



Warships to Workboats

A Joint Publication of the Modelshipwrights and Warrior Groups



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Number 1

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Introducing "Warships to Workboats"

Welcome to the premier issue, the maiden voyage as it were, of **Warships to Workboats**, a publication devoted to the art, craft and science of ship modeling.

This publication is a joint venture of two online modeling groups, Modelshipwrights and the Warrior group, who share some members, some resources, and most importantly, a love of and dedication to the hobby of creating ships in miniature.

Modelshipwrights is a group of modelers who strive for the most accurate and historically informed models possible, through careful research and innovative and advanced building technique. The Warrior group carries this even further by concentrating mainly on a single ship, HMS Warrior of 1781.

The articles in Warships to Workboats come from the members of the two groups as well as from interested non-members. Anyone reading this publication is invited and urged to submit articles, photos or listings of interest to the ship modeling public.

As with any endeavor, there are many people without whose help this humble document would not have seen the light of day. First, we would like to thank Mike Taylor, whose editing of The Modelshipwrights Journal over the past year provided inspiration for this publication. When it became clear that circumstances would prevent him from continuing, we decided to totally revamp the format rather than try to match his accomplishments.

Thanks also to the Terrys, Lynock and Godwin, the creators and owners of the two groups. We wouldn't be here without them.

And special thanks to John Rose, of WorldNet Communications, who provides a home for the Warriors and this publication. Be sure to visit him at www.wnonline.net.

-The Editors



BOW OF THE DUKE, OF 1777, A 90-98 GUN SHIP MODEL IN THE ROGERS COLLECTION

A Modeler's View of the Rogers Collection

in the U.S. Naval Academy, Annapolis, Maryland

by Michael Draper

If you are like me, you take every opportunity you can to visit the local maritime museum when you are traveling. If you are lucky, these museums can end up being an exceptional find. This was the case with the Rogers collection at Preble Hall in the US Naval Academy in Annapolis, Maryland. I have had the opportunity to visit it twice, once on my way back from the NRG conference in Newport News, Virginia and the second time as part of the tours available during the Washington NRG conference in 2001.

Both visits left me with a sense of awe of the beauty of the models that were displayed, and also gave me new impetus to perfect my hobby to a higher level. While the quality of the models is exceptional, they are also accessible to the public and are easy to photograph (good lighting and very user friendly displays). In addition, the staff are more than happy to let you take your time to photograph the models to your heart's content (of course you can't use a flash, but the amount of light allows you easy use of high speed film or a tripod).

When you first walk into the museum you realize that there is a wide range of models in the Rogers collection as well as in the museum as a whole. The

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ground floor has several models that are worth checking out -the **Constitution** that was built in the 1800's, the **Fair American** that has been the subject of much debate in the NRG magazine, as well as an amazing (though not totally accurate) model of the **Sovereign of the Seas**. These models are surrounded by a wealth of paintings and artifacts from different periods of US naval maritime history.

Your descent into the basement of Preble Hall begins your journey through the mother lode of models that represent the Rogers Collection. There is an abundance of bone models that to the uninitiated like me are a real eye opener. While some are obviously not properly scaled, they represent a high level of skill, expertise and patience that can take bones and convert them to detailed works of art. If you have a chance to see these models please take to time to admire the bone version of the **Royal Caroline**. It is a notable highlight of the bone ship model collection.

After viewing the bone models you move to the first 3 models of the Rogers collection -the **Grafton** (70 gun, 1679), the **Prince Frederick** (70 gun 1714-15, and an unidentified English 3rd rate 50 gun ship of 1750. These models give you a taste of the models that are in the main hall. They are fully rigged, and are in admiralty style of the period of the late 1600s to the early 1700s. The stern galleries, exterior bulwarks and figureheads are highly detailed, ornate carvings and are worth a close look and study. The rigging is also worth examining, as it reflects the period of the spritsail topmast.



St. George, 1701

Now moving into the main hall the first 3 models that should be mentioned are the **Royal William** (90 gun, 1719), the **Duke** (90-98 gun ship, 1777 -see photo, page 1) and the **St. George** (90 guns ship, 1701 above) Again, the stern ornamentation and the figureheads are masterpieces in carving. The physical

size of these models make it a modeler's heaven for anyone interested in detailing a ship of that period. The **Royal William**, which is one of only 2 models of this ship in existence, has all of its deadeyes and blocks carved from ivory. Its value has recently been assessed at over \$1,000,000 USD.

Again, these models are admiralty style, fully rigged (the **Duke** has furled sails). The decks are partially planked to provide valuable information about the beam pattern that was used at that time for models.

framing, plank butts and planking, deck furniture and headrail construction, the stern ornamentation and galleries, the figureheads and the frieze painting along the hull make these models highlights of the collection for me. The **Canada** is a good source of information if you are tackling a 74 gun ship of that period. The **Minerva** also serves as a source of information if you are presently working on the Caldercraft kit of the **Diana**.

One of the last models that I wish to mention is the British 3rd rate, 70 gun ship



Princess Royal, 1773

There are over 30 other models on display that are worth mentioning, but I thought I would discuss in this small article the few that I think would be of special interest. There are several models in the center of the room that are admiralty style without rigging. These models are the **Canada** (74 gun ship, 1765), **Princess Royal** (90 gun ship, 1773 - above), and **Minerva** (38 gun ship, 1780)

While these models serve as a amazing source of technical information on

of 1735 (right, top). What makes this ship unique is that it is separated at the waterline to allow a amazing view into the framing of the hull. Even though this model would have proven to be a technical challenge to build, there is no lack of detail to the figurehead, stern ornamentation, and galleries. It also has detailed painted friezes, channels and chainplates.

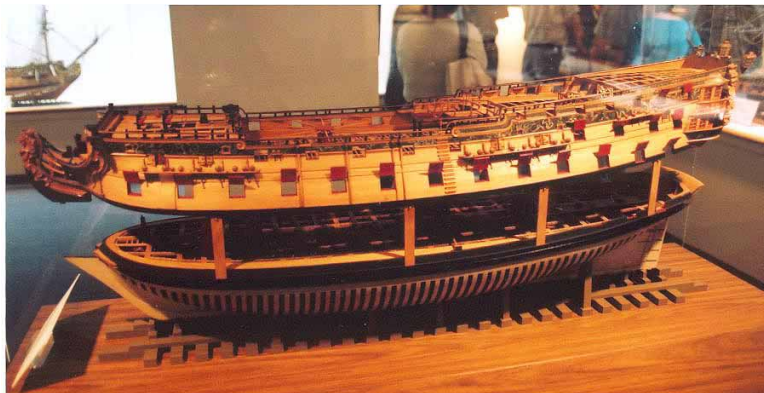
The last model I want to mention is one that is tucked away in a corner in a glass-paned cabinet. It is a incredible model of the

Britannia. While she is not rigged, she represents one of the most amazing models in the collection because the carvings on the stern galleries are beyond description. The figurehead and the headrails are also highly detailed. This model also illustrates detailed carving of the railings for the quarterdecks. If you are interested in getting a feel for what great carving looks like, this is the model to spend time looking at.

I hope this article provides the reader with a quick snapshot of the amazing collection that is located at U.S. Naval Academy at Annapolis. With so many collections hidden in storage and only accessible by appointment (if they are accessible at all), this collection allows the public to see and appreciate true workmanship and quality in ship models.

Michael Draper

Whitehorse, Yukon, Canada



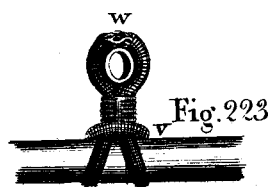
British 3rd Rate of 1735

I can't end this article without mentioning that there is a row of models that, while not as spectacular as the **Britannia** or the **Princess Royal**, are worthy of study. These models include the **Sussex**, a English 4th rate (50 guns, 1695), the **Portland** (50 gun ship, 1693) and a English 4th rate (50 guns ship -1732).

There is also a recently constructed model of the **Bonhomme Richard** that is amazing. From my closer review of the model it appears it has been constructed from the Boudriot plans. By having the lower hull and decks unplanked, it allows the viewer to appreciate the work that has gone into the frame construction.



Princess Royal Figurehead



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

www.users.zetnet.co.uk/modelshipwrights/msw/
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Carving Ornamentation for Ship Models

By Bill Short

Rotary Power Carving Techniques



Carving Ornamentation for Ship Models

Bill Short

This comprehensive booklet will take the beginning carver through the process of creating their first bas relief and in the round carvings using rotary powered carving tools. It also covers types of wood, visualization techniques and safety concerns. The booklet sells for \$25.00 US including postage to the USA and \$30.00 US including postage to anywhere else in the world. Contact Bill Short at: short@tamcotec.com for details on how to order.

Brig Niagara

-a Metamorphosis (Part 1)

by Joel B. Sanborn

One aspect of researching the history of a vessel, in regard to building a model, is to try to reach some resemblance to the vessel as she existed at some point in time. Some will choose a particular configuration of a vessel during a long lifetime, as she underwent a series of rebuilds and restorations. This might include such concerns as changing paint colors, changes to the rig as rigging practices change or as the ability to sail a vessel is deemed more or less desirable in a display or museum ship, such as USF Constitution or HMS Victory.

Some models depict a vessel on a particular day, the day of a battle or some other incident. The ultimate example of this is perhaps the Swedish ship 'Vasa' which capsized in the harbor on her maiden voyage. She has been raised and is available for study.

Some models are of a 'generic' or type of vessel, where information of any specific vessel is not sufficient for a model. If a model were to be made from the plans presented in Jean Boudriot's '74 Gun Ship', it would be of a French 74 gun ship, but not of a specific vessel. There could be a model of 'A Spanish Galleon of 1657' or 'A Pirate Ship of the Caribbean', perhaps, but to put a name to the model would be inaccurate.

The corollary to this would be a model of 'Bon Homme Richard', which, barring further information than is known to this author, could be labeled a representation of this vessel, but no more. Such a vessel is the U. S. Navy's 'U. S. Brig Niagara', which was an actual vessel with a history, more or less well-documented. As with John Paul Jones' ship, the information of the physical appearance of the vessel is more scanty than the information about the personages involved. Three other vessels are involved in the history of this vessel, which further complicates the search.

This is a famous vessel also, and the high esteem in which she and her commander have been held over the intervening almost two centuries has led to further confusion.

While searching for a model to build, one may chose to work from a kit, as did this author. The subject model would have certain characteristics. It should be more complicated than previous efforts, but not too much so. It should be plank-on-bulkhead, as it was desired to learn how to plank. It was felt that the best designed kit would introduce the least problems

for this inexperienced builder, and Ben Lankford designed the 'Niagara' kit. It was desired to do a model of a vessel with guns (you got to have guns, right?), but not too many, and 'Niagara' has only twenty. 'Niagara' further has square-rigged masts, but only two. 'Niagara' was of the desired time period, when the development of the wooden sailing man-of-war was reaching a zenith in efficiency of hull and rig and its greatest appeal, visually, to this author. It was desired that the model be of an actual vessel, not a generic vessel or an imaginary vessel which never existed. 'Niagara' was an actual vessel, and she had been raised and restored with the benefit of all the professional research then available and the Model Shipways' kit was of this restored vessel.

Alerted by postings to the various e-mail lists, it was discovered that the original 'Niagara' had undergone some changes during her lifetime, including the upsetting possibility that the present replica was based on an artifact which was not 'Niagara'. Further research was done, and the results of that research and the effects on the model undertaken have been pronounced. The changes to 'Niagara' are of such an extent that they constitute a metamorphosis, of a vessel which slipped beneath the surface of the water as one thing, and emerged almost one hundred years later altogether quite different.

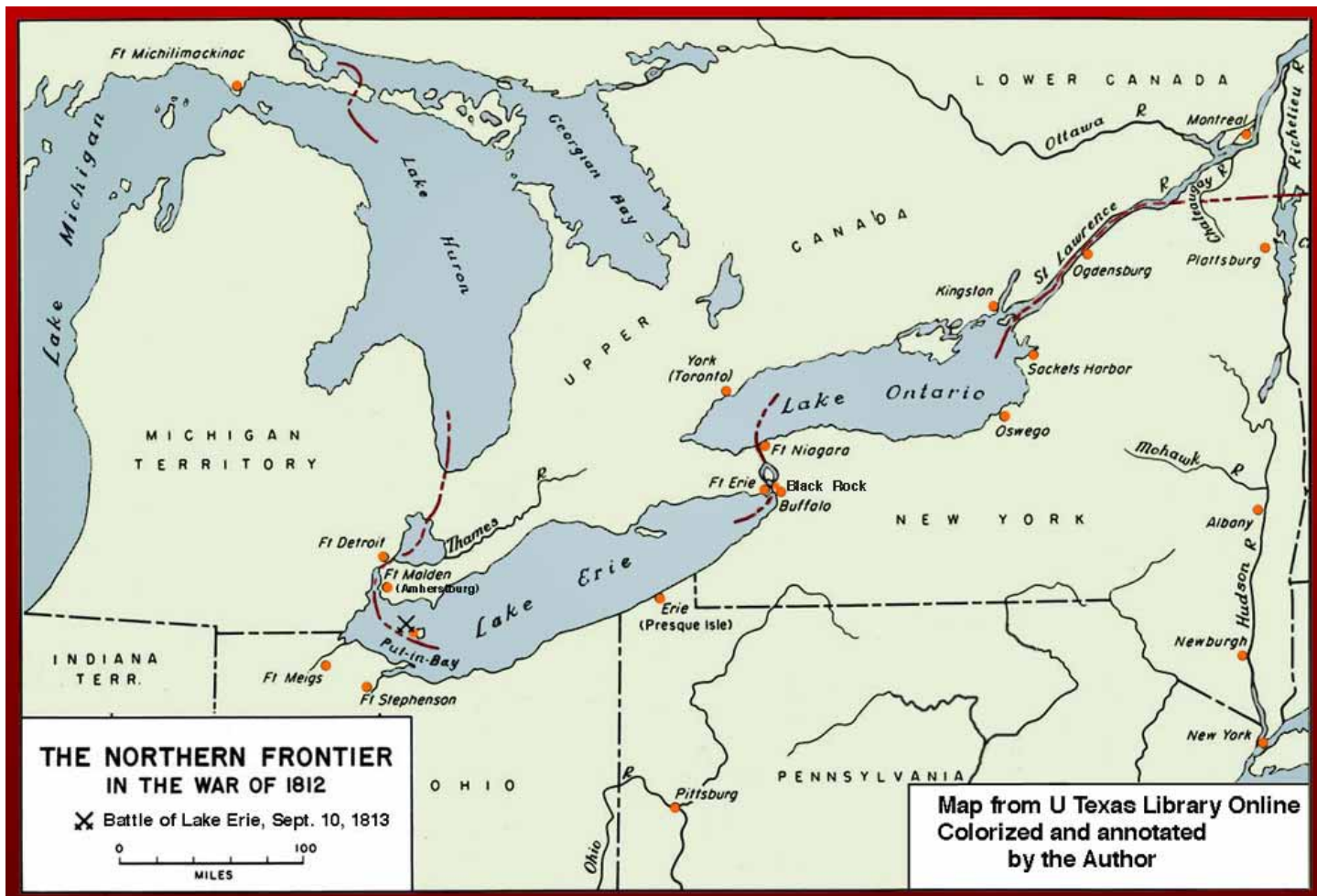
The Model Shipways' version of 'Brig Niagara' is a truly faithful representation of the present incarnation of this

historic vessel. One can certainly proceed with the kit without modification and produce a beautiful thing. One can just as legitimately attempt to recreate her appearance as she was built and as she fought her battle. To produce a version of 'Niagara' of 1813 requires the accumulation of much background material. How and why and where she was built, what materials were likely used and which not likely, her history after the grand strategic events in which she took part and an appreciation of the cultural milieu into which 'Niagara' reemerged after nearly 100 years out of the sight but not the imaginations of men all are important to understand the intricacies of this story in an attempt at an historically accurate result.

HISTORICAL PRELUDE

In 1813 a great battle was fought between British and American forces on Lake Erie which decided control of the Upper Great Lakes for the duration of the War of 1812. The squadrons of either side were fairly evenly matched, two large vessels per side plus a collection of smaller gunboats, schooners, etc. The American Commodore, Lt. Oliver Hazard Perry, was able to report to his superiors that "We have met the enemy and they are ours...."

Prior to the outbreak of hostilities there was only a meager presence on the Upper Lakes by either side, with the British having, by default, a more formidable



Map of the Northern Frontier during the War of 1812 with sites marked pertaining to the U. S. Lake Erie squadron.

presence. Some years previous had been constructed at the British establishment at Amherstburg, on the Canadian side of the Detroit River, 'Queen Charlotte', a ship-rigged Sloop-of-War, mounting, in the Summer of 1813, 18 carronades. It would seem reasonable that she would have been built in the tradition of the Royal Navy, with proper scantlings or sizes of her timbers, planks and other structural members to provide adequate safety and functionality. There was no war on-going, supplies for her construction would have been, if slowly, reasonably available and there would

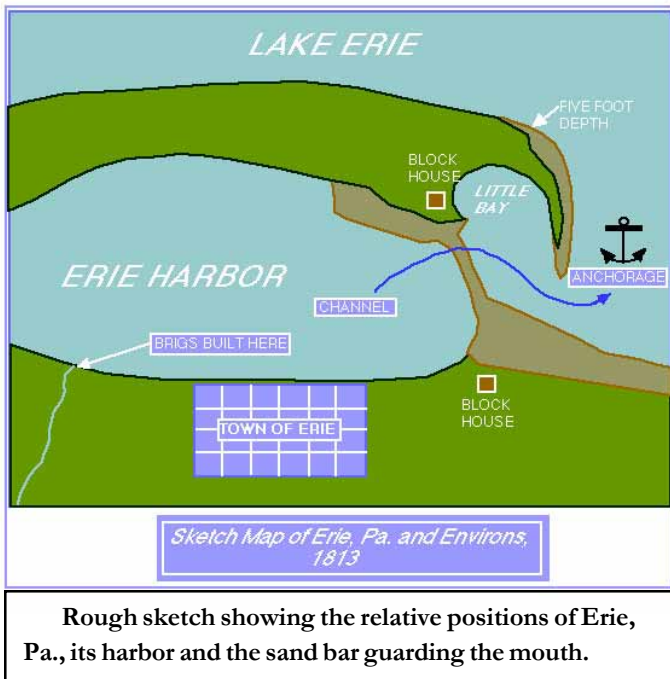
presumably have been time to build her at leisure. None of these conditions pertained when the other large vessels of the two squadrons were constructed.

WAR At the outbreak of hostilities, an American force attempted to take over the British positions across the Detroit river, but was unsuccessful, and the civilians of the area, combined with those who had given their parole after an earlier defeat of American arms further up-lake, were allowed to travel down the Lake to Erie, Pa., then a metropolis of some 500-600 inhabitants.

Among this group was one Daniel Dobbins, a

merchant skipper whose vessel had been one of those transporting non-combatants down the Lakes from the Strait of Mackinac, through the Detroit River, and thence to Erie. On arrival at Erie and having discharged his obligation to deliver the civilians and fulfilled the conditions of his parole he was sent to Washington where he was able to acquaint the Government with the situation on the Upper Lakes. He was subsequently ordered back to Lake Erie to commence the construction of a squadron to counter the British. There were some small vessels at Black Rock, just down river from Buffalo, N.Y., and the intention was for Dobbins to build four more of similar size, typical Lakes trading vessels, with which he was intimately familiar. He was given an allowance of 2000 dollars to pay for this building program. War broke out in June, and all of the above took place during the next three months, Dobbins being appointed Sailing Master on Sept. 16th, 1812.

Back on Lake Erie, and based at Erie, Pa. on his recommendation of the harbor there as the best place on the Lake for the purpose, he commenced getting trees felled and timbers and plank cut and shaped. Superior to Dobbins were Lt. Jesse Elliot, command-



Rough sketch showing the relative positions of Erie, Pa., its harbor and the sand bar guarding the mouth.

ing the vessels on Lake Erie, and Commodore Isaac Chauncey, commanding on Lake Ontario, and, wearing his other hat, Commander of all U.S. Naval forces on the Lakes. There was an ambitious building program under way on Lake Ontario as well as on Lake Erie, at Sackett's Harbor at the eastern end of that Lake. Working there for Chauncey was New York shipwright Henry Eckford, a builder and designer of note.

At New Year's, 1813, Commodore Chauncey and Eckford visited Erie to inspect the work being done there, and at the conclusion of their one-day visit left instructions for the building of two 20-gun brigs, much the largest vessels to be built in this program for the Navy, and for an increase in size of two of the four gunboats. The gunboats being built by Dobbins were intended to mount one gun, on a pivot, or perhaps a half-dozen pop-guns. The brigs would mount 2 12 pounder long guns and 18 32 pound carronades each. The gunboats mounted (1) four long 12 pounders on pivots, (2) one long 32 pounder on a pivot and two 12 pounder carronades, and (3 & 4) one long gun, pivot mounted.

Another noted shipwright and designer from New York, and well-acquainted with Eckford, Noah Brown, was sent to Erie during the winter to supervise the construction underway there. Noah Brown and his brother Adam had worked building the frigate 'New York', in 1807-08, then went into business working on merchant vessels and gunboats. They also built privateers, among them the noted 'Prince de Neufchatel'. They would subsequently build the ship-sloop 'Peacock' and, on Lake Champlain, 'Saratoga', 26 guns, 143 ft. between perpendiculars, brig 'Surprise', renamed 'Eagle', 24 guns, and several gunboats.

A new Commander was appointed to Erie, under Chauncey as overall commander, Lt. Oliver Hazard Perry. Senior to Lt. Elliot, Perry had the title of Commodore as commander of the squadron. His task was to build, equip, train and take into battle this new American squadron.

The British squadron was under the command of Lt. Robert Barclay, also a Commodore by virtue of his command of a squadron, who had the task of building up the strength of the squadron, equipping it and taking it to meet the Americans. He, like his counterpart at Erie, was under the command of a senior officer based on Lake Ontario, Sir James Yeo. Barclay had the 'Queen Charlotte', 18, and several schooners and a brig. He built 'Detroit', 20 guns, at Amherstburg while Perry, Brown and Dobbins were building two brigs of 20 guns and the assorted gunboats.

All of this activity was taking place at the back elbow of the universe, at the end of supply lines of utmost difficulty and complexity (the canvas for the American squadron was sent from Philadelphia by U. S. Mail), the only material locally available in sufficient quantity being trees. There were a lot of trees growing on the frontier in those days.

The two squadrons met and gave battle off Bass Island, at the Western end of Lake Erie, South of the mouth of the Detroit River and the British base at Amherstburg. They consisted of, on the American side,

'Lawrence' (Flag) and 'Niagara', the two 20 gun brigs, and assorted smaller vessels, and on the British side, 'Detroit', 20 (Flag), 'Queen Charlotte', 18, and assorted smaller vessels. During the battle, 'Lawrence', 'Detroit' and 'Queen Charlotte' were more-or-less shot up while 'Niagara' was relatively unscathed. The reasons for this marked difference in damage sustained between the two American brigs are fascinating, but have no bearing on this particular aspect of the story.

After the battle the two squadrons anchored in Put-In-Bay, in the Bass Islands, from which place the American squadron had sailed to meet the British. While there, the dead were buried and one of the captured British officers, Lt. Robert Irvine, made a sketch of the four largest vessels lying at anchor, from which he later made a painting. The sketch is presumed to have been made after Sept. 12, as a squall on that date completed the dismasting of 'Detroit', as she is shown in the painting. This is the only contemporary pictorial evidence of which this author is aware showing these four vessels. It will be referred to later in more detail.

'Lawrence' returned shortly to Erie carrying wounded, and was immediately got over the bar and into sheltered waters for repairs. 'Niagara' arrived later and was also laid up for the winter. 'Detroit' and 'Queen Charlotte' remained at Put-In-Bay for the winter, Daniel Dobbins being sent there

over the winter to effect sufficient repairs to enable them to reach Erie, which they did in May, 1814.

The bar guarding the inner harbor at Erie has some bearing on matters and deserves a few remarks. The town of Erie was at that time situated on a portion of the main trend of the Lake shore, at the mouth of a small river or creek. A short distance out in the Lake was a sandy hook, much as is Cape Cod or the Barrier Islands of the Carolina coast. This hook or spit was attached to the main shore to the West and South of Erie, producing a sheltered bay with its opening to the Northeast. It was near this opening that the town was situated. Across this opening to the harbor was a sandbar which limited the draft of any vessel using the harbor. The two American brigs, having been built to be of less draft, yet still drawing 11 ft., were not able to get over the bar without the help of 'camels', barges which were ballasted with water to lower them. They were lashed, one each side, to a vessel and the water pumped out, raising the barges and the vessel between them and reducing the draft to the point that the bar could be crossed. Once over the bar, the camels could be filled again or the lashings slacked off, and the vessel allowed to float at her natural waterline. It was this bar, and the harbor it protected, that was relied upon to keep the American vessels safe from British interference while they were being built, and the circumstances of which recommended Erie to Daniel Dobbins when he proposed

the site for the American effort on the Lake. The British could not approach because of the bar as they would have been shot to bits by the forts guarding the entrance if they tried to enter, and the sand spit protected the harbor from natural forces during the winter while the vessels were under construction.

During the sailing season of 1814, 'Detroit' and 'Queen Charlotte', as stated above, arrived at Erie. 'Lawrence', 'Niagara' and some of the smaller vessels cruised up the Lakes as far as Georgian Bay on Lake Huron and Michilimackinac at the junction between Lake Michigan and Lake Huron. After various and sundry alarms and excursions by the American squadron, all four vessels were inside Presque Isle Bay (Erie Harbor) and roofed over for the winter, both to make them more habitable and protect them from the elements and to make any attempt upon them by the British more difficult. The war ended during the succeeding winter.

Joel Sanborn, Dartmouth, NH, USA

Fiddlers Green Model Ships

Fiddlers Green Model Ships is a service oriented brokerage business of model ships and yachts. Since its inception in 1981, buyers and sellers have been put in touch with each other, resulting in a happy exchange of high quality model ships. As a broker, Fiddlers Green introduces buyers and sellers that would not normally connect with one another.

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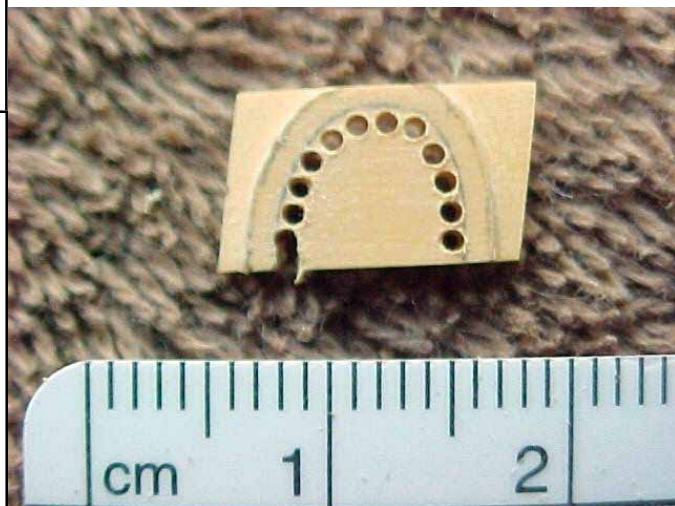
Carving with a dental drill.

-Part 5. Carving structural shapes. (Parts 1-4 of this article were published in the Modelshipwrights Journal, which is available at www.warriorgroup.org/Download.htm)

by Bill Short

Part of the beautiful look of the Sovereign's stern is the graceful arched stern gallery windows which give the ship a distinctive look. Originally, I had envisioned fabricating the windows from Holly strips which would be bent into shape through heating as you do in the planking process. I was happy with the results, but in the end, it was not good enough for the stern of my model and so I decided to carve them from the solid as the ribbons had been done.

I started by making a panel of boxwood to the exact shape of the area to be filled in by the window on the stern. After careful fitting, the piece was ready for layout of the arch. I had used a piece of maple as a forming tool when trying to bend the Holly strips, and used it once again to trace the outline of the arch onto the Boxwood. This marked the area of wood to be removed to form the arch. After sketching in the frame of the arch free hand on the panel, I proceeded to remove one half the depth of wood outside the frame to give the frame window depth. The next step involved removing the actual window area and a series of tiny holes was drilled along the arch line of the window.



Using a fluted burr in the dental drill, I connected all the holes removing the center piece revealing the arch. The arch was then smoothed out to form the final shape with the same fluted burr. The piece was final-finished and placed on the hull.

Another challenge in structural pieces was to carve a grid for mounting on the top of the stern gallery. I had tried a number of ways to depict this honeycomb structure including burning designs on the boxwood as well as drawing techniques, all of which did not fill the bill. Finally I decided it too must be carved from the solid and so proceeded to fabricate the shape of the grating to fit the hull. Once the shape was final fitted to the space on the hull, I laid out three rows of dots on the wood to represent the center of the holes to form the honeycomb shape. I then drilled through the holes with progressively larger ball end burrs until I was satisfied with the size of the openings. It was then left to shape each hole into a teardrop shape with the dental burrs. After careful shaping and final finishing, the grating was acceptable for mounting.



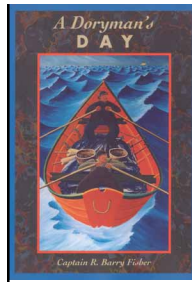
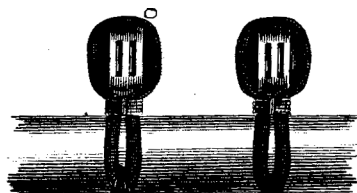
Although the gun port surrounds were not actually structural shapes, they do represent a challenge in carving. I used the same technique to remove the wood from the center of the surround and smoothed it in the same manner. The outside shape was carved in the same manner as other individual pieces of ornamentation using several ball end burr combinations. I wanted the background of the actual gun port opening to be black and in the spirit of 'painting with wood' that I have employed on my model, I used a sliver of ebony to achieve this effect.



The dental drill has proved to be a versatile tool to carve many different shapes including structural pieces.

NextCarving in the round.

Bill Short, Thornhill, Ontario, Canada



A Doryman's Day

Captain R. Barry Fisher
Tillbury House/ Maine Maritime Museum
ISBN 0-88448-233-2

A Review by Tom Babbín

Sea stories most often tell the tales of the great ships and the great officers that commanded them. Seldom do they concern themselves with the lives of the inhabitants of the forecabin, or fo'c's'le. A Doryman's Day tells the story of the great sailing fishermen from the point of view of Barry Fisher, a doryman on some of the last sailing schooners of the 1940s.

Capt. Fisher begins his tale in 1930's Gloucester, where, as a typical 'wharf rat', or boy who hung out on the wharves, he arranged to buy an old dory from one of the schooner captains. He amusingly lays out the complex negotiations for the decrepit craft and the supplies needed to get it into shape, and then describes the process of becoming a young tycoon by salvaging items from under the wharves with his gang of friends. He also lets us in on the secret that the best fishing in Gloucester Harbor is right over the sewer outlet!

The second section is the meat and potatoes of the tale, where he describes in great detail the process of hand-lining for cod from the dories of the schooners Marjorie Parker of Boston and Robertson II of Shelburne, NS. He describes the long and difficult days quite eloquently, but saves his most loving prose for the elaborate and high-calorie meals prepared by the most important crew member, the 'Doc' or ship's cook. His detailed descriptions of the work, the equipment, even the clothing the crew wore give the reader an appreciation of the difficult, but rewarding life of the crew.

In the third section of the book, Capt. Fisher takes us swordfishing in a tale that is part factual, and part sea yarn. It is fascinating to compare his description of hand-lancing the fish to the modern practice of longlining described by Linda Greenlaw in *The Hungry Ocean*. On his schooner, the fictitious Lorna B. (names were changed to 'protect the virtue of the innocents and hide the misdeeds of the guilty') the harpooner braced himself on a platform on the bowsprit while the captain maneuvered the schooner into position. A quick thrust of the harpoon, and a doryman is dispatched to round up the dying swordfish, as the schooner heads off after other fish. He finishes the tale by telling the story of an ill-timed curse on the captain's part, and the unexpected results.

Captain Fisher (who died in 2001), was an excellent story teller, and the book is consistently entertaining, whether he is describing a seine boat race or the baiting of trawl lines. If you love fishing schooners, or just want to find out how things were done on them, this slim volume is highly recommended.

Tom Babbín, Natick, Massachusetts, USA

Making Wire Core Rope on a Rope Walk

by Robert M. Crane

Ship modelers, who have reached the stage of rigging that new model, will inevitably experience some frustration when trying to achieve a realistic rendition of rigging lines whose natural appearance is due to gravity sag, such as stirrups and footropes on yards. Commonly kit supplied materials or other thread materials simply do not have enough mass to overcome their inherent stiffness and will not drape or sag naturally by their own weight.

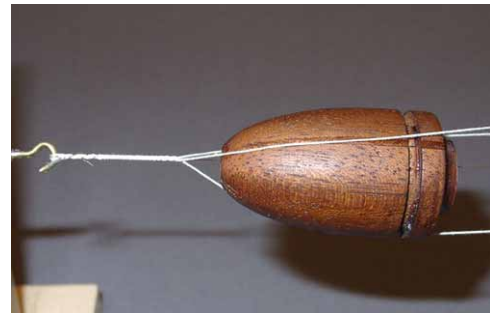
Many modelers use wire for footropes and stirrups because the wire can be formed to hang straight for the stirrups, and shaped to the graceful catenary curves of footropes. This works well at smaller scales, but as the scale becomes larger, this artifice becomes increasingly unattractive. These elements of rigging are supposed to be rope, not wire.

I have for years had in the back of my mind that, if small enough cordage with a soft wire core could be found, that this would solve the problem of realism in both the material and achieving the proper gravity induced appearance. But alas, the closest I could come was some weighted fishing line that was not at all appropriate.

As necessity is the mother of invention, frustration can be the spark that inspires. It occurred to me to try to make a wire core rope on my ropewalk. My available stock of modeling wire did not yield a wire small enough. Scrounging about I seized upon a length of 18 gage AWG lamp cord. There inside was an abundant supply of soft copper wire measuring 0.006" diameter. I discovered that if I slit the insulation a few inches back, and pulled out all the wires as a bundle, that I could grip the bundle in one hand and the insulation in the other, and with a good pull the bundle of wires would tear the insulation for as far as you wanted to go. AWG wire comes in many sizes (gages) with the individual conductors ranging in size from 0.002" diameter to 0.081" diameter, and is dead soft copper. It's a cheap and readily available source.

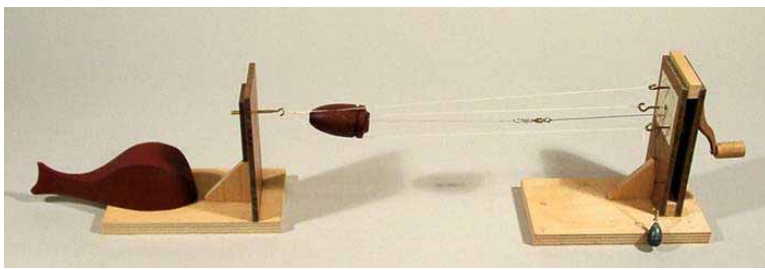
hook (which doesn't spin all that freely), and a bobbin. These elements are not attached to each other. I place them on a smooth table top and place a weight (substantial) on the idler end. That fishy looking thing on the idler end is a lead weight. A Drafting duck for us old timers. In use the twisting and consequent shortening of the strands causes the idler end to slide toward the geared end. Friction maintains tautness. I never make up more than about 5 feet of rope. Longer lengths are difficult to do without a motorized rope walk with motor controls, or a second person.

The only modifications I have made were to drill a hole through the bobbin for the wire to pass through, and attach a small screw eye to the face of the geared head to pass the wire through and hang a weight on it just to keep it straight and from fouling the other lines.



The technique Rig the wire by attaching at the idler end (neatly), pass it through the bobbin then to the swivel. Tie a thread to the swivel and pass it through the eye hook and attach to the weight. Let the weight hang over the edge of the table or whatever so that gravity does its job keeping the wire taut. Knowing that the twisting of the strands will shorten the distance of the original setup by about 30 percent simply set the length of the wire accordingly. Now rig the three strands, single, doubles, triples, or whatever. Twist the strands (i.e. crank the hell out of 'em) in the usual fashion. Remember my idler does not rotate freely. Test the readiness of the layup by turning the idler by hand. You can tell when it starts to lay up nicely.

As the rope starts to layup the wire will probably try to wind up with the strands and become one of them. It makes a pretty layup; every fourth lay being bright copper, but is useless for our purposes. Don't let it do this. You can see in the picture where this started to happen but was stopped with increased tension on the wire. With your right hand on the bobbin grip the wire with your thumb and second finger and use your index finger to push against the back of the bobbin. This pushes the bobbin up close to the point of layup and gives good control over the



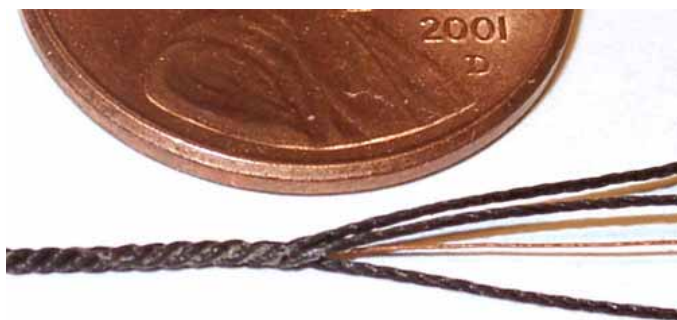
Basic setup of the rope walk. 3 strands, wire through center, attached to swivel and weighted

The rope walk My rope walk is a simple affair, a geared head with 3 rotating hooks, an idler end with a free spinning

process. Continue turning the idler end as the rope makes up and letting the bobbin relieve itself and progress along the rope. If the lay starts to become loose, crank in some more twist at the crank end. This gets pretty easy as you get more experienced.

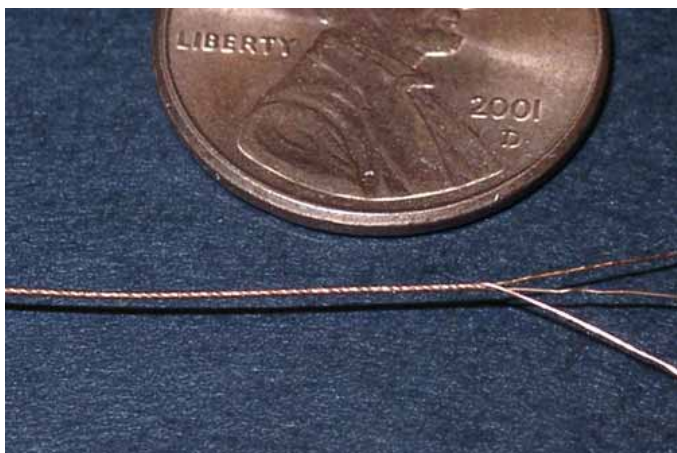
This is all easy to demonstrate but difficult to describe. It won't make a lick of sense to those who haven't tried a rope walk.

I think what is really happening is that, since my idler doesn't rotate so freely, I can over-twist the strands beyond the point of normal makeup. Then by manually turning the idler end, I am relieving the over-twist in a slow and controlled manner, allowing one to control the wire core. I have tried a freely spinning ball bearing fishing swivel on the idler end, which works fine for ordinary rope making, but did not allow the control of the idler end needed to successfully lay up the wire core rope. The swivel spins too fast and readily to allow sufficient control. My sticky idler bearing may have been a serendipitous thing.



The 0.006 wire and 3 strands of Coats and Clarke upholstery thread yields a layup of 0.030 dia.

The 0.006 wire and 3 strands of Coats and Clarke hand quilting thread yields a layup of 0.020 dia., just about right for 1" diameter footropes at 1:48 scale.



Wire rope

I rigged up the rope walk with 3 strands of 0.006 copper wire. Now instead of turning the crank end, turn the idler end. The bobbin is necessary to keep the wires twisting nicely at the point of makeup. This is simplicity in itself. The bobbin takes care of itself, sliding nicely along as the tension builds and stays at a relatively constant distance from the point of makeup. Tension is controlled at the idler end, by feel and the tautness of the wires. Just enough tension to keep the wires from sagging seems about right. So a rope walk isn't needed at all, just a means of holding the wires apart at the static end, 3 in this case, and a simple crank mechanism at the other end. The elliptically tapered cone bobbin provides the control.

Three strands of the copper alone yield nice looking stuff at 0.013 dia., but would have to be painted or otherwise blackened. When painted it looks just like rope. At 1:48 scale this yields

a wire rope of 5/8" diameter, just right for stirrups.

Conclusions To an old diehard ship modeler, this is pretty exciting. I see great potential for this development. I have found that the wire core rope can be laid up hard or soft by controlling the progress of the bobbin. A hard lay produces rope that looks like serving. This opens the possibilities of using it for Burton pendants, yard slings, yard trusses, and other bits I haven't even thought of yet. You can tie a knot in either of these materials, but the knots do not draw up like thread and remain rather bulky. However, it is easy to form a served tapered eye splice. The slight stiffness of the wire helps immensely in holding the desired shape while one fiddles with the serving and such.

Have fun.

Robert M. Crane

Georgetown, Texas, USA

Making a Capstan

By Terry Godwin



I will describe the method I used to construct the Capstans for my HMS Warrior of 1781, and my Oliver Cromwell. No dimensions will be given since actual sizes of the parts will depend on your scale.

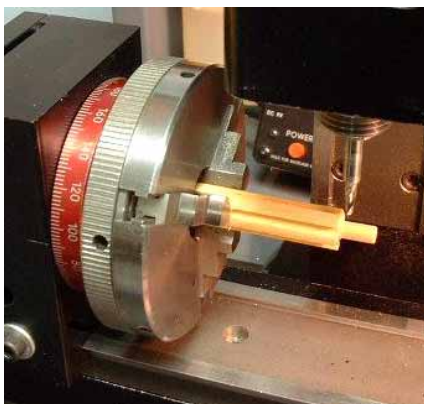
The tools That I used included the usual files, Xacto knives, and drills. I also used a Sherline Lathe, and a Sherline Mill with the Indexing attachment P/N 3200.

In making the barrel for the Capstan, a dowel of the correct diameter is needed. My choice of wood was Boxwood. As boxwood dowels are not available, I chucked a square piece of boxwood in the four-jaw chuck of the

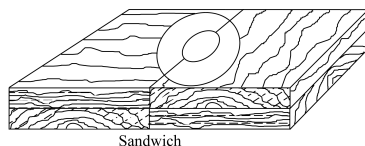
Sherline lathe and turned it to the diameter needed. I always make one or two spares when making any repetitive parts like this, as the setup is what takes the time. It is far better to make extras while the setup is ready than to try to set up again and find minute dimensional differences in subsequent parts.

Make each dowel about 1 1/2 or so inches longer than needed. This will give you the necessary length to hold in the chuck while working on the open end. I also turned a small diameter on the end that will become the base. This part will be inserted into the mating piece to mount the capstan.

With a suitable diameter dowel prepared, set up the Indexing Attachment, (IA), on the Mill. Attach your three-jaw chuck to the IA and chuck up a piece of dowel. Make sure you have enough length of dowel exposed to match the needed height of your capstan plus about a 1/2 to 3/4 ". The extra is to allow clearance for the head of the mill when you cut your slot. Make sure everything is tight and set the index to 0. Select an appropriate metal cutting mill. An exact size mill is great but if you do not have the exact size you need, then use one slightly smaller.



Do not try to take the whole depth of the cut in one pass. Make several shallow cuts to keep from splintering out the wood. Making too deep a cut may also cause the dowel to deflect and even break. Cut a slot to the calculated depth. If you need a wider slot than your mill, move the table in or out half the extra width needed and cut, then move it in the other direction half the required extra distance. Always keep track of where your zero position is on the table and return to that before beginning the next cut. Make allowances for backlash. Now rotate the IA 60 degrees and repeat.

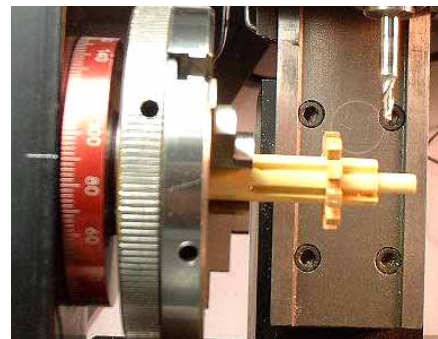


To make the trundle head I laminated thin pieces together using half widths with the grain alternating. Two pieces are laminated with each laminate composed of two pieces with grain at right angles. Then sandwich several pieces together with a soluble glue.

Make sure the sandwich can be separated without affecting the laminated pieces. Rough cut the sandwich to the outer diameter of the capstan top using a saw. Hand or scroll. Leave about 1/16" over the finished size. This package should consist of the necessary pieces for the notched trundle heads and the cover pieces, top and bottom, for the trundle head

Drill a hole in the sandwich the diameter of the inside (bottom of the groves) of the spindle. Cut or file the inside notches to make the sandwich fit down onto the spindle.

Make sure the sandwich is wide enough that it is stable on the spindle and does not wobble. Make several extras to keep the sandwich wide and to allow for the inevitable breakage. Chuck the sandwich-spindle in your lathe. Now take the diameter of the sandwich down to the exact size for the trundle head. It is probably best to do this with sandpaper or files, not a cutting tool. Remove the top and bottom pieces that do not need to be notched from the sandwich and set aside. Mount the sandwich onto the spindle.



Transfer the sandwich-spindle to the IA. Now use the same process used for the spindle to cut the notches into the trundle head.

The end result:



Capstans on the HMS Warrior

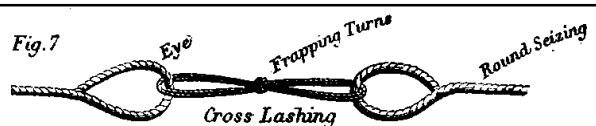
Making the other parts is pretty straight forward and does not require and special tools.

Fair winds and happy sailing.



Terry Godwin, Englewood, CO, USA

Terry is the founder of the Warrior Group



Art and Historical Accuracy in Ship Modeling

by Bill Short

In my brief exposure to this hobby, I have been intrigued by the ornate nature of the 17th and 18th century ships and the representative models exhibited in museums and at competitions. Viewing some of these models in my travels has confirmed my belief that there are unique differences in how modelers depict the ship of choice. In my mind, there are two general depictions: historically accurate and artistically rendered. For the purpose of this article, you may forgive me for using such a broad brush to paint the spectrum of model types.

Historically accurate would seem to be the route to go to really please the adjudicators at the Mariner's Museum competition in Newport News VA. My understanding is that you can be taken to task for omitting details or misplacing wales etc. that would be deemed to be an historically incorrect depiction of the ship in question. Many of the very fine models that find their way to these competitions, and in some cases, to museums, would seem to me to be somewhat sterile in the quest for perfection. Planks, deck furniture and rigging is modeled to exquisite standards of perfection with nary a chip dent or bit of fuzz in sight. While these models are correct in their quest for accuracy, they may lack what I call Artistic Pizzazz.

Artistically rendered models are at the other end of my broadly defined spectrum. They possess the artistic talent of the maker which comes to the surface in the form of intricate carvings, beautifully painted friezes and unique selections of woods finished in a manner to impart a warm, used appearance. Most of the August Crabtree models would fit into this category as I see it.

Where plans and historical records of ships exist, it remains for the modeler to build the miniature ship by following the information at hand. One could take either route to building, and each individual modeler's depiction would produce an entirely different result. The historically accurate route could, in essence, produce very similar models if a group of people were building the same ship, as is the case of the now

popular 'practicum' method. Many of these models look the same to me, and seem to lack individual interpretation. Hopefully, the practicum is treated as a learning experience to enter the realm of scratch building, as it can lead to 'cookie cutter' models. I would suspect that it is possible to place one's own stamp on a practicum model if you stray from the guided path.

Artistic renderings may be best suited to those ships which lack recorded history in the form of plans. Pictorial representations of ships of this period can be found by artists like the Dutch artists the Van deVeldes, who skillfully sketched the views that we all admire in various ship modeling books. If one could produce the hull in a form that is representative of a ship of that time, it remains for the modeler to add the carvings, paintings and adornments to his carefully chosen woods to create an artistic rendering of the ship. My personal preference is the artistic rendering route. Many of these fine models can be seen in the Roger's Collection in Annapolis Maryland.

I would guess that there are no rights or wrongs between the two model types, as it is in the eye of the beholder to choose the 'right' way of doing it. Individual tastes and methods will continue to provide ship modeling eye candy for us all to debate and enjoy.

Did you know?

the origins of these common terms...

Footloose - The bottom portion of a sail is called the foot. If it is not secured, it is **footloose** and it dances randomly in the wind.

Pipe Down - Means stop talking and be quiet. The **Pipe Down** was the last signal from the Bosun's pipe each day which meant "lights out" and "silence".

Chock-a-block - Meaning something is filled to capacity or over loaded. If two blocks of rigging tackle were so hard together they couldn't be tightened further, it was said they were "**Chock-a-Block**".

Buoyed Up - Using a buoy to raise the bight of an anchor cable to prevent it from chafing on a rough bottom.

By and Large - Currently means *in all cases or in any case*. From the nautical: **by** meaning into the wind and **large** meaning with the wind: as in, "**By and Large** the ship handled very well."

Cut and Run - If a captain of a smaller ship encountered a larger enemy vessel, he might decide that discretion is the better part of valor, and so he would order the crew to **cut** the lashings on all the sails and **run** away before the wind. Other sources indicate "**Cut and Run**" meant to cut the anchor cable and sail off in a hurry.

For other examples of nautical terms that have entered common usage, see:

www.fortogden.com/nauticalterms.html

