plug.

Starting at the dead-flat frame position, carve the shape of the plug using the frame patterns as a guide. As you work your way along keep sliding the frame patterns over the plug at the respective frame lines to ensure that it is being shaped properly.

The shape of the plug cut on the sheer line, the frame line and the fore/aft centerline are used to position and align the frame patterns on the plug.

Once the plug is shaped mark a gunwale line where the upper plank will meet the gunwale.

Cover the plug with a couple of coats of bees wax to prevent glue from sticking to it.

Next you need to make a base for the plug. Cut two



pieces of $\frac{1}{4}$ " plywood so they are 2" longer and 2" wider than the plug. Treenail these pieces together. Securely clamp the plug on the centerline of the base and equidistant from the ends. Install at least two treenails up through the base and into the plug.

On the plug side of the base, mark the base with a line around the plug that is the thickness of a frame out from the plug. Remove the base and cut out the center portion of the piece just marked with the plug shape. Now, mate the base pieces back together using the treenails. The plug is set down through the hole in the upper base and secured to the lower piece using the treenails installed previously and a screw through from below. Mark the frame positions on the base



Keel. Using the profile drawing make the keel including stem and stern post. The process used to do this is up to the model shipwright.

If any part of the keel assembly extends into the boat beyond the inner frame line, rabbets will have to be cut into the plug to allow the keel to be put in place.

Frames. The frames are cut to the dimensions required by the boat and long enough so they go over the plug and extend down between the plug and upper base piece on both sides of the plug. Soak the frames until they are soft and pliable.

Take a frame and fold it over the plug on a frame line. The ends go down next to the base piece. Push dress maker pins bent into an “L” shape into the plug and over the frame to hold the frame against the plug. Multiple pins may be required on each frame. If the frame will not stay in position at the base drill a hole through it near the base and push a pin through the hole into the plug. Repeat for each of the frames.

Let the frames dry for at least 24 hours to ensure that they keep the shape of the plug.

Remove a section on the centerline of any frame if the keel must go beyond the inner side of that frame. Fit the keel over the frames and make any adjustments required to have it fit to the frames based on the boat’s plan.

Glue the keel to the frames and remove the “L” shaped pins except those required to hold those frames that have been cut.

Planking. The actual process used to plank the boat will be up to the modeler. I started at the gunwale line and worked towards the keel.

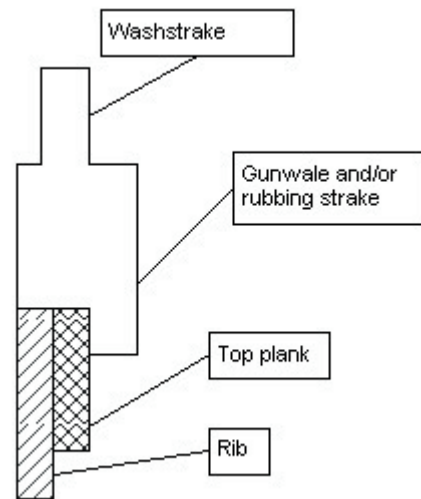
If you are making a clinker built boat you have the option to use tapered planks.

Glue the plank to each frame and to the keel assembly at each end. Use the “L” shaped pins to hold the plank against the frames until the glue is dry.

When the planking is complete remove all pins and remove the plug from the base. Now, with any kind of luck, you should be able to pop the boat off of the plug. If you forgot to wax the plug it may take more than luck to do this.

Cut the frames off at the upper plank line.

Make a moulding that has the shape of the combined gunwale, rubbing strake and washstrake as required by the boat’s plan.



Soak a piece of the moulding until it is soft and pliable. Pre-form the portion that will go around the curve of the bow to reduce the pressure required to hold it against the plug.

Put the boat back on the plug and clamp it securely in place. Apply glue to the moulding where it will sit against the upper planks and secure it against the boat and plug using pins and clamps as required. Leave it in place until the glue is good and dry.

Once the boat has been removed from the plug there is one pair of timbers that requires special care. These are the timbers that are made fast to the inner side of the frames and used to support the boat’s thwarts. Soak these timbers well and pre-form them as close as possible to the inner shape of the hull. If too much pressure is required to hold these timbers against the hull when they are glued in place there is a risk of distorting the shape of the boat.

The interior. Make and fit the rudder, floorboards, decks, thwarts and other fittings required in the boat.

There is a davit which extends over the stern of the Victory's 34 foot launch. With it in place there is no room for the head of the rudder or tiller creating a navigation challenge. The drawings do not show it but this davit was not fixed in place and could be swung forward or removed completely when not in use.

To make the oars I cut pieces the width of the blade, the thickness of the loom (shaft) and the length of the oar. The sides of the loom portion were then cut to form a square and the loom pushed through a draw plate to make it round. The blade portion was filed down to the required thickness.



Victory's Cutter, with oars. The 34 foot barge is pictured on page 1.

David Nelson, Toronto, Ont., Canada



Tips for Getting Research Help from Museums

by Fred Hocker

Reading over some recent internet posts about museums and museology, I thought I would provide some tips that new modellers might find useful. One of the sources for information about specific ships or ship types is a maritime or other museum. Most maritime museums have models in their collections, and many have plan collections and libraries. Sometimes the plan collections can be vast, as at the National Maritime Museum in Greenwich or in the Naval History and Transportation divisions of the Smithsonian's National Museum of American History, but even smaller museums may have unique information for a particular model. Finding that informa-

tion and getting your hands on it can be a challenge, especially if you cannot physically visit. Museum staffs can seem unfriendly or at least unenthusiastic when queried - I know, as I work for a maritime museum (the Vasa Museum in Stockholm) that gets a lot of queries from modellers.

Almost all museums have, by definition, some responsibility to answer queries from the public. If the museum is publicly funded, that responsibility may actually be written into law or the museum's bylaws. In the case of my museum, the law specifically requires me to answer queries, although it does not specify how detailed the answer has to be.

Most museums are understaffed and under-funded, and the staff with real knowledge are often the most overloaded with responsibility (in budgetary terms, it is much easier to eliminate a research position than a building maintenance or restaurant position). Queries are often seen as a distraction from the more interesting work, or projects that have to get done, etc. That does not mean that they cannot be fun - I actually like getting questions from modellers, since it gives me an excuse to get out of my office and crawl around inside the ship for a while.

There are some ways to improve your chances of getting useful help from museum staff. I suggest the following tips:

1. Do a little preliminary research to find out whether the museum has relevant material, and who the most appropriate person to contact is. This will save our time, and will help to insure that your question does not get buried, lost or misdirected. An email query to the main museum address may produce a result, if the person who handles it knows where to send it, but it may not. If possible, call the museum to ask who the most appropriate person is, if it is not clear from the museum's website.

2. Formulate your query to be as specific as possible. "How long is the cross piece on the riding bitts?" will get a much more speedy and enthusiastic answer than "Please send me everything you have on frigates." The latter question is known in the museum biz as a "please write my term paper for me" question, and even if the questioner offers to pay copying and reproduction fees, it is likely to reach a dead end. A specific question is much easier to answer, is potentially more interesting for the museum staff (and thus more likely to be answered), and keeps the workload on the staff at a reasonable level. Very broad questions will usually get either a reading list as a response, or a statement that you are welcome to come down and use the museum library yourself.

3. If you have multiple queries, try to group them logically and send them in small bunches. A 40 point list of questions will be ignored as too troublesome, but a 5 point list is manageable.

4. Be prepared to pay for larger tasks. Our official policy, set by my boss, is that if the question can be answered in less than 15 minutes, we will take care of it for free. If it requires more work, we will charge a research fee. My own policy is that if it is an interesting question or gives me an opportunity to go on board the ship, I will answer it without charge.

Here is a good example of the kind of question I have received recently, and it is one that received a detailed response:

"If you have a moment, could you consider the following? Ref to drawing nr 3 in the model kit drawings. Snatch blocks (if that's the proper term for the fixed blocks on the inside of the bulwark, open at the lower end): Eva-Marie has drawn such a block immediately abaft of the beam across the forecastle. Any evidence for this?

Kevel: There is a kevel drawn immediately abaft the

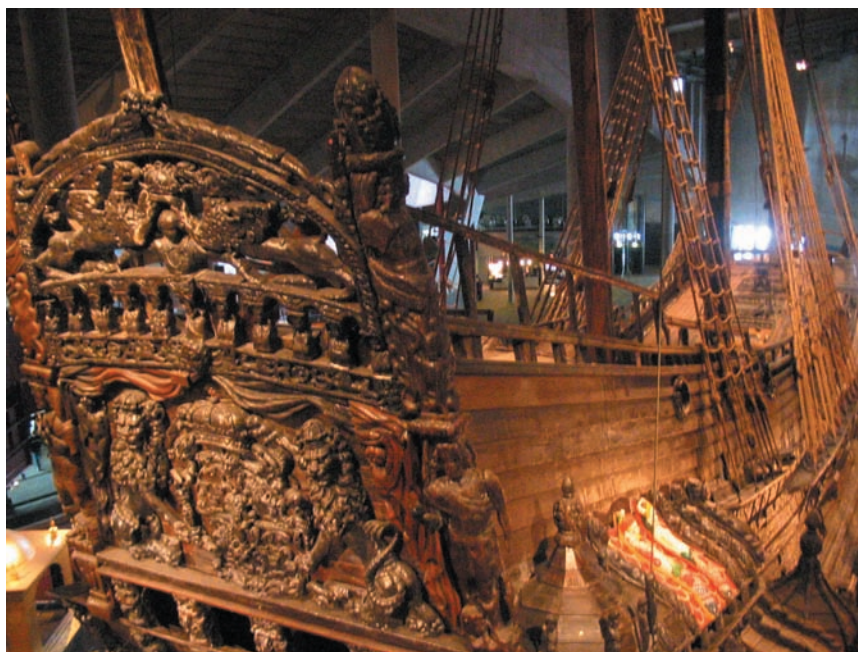
mainmast on the bulwark. Any evidence? A kevel would work fine for the mainsheet, but it would block the pinrail that is positioned above the gunport, assuming the mainsheet enters through the hole in the bulwark, immediately forward of the steerage bulkhead. This pinrail looks new to me; what is the reconstruction based on?"

This was a straightforward set of related questions that could be readily

answered by 10 minutes on board the ship. The questioner provided references to allow me to find the relevant areas quickly, and even some background as to why he needed the answer.

I look forward to hearing from all those Vasa modellers out there!

Fred Hocker, Vasa Museum, Stockholm, Sweden



Stern of Vasa. Photo by Andy Carvin, used with permission

Warships to Workboats

is a joint publication of the Modelshipwrights and Warrior Groups. For information on the groups, please see our websites:

www.modelshipwrights.net

www.warriorgroup.org

Editor Tom Babbins (babbint@comcast.net)

Assistant Editors Bill Short (modelshipwright@sympatico.ca)

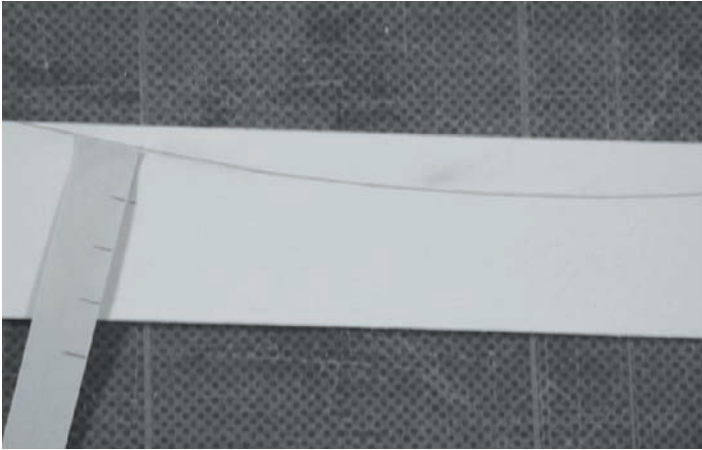
..... Neb Kehoe (nebk@together.net)

A Primer on Planking

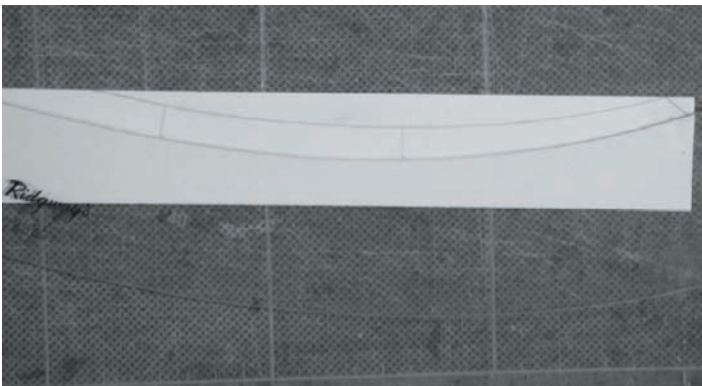
Part two

-by David Antscherl

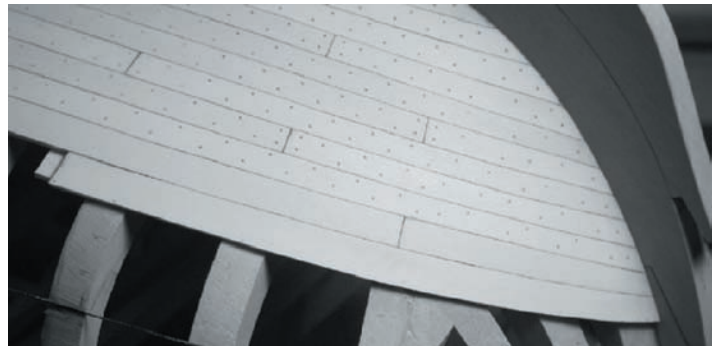
Using the marked strip that was created in the last part, you can transfer the width of the new plank *at that point* to the blank that you are marking out, as pictured below. Repeat for as many points along the plank as you need.



The points may now be joined up using a flexible or ships' curve to complete the shape of the plank ready to cut out:



Here are two identical planks: the lower one has been carefully steamed to shape. One can bend a plank in two planes, but not three. Note that the fitted edge is cut out close to the marked line, but the "far" side has been cut $\frac{1}{32}$ " full (actual, not scale measurement) to allow for adjustment.

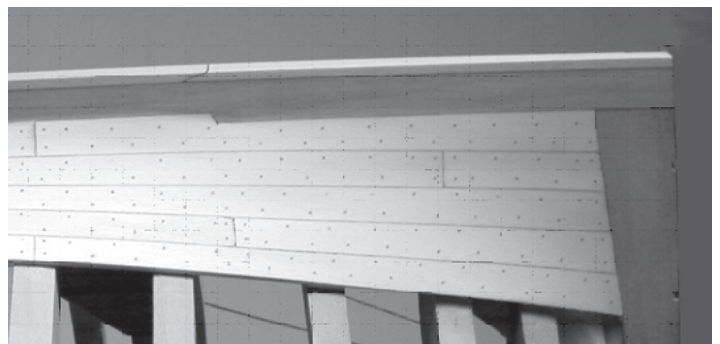


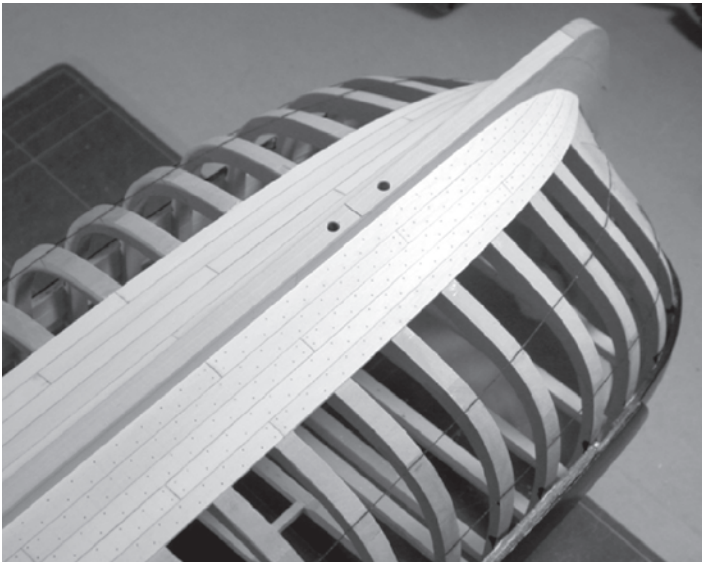
In this photograph the plank has had the fitted edge refined with a sandpaper stick, the hooding end trimmed, and is now glued in place. Properly carried out, there is no stress on the plank and no clamping should be necessary. Note a small piece of offcut plank which has been glued under the aft end to support the joint with the next plank in this strake, as the butt falls between frames. In a fully framed model this is unnecessary.



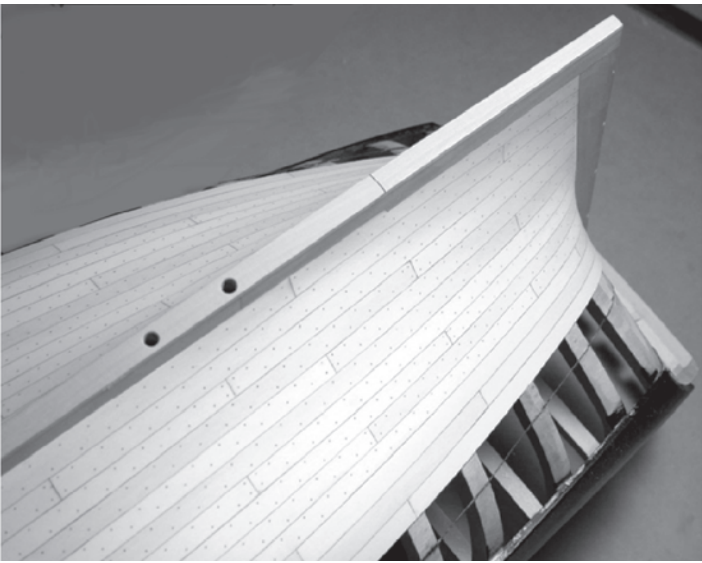
Here the strake has been completed. Once all planks in a strake are in position, the widths are re-marked at intervals and a sanding stick used to reduce the strake to its final width. Sighting along the planking from bow and stern will show up any "waviness" which can be eliminated before proceeding with the next strake.

This view aft shows the widening strakes without need of steelers. The widest point is a scale 17". The lowest five strakes have been treenailed in all the positions that framing would have run in the actual ship.

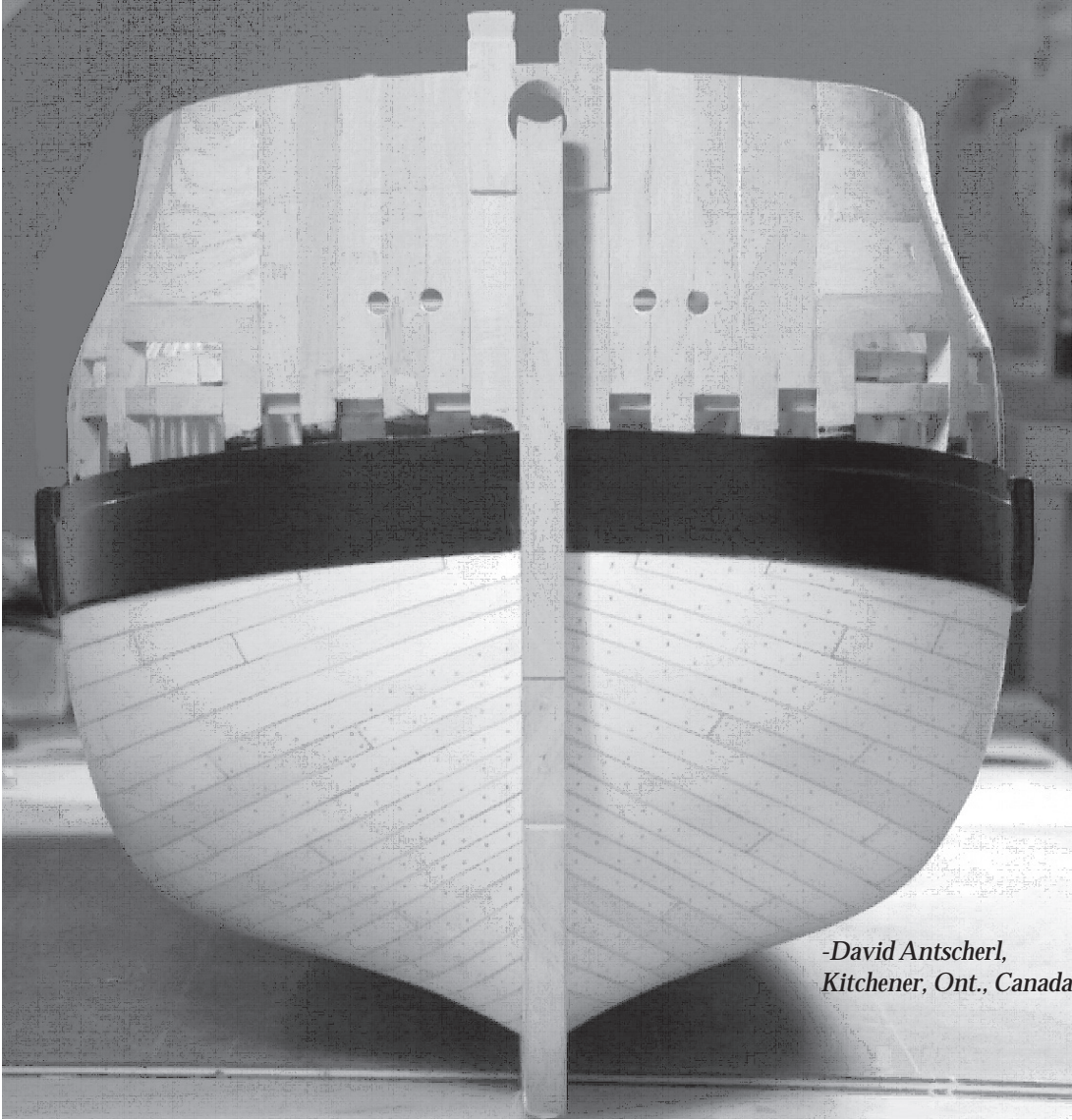




An earlier stage in planking. The garboard and four strakes making up the first band of planking have been completed



Another view at a later stage of planking. The holes in the keel are for the pedestal bolts. Below is the finished planking job.

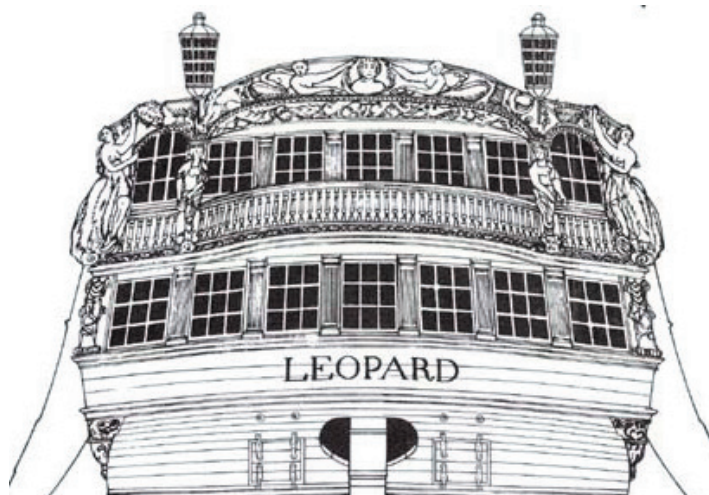


-David Antscherl,
Kitchener, Ont., Canada

Improving your carvings.

by Bill Short

In order to carve suitable ornamentation to adorn our ship models, we need to train our brains to visualize the sculptures well in advance of removing wood with carving tools. It is simply not a good idea to start carving an item without a clear picture of all its details imbedded in your mind. How do we get to this point? Of course, drawing the items in detail, on paper, is a good way to imbed the image in your subconscious. If you can represent the item in detail on paper so that it is acceptable for placement on your model, you are well on the way to having the ability to carve it from wood.



However, there is more to it than just studying the object you want to carve. Often the sculptures are presented on a ship's draught and are not detailed enough to give you the information needed to carve an acceptable version. These drawings give you a hint of what the actual sculpture might look like but are artists' impressions, and in most cases are primitive in nature. In order to get the beautiful details on your carving, you need more information. Sometimes, the ship in question is illustrated in paintings by artists of the period. If so, you should study the painting to obtain a clearer picture of the sculpture. Usually this is not the case and you are left to your own devices to come to a suitable conclusion. Guessing as to the detail will most likely produce a carving that may be acceptable, but more probably, could be better.

There is a way to come up with an accurate rendition of the sculpture without a drawing of the details. Most sculptures of the period are simply carvings in wood which

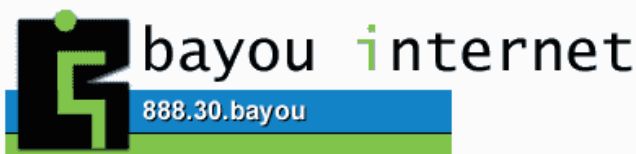
are similar to, or copies of other sculpture styles that are created in marble and other media. We can, by spending time studying marble sculptures, paintings and decorative stone carvings on buildings or in museums, learn a great deal about the details required to finish a carving to perfection. This is time well spent and it further imbeds concepts of shape, texture, depth and depiction of the

human form in our minds for future carving projects. Suitable subjects on buildings can be seen in most large cities, and there are countless books on architecture, paintings and sculptures available in most public libraries. Obtain a book with material from the period your ship model represents and study the photos, taking note of the fine details represented on each subject. As you look at them, you are committing information to your mind for future use. You will not regret the time spent studying these objects and most certainly, the images you form in your mind will assist you in carving better sculptures for your models.

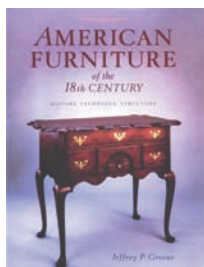


-Bill Short, Niagara-on-the-Lake, Ont., Canada

We would like to thank Bayou Internet (new home of Worldnet Communications) for their generous hosting of Warships to Workboats and the Modelshipwrights and Warrior web sites.



Book Review



American Furniture of the 18th Century: History, Technique, Structure

Jeffrey P. Greene
The Taunton Press,
Newtown CT, 1996 \$45.00

We spend a great deal of time and effort researching our shipmodeling projects and what seems like a lifetime building them, but then take not much more than a casual, utilitarian approach to designing and building their cases. That didn't seem quite right to me a couple of years ago, when I was finishing my miniature (1:192) dockyard style model of the Continental Congress frigate *Randolph*, 32, 1776-1777. The idea of putting her in an era-correct case occurred to me and began to look very appealing the more I thought about it. I even worked out a scenario for this happy combination of model and case: The *Randolph's* captain, Nicholas Biddle, had just become engaged to Elizabeth Elliot Baker of Archdale Hall (South Carolina). His brother, Charles, was in Congress in Philadelphia and knew the shipwright, Joshua Humphreys, whose yard had built *Randolph*. So, in my scenario, preparatory to building a conventional full-size display model of *Randolph* for a wedding gift for the couple, Charles Biddle commissioned a shipwright in the Wharton and Humphreys yard to build a miniature of the project for approval. The model of the model was built, cased and delivered, but of course Nicholas Biddle died when his ship exploded in the *Randolph-Yarmouth* encounter of 1777. The model was stored, forgotten, and only recently recovered.

This was getting to be fun, but since I knew nothing significant about eighteenth century American furniture, either style or construction, where was all that information to come from? Well, you know how synchronicity and serendipity always work in favor of the dedicated shipmodeler. Within the week, a woodworkers' book catalog appeared in my mailbox and among its offerings was a book by Jeffrey P. Greene, offering the purchaser a complete education in the history of such furniture, how it was built, and drawings and details of each step for each style. I soon had a copy of my own, and not much later I had a return letter and drawing from Jeffrey Greene as to what my ship model case might look like. Using his suggestions and some ideas of my own, derived from repeated study of his book, I developed plans and built what I think is a very attractive Queen Anne case of cherry, hand-tooled brass and antique glass. I may have overdone it, because when I took the model to the last Queen Mary conference, I got many more comments on the case than the model, which was a little disconcerting. In fact, the former president of the famous Japanese modeling club, The Rope, sought me out and went on-and-on; the only words I understood in the torrent of

Japanese were the two English words, "the case!" Well, on to the book.

This is a large (9 ¼" by 11 ¼", 300 pages), attractive book, printed on high-quality, coated paper. It boasts an excellent, readable typeface and the services of an editor, layout artist, illustrator and indexer. It is first quality throughout; nothing has been left to chance. The history is understandable and interesting, the drawings first-class and the photographs completely professional. The author is an MIT mechanical engineer, a self-taught 18th century furniture-maker and the proprietor of Ball & Claw, a custom furniture showroom in Rhode Island.

My education began with the liners, before ever getting into the book. Front and rear, they are a chart of the various furniture types—Jacobean, William & Mary, Queen Anne, Chippendale, Federal and Empire—over ten-year intervals in America with subsections for the same intervals in England and France. Part I of the book is a detailed, illustrated description of those six furniture styles, with drawings showing their characteristic construction features. The examples shown are world-class examples of their type and era. The writing style is almost sociologic; the "story" comes out as actually interesting, which surprised me.

Part II describes the methods and materials used in each era and how they differed over time. Included are such useful and interesting topics as period surfaces and finishes, a careful look at the related construction joinery, and a treatise on making cabriole legs (Queen Anne and Chippendale) and ball & claw feet (Chippendale). There are also sections in this part on surface ornamentation (like the carved fan applications in Queen Anne work), era-correct turning and finishing materials and techniques (quite different from ours, starting with the absence of modern type sandpaper). Greene finishes up this section with a course on how to take measurements from existing work or from photographs of period pieces.



Part III is an interesting section, in which Greene illustrates classic examples from the four major periods from our mutual era of interest (William & Mary, Queen Anne, Chippendale and Federal), together with very nice, exploded views of their major construction details. He finishes up (no pun intended) with appendices covering wood and wood movement (very important in furniture work), period varnish resins, period coloring agents and period finishing formulae. He also supplies a chronology of illustrated publications, a glossary, bibliography and a well-done index. It's a graduate course in eighteenth century furniture history and construction in a single volume. It should be in the personal library of every modeler of American ships from the classical era of sail!

Clayton A. Feldman, MD, San Jose, CA, USA

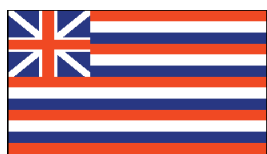
Computer Generated Flags

by Chuck Seiler

Good, detailed, historically accurate and appropriately sized flags have often been a problem for ship modelers. The Ship Modelers Association website (www.ship-modelers-assn.org) has a tip on computer generated flags. The tip indicated you can download your flag of choice from one of many sites on the Internet, place the picture or bit map into a word document, make it the size you want, then print. Then paste a small piece of kleenex over the flag and reprint. See the SMA site for details.

When we discussed this at our club meeting, one member indicated he used this technique, substituting cigarette paper. It is stronger than kleenex and results in a sharper image, particularly when using an ink jet printer, but is too small when dealing with larger scale flags. I have experimented with silkspan and rice paper with interesting results. I have found, however, that while one side of the flag is great, the other side is barely visible. Efforts to paint the reverse side have usually resulted in disaster.

How can I get the reverse side of a flag as crisp and detailed as the front? You would think this is easy, but until recently, the answer eluded me. Essentially you want a mirror image of the picture. I found the answer quite accidentally while playing around in Microsoft Photo Editor. It was right there in front of me and I missed it. You invert, then rotate the flag (or vice versa). Easy for me to say, eh?



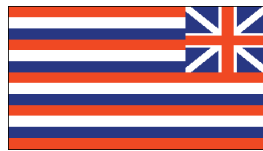
Long may she wave.

First find your flag of choice and save it. Since I am working on the brigantine *Lexington* I will use the alleged *Lexington* Ensign "LEXFLAG." Copy the picture and save as something else, in this case LEXFLAG2. This is the picture we

want to manipulate.

To make this work, you must have a Photo Editing program. Open your file "LEXFLAG2" with your editing program. It will look exactly like "LEXFLAG." Go to the toolbar on top and click Image then Rotate.

Click on Transpose. This will rotate the picture 180 degrees.

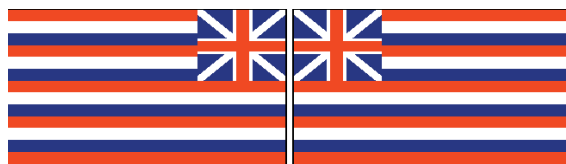


Transposed and inverted

Click on Image and Rotate again, this time using Invert which flips the image up. You now have a mirror image of "LEXFLAG." Save your picture.

Editor's note: some graphics programs will have a Flip Horizontal command, which will do the above in a single step.

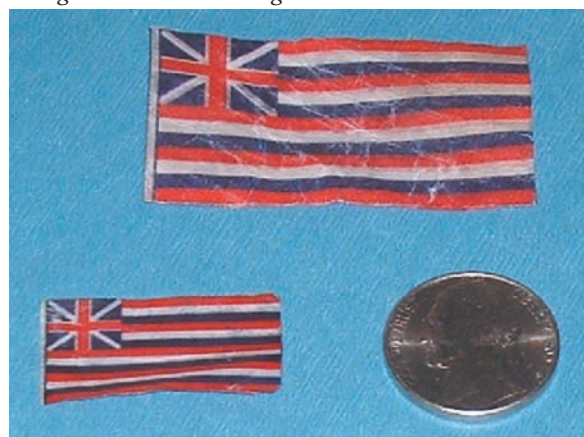
We will now put color to paper. Open a blank MS Word document and insert a text box. Make it about the size you want your flag. Copy and paste an exact duplicate box so the flags will be the same size (both sides need to be the same size). Insert LEXFLAG into one and LEXFLAG2 into the other.



Almost finished. Can't tell if I'm coming or going!

Be sure to turn off line color and fill color for both. Line it up so it is hoist to hoist and print away using your favorite flag making method. Now all you have to do is cut, paste, hoist and salute. Underway!

Postscript: I made a couple flags using the above method, with both an ink jet printer and a laser printer. The cigarette paper works well with both printers, but I had problems with 'ink bleed' using silkspan and the inkjet printer. The laser printer image on both paper types came out very shiny. A little Dullcote and roughing up made the finish look good without reducing the detail.

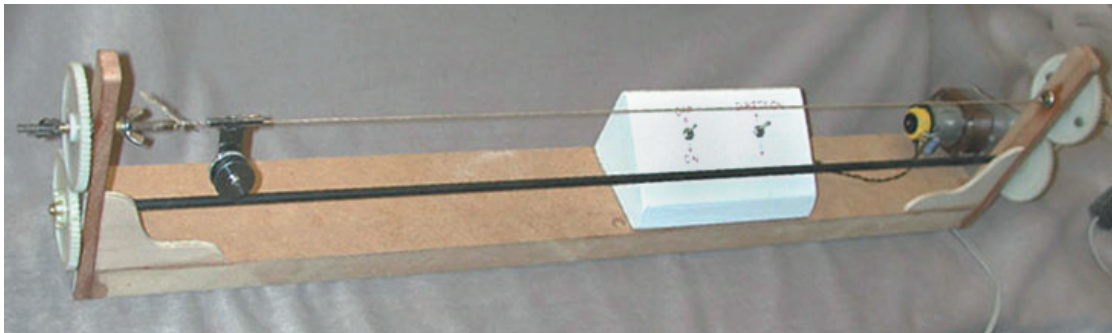


Lexington flags ready to fly as future President Jefferson looks on.

Chuck Seiler, San Diego, CA, USA

Bits & Pieces

I should imagine that everyone in model ship building has been faced with the long and tedious task of serving main stays and other lines at some time. After various attempts to automate the process, I remembered my days in archery, and how we had to make up our own bow strings and serve the centre section of them to stop wear.

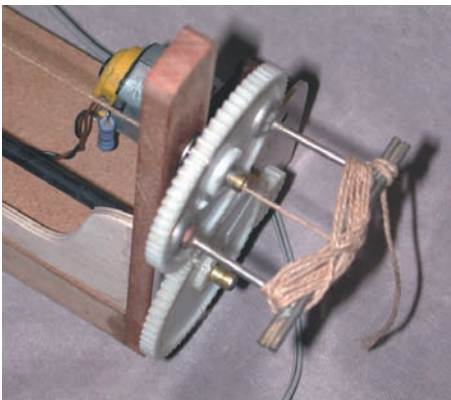


A view of the completed server

I still had my bowstring server, which is like a miniature serving mallet. All I needed was some way to use it. Another memory was of a little machine that I used to see advertised called a "String-Along." Taking that idea on a much enlarged scale, I built a machine powered by a

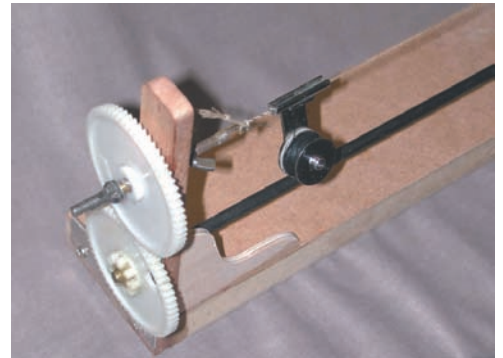
reversible 12v DC motor, geared down about 120 rpm, and we were on our way.

In operation, the length of cordage is fixed to each end of the machine, and pulled taut by the adjuster at one end. The end of the serving material (stored on the bow string server) is passed between the cordage strands with a needle and knotted off around the cordage with a clove hitch. Take up all the slack until the bow string server is snug up against the cordage.



The drive end

Switch on the server drive in the required direction and "help" the serving to get started in the right direction. By adjusting the tension on the serving by tightening or loosening the centre screw on the bow string server, you will find the bow string servers weight will keep it from rotating with the cordage, and it will lay down a nice even serving all by itself. My server can do a 30" stay in about 25 minutes, and while this is going on I can get on with other jobs.



The tensioner end

Some big models may require extra-long stays to be served, particularly some vessels that had a double mainstay from a common collar around the mainmast head. This is no problem, as with a little practice you can serve 30", then unbend it and move up to serve the next 30". The already-served section can be coiled and held out of harm's way by tying it to the rotating stay, so in theory any length of stay can be served.

To date, the afternoon spent building this machine has saved me hundreds of hours I would have spent serving stays manually. This thing does it automatically, once set up and running properly.

Terry Lynock, Shropshire, UK



Serving in progress

Editor's note: bow string servers are available from most archery supply companies. Look up "bow string server" in any search engine.

Book Review



Model Boat Building Made Simple

Steve Rogers and Patricia Staby-Rogers

Schiffer Publishing, 1992

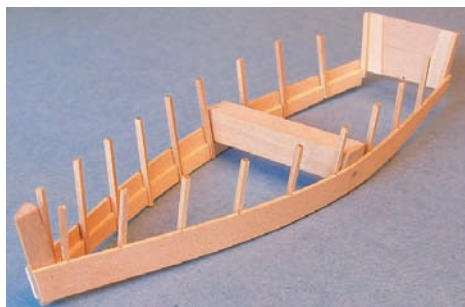
ISBN 0-88740-388-3

Soft cover, 8½ x 11 inches, 64 pages

\$15.95

Steve Rogers is known for his ability to 'weather' models in a most realistic fashion. In this book he introduces the reader to the basics of his weathering technique. But first, he guides the reader through the construction of a model to which weathering can be applied.

The bulk of the book covers the model building process. This is accomplished through a series of close up photographs that detail each step in the process. The subject is a cross planked, pieced chine, 14' Chesapeake Bay rowing skiff. The model is based on real boats from which measurements were taken and a two page spread of plans developed at 1:12 scale. Several photos of the original boats are included and prove to be extremely useful.



The opening pages provide background information about the boat, comments about the tools needed to build the model, and the materials that will be used. The

tools include a table saw with a blade for cutting pieces $\frac{3}{32}$ of an inch thick – the planking for the hull. This requirement may be a stumbling block for new builders attracted by the 'Made Simple' portion of the book's title. It needn't be, because properly dimensioned lumber can be purchased from hobby shops and on-line vendors at minimal cost. The book does not mention the option to purchase ready-to-use lumber, and there is no list of materials on which to base a shopping list. Dimension data are provided throughout the building process and can be assembled into a materials list by going through the book page by page.

Fully two-thirds of the book is devoted to model construction. Each stage is broken down into steps shown in a series of sharp, clear, and well lighted photographs. There are also a number of sketches. The photos and sketches are accompanied by descriptive text. The building sequence is both logical and practical, and the photos leave

very little to the builder's imagination. Followed carefully with attention to detail the sequence will gradually turn a pile of sticks into a boat.



There is one source of confusion in the building guidance. The model shown on the book cover, in the plans, and in the gallery photos at the end of the book has nine frames. The model shown being built has only five frames. Accompanying text implies that a nine frame boat is being built, and photos of the real boat indicate that it should have ten frames. Obviously, it's the builder's choice on what to do about this aspect of the model.

I built a half-sized edition (1:24) of the model, following the book's sequence and methods for hull construction, and relying on the photos of the real boats for finishing details. Materials consisted of a $\frac{1}{32}$ " x 3" x 24" sheet of basswood from which most parts were cut. The frames were cut from a $\frac{1}{16}$ " square strip and the skeg was fashioned from a $\frac{1}{16}$ " thick piece of basswood from my scrap box. The stem and stem liner were worked down from $\frac{1}{4}$ " square stock.

I opted for a small seat at the bow in place of the decking shown in the book, added a seat at the stern and inwales as shown in photos of the original boats, and added floorboards. The floorboards were made of .0208" thick basswood scale lumber from Midwest Products and fitted on either side of the keelson.



Shortcomings aside, the Rogers' book provides sound guidance for building a model of a small boat. Whether built as indicated or 'enhanced' on the basis

of the photos of the real boats, a beginning modeler should be able to create a satisfying model with simple tools and at minimal cost for materials.

Michael A. Graff, Kirkland, WA, USA