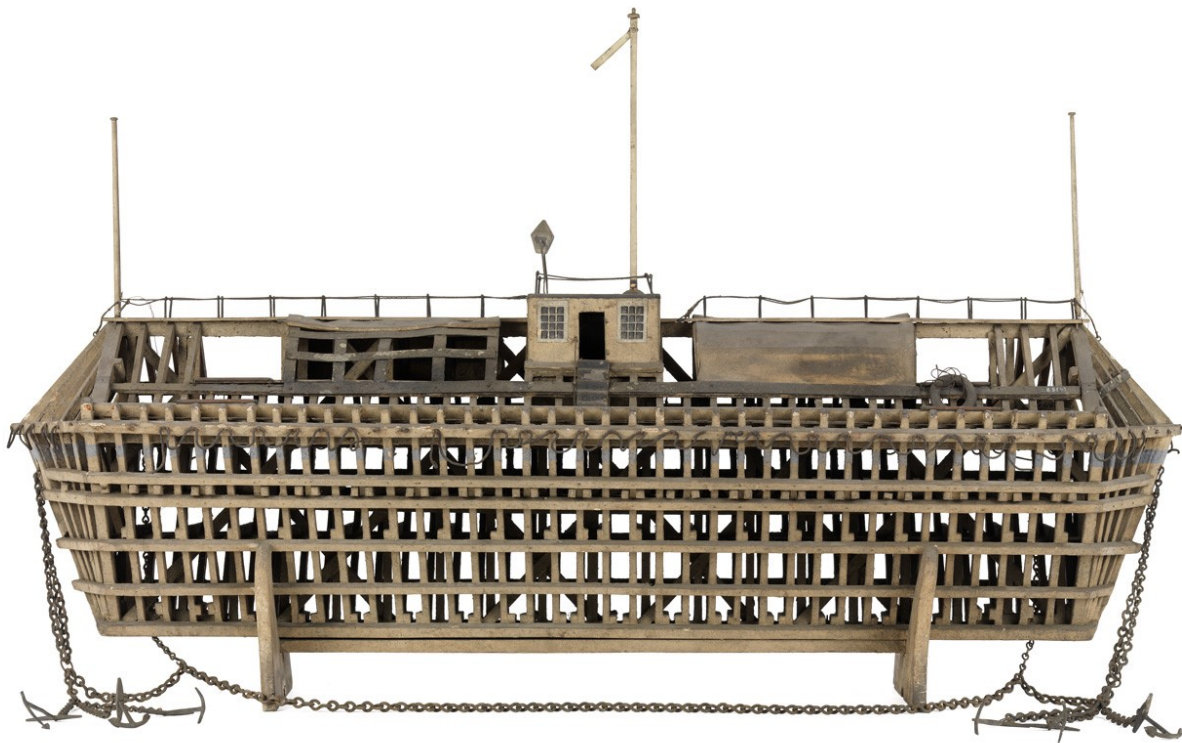


# The MSB Journal



**Winter 2015**  
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## **The MSB Journal**

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On the Cover  
Refuge Asylum circa 1820  
National Maritime Museum

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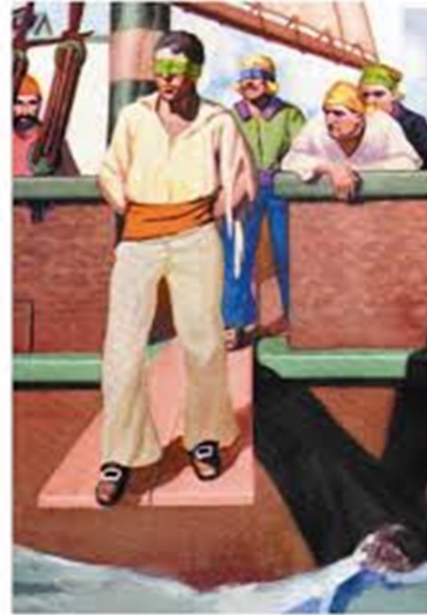
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## Walking the Plank

By Gene Bodnar

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In Hollywood, the standard way for pirates to kill someone was to have the individual walk the plank, but real pirates like Blackbeard or Captain Kidd or a host of others did not employ such a punishment, except on extremely rare occasions. Pirates actually preferred not to kill their victims; their primary interest was gold and other booty, and they simply took it and ran. In fact, if they really wanted to get rid of someone, it was much faster and simpler to push them overboard or run them through with a sword.



On the other hand, there are indeed a few documented instances of walking the plank, but the pirates did it simply to amuse themselves. In some cases, it was not pirates who employed the practice in real life. For example, in 1769, mutineer George Wood, while in a London prison, confessed to his chaplain that he and his fellow mutineers had sent their officers to walk the plank.

There are only three, perhaps four, documented cases of the punishment being used by pirates. In July 1822, the captain of the British sloop "Blessing" was forced to walk the plank by the Spanish pirate crew of the schooner "Emanuel" in the West Indies. In a second instance, on February 14, 1829 the packet ship "Redpole" was captured by the pirate schooner "President" and was sunk. The commander was shot and the crew members were forced to walk the plank. And in the third instance, in 1829, pirates captured the Dutch brig "Vhan Fredericka" near the Virgin Islands and murdered most of the crew by making them walk the plank with cannonballs tied to their feet.

Black Bart, who was well-known for his psychotic tendencies, was incredibly successful as a pirate, having taken over 400 ships; yet, he is only known to have made one person walk the plank in his many years of pirating.

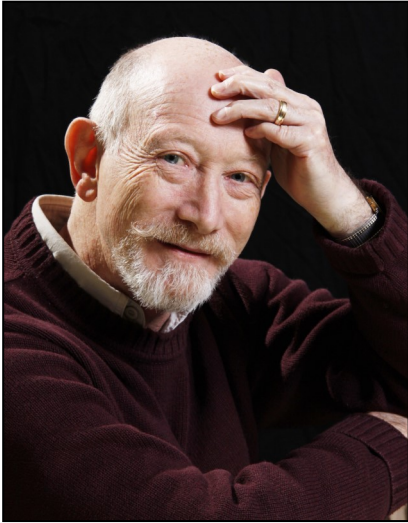
Thus, all things considered, it is possible that other instances of walking the plank occurred but their records have been lost to time, but undoubtedly the practice wasn't nearly as commonplace as fiction would have us believe.

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## Behind the Tiller

Gary Milgram

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David Antscherl

We all know them by name, Davis, Chappelle, Underhill, Hahn to name just a few. In my opinion, these are masters who have contributed greatly to our wonderful hobby, each in their own distinct way. Each, sharing in writing and through their work, a unique vision and pathway to enhance the model ship building hobby. It is through their works (and many others) that I have been able to elevate the quality of my modeling efforts. And, if I may, I would like to include David Antscherl in that list of distinct masters modelers and authors. I think one of the greatest contributions one can make to the hobby is to gather insight from these masters and then share it with the rest of the community. I hope that this article will afford just that.

I had the pleasure of sitting down with David at the Nautical Research Guild Convention this past October in Mystic Connecticut. I had never met David before, and had only seen a photo of him on the dust jacket of his book series, *The Fully Framed Ship Model, HMN Swan Class Sloops 1767-1780*. This four volume set, offered by Sea Watch Books, was a collaborative effort between David Antscherl and his friend and fellow modeler Greg Herbert.

My first sighting of David at the convention was while we were poring over a selection of used books His name badge was tucked away, intentionally, perhaps signaling that he was a little uncomfortable with his notoriety among the ship modelling community. When I introduced myself, he was warm and welcoming. We made arrangements for the interview, which took place on the last day of the conference.

When we sat down to talk, I was pleasantly struck by his outgoing personality, which certainly contributed to our being repeatedly interrupted during the interview by fellow modelers and ship historians who wanted "just a moment" with him. Interspersed between these "moment's", we had our own conversation.

**Question:** David, How did you first get involved in the hobby of model ship building?

**David:** I have been interested since my earliest memories as a youth. I grew up near Greenwich, England. A few years ago my mother gave me a small journal that I'd written as a six year-old. My very first entry into that journal was, "I am building a ship model". He then went on to say with a chuckle, "I was doomed!" Every year, I went into London with my father to attend the Model Engineer Exhibition. We would marvel at the wonderful examples and came across some ship models. Sensing my interest, a man demonstrating ship model-making told me to bring back what I was building next year. I did as suggested and when I returned the next year, he said, "You need to join a ship model society". So I did and, as a youth at the ripe age of 10, I was encouraged by that society to learn more about researching what I was building and to do that, I needed to learn how to research.

I was very fortunate at that time to meet and befriend the Keeper of the Draft Room at the National Maritime Museum. I obtained a "readers' ticket" at age 12 and he taught me how to research properly. It was these formative years that set me on a quest to build historically accurate models that were backed by primary research.

**Question:** David, What do you think is the greatest challenge to the hobby today?

**David:** The greatest challenge to the hobby today is that of not replenishing our ranks with the younger generation. The young are learning a different fine motor set than that of building models with their hands. I am hopeful that electronic forums will help engage the younger generation in this hobby. And help replace "us old guys".

**Question:** David, What do you think is the most exciting thing about the hobby today?

**David:** I think the worldwide access to information is huge and exciting. The amount of research that you are able to do from home now is significant. Before the internet, I was working in isolation. I knew of no other modelers before the year 2000. By chance, I saw an ad for a large ship modeling competition in Newport News, Virginia and decided to enter. I was delighted to have earned a silver medal at that competition for my model. But the biggest compliment was when I also earned the Howard Chappelle Memorial Award for my research efforts.

**Question:** David, Please tell me about your career before modeling.

**David:** Before modeling, I was trained in the health sciences as a Physical Therapist. After a life changing event in my mid-twenties, I reflected inward and changed my focus to art related ventures. I became a graphic artist to a printing house as well as a theatre set designer. I still design sets to this day. Fast forwarding, ship modeling was a significant part of my own healing and therapy during difficult times and helped to keep me sane.

After that modeling competition in Newport News, Virginia, I earned my

first professional ship model commission. It was also then that I met Greg Herbert. He suggested that I draft a *Swan* Class ship for him. I loved the design of these ships and readily agreed. At some point during the process Greg insisted we share this subject on a broader level. The build evolved into a subscription series of instructional articles that took place quarterly over a three year period for a total of twelve issues. We had 100 subscribers to this initial "Swan Class Practicum". It was at that point that we met Bob Friedman of Sea Watch Books, who said, "Let me publish these". The rest is history.

**Question:** David, What were your greatest influences as you developed your modeling skills?

**David:** I'd have to say, the greatest influence on my modeling skills was my desire to do better, having seen the fabulous models at Greenwich. When I started I couldn't make a joint to save my life! I think it has a lot to do with putting in the time and effort. There is a theory out there about 10,000 hours. Some say that this is the amount of time that is required to become an expert at something. I subscribe to this theory.

**Question:** What is the one piece of advice that you would give novices, intermediates and experts?

**David:** For the novice builder, don't choose too ambitious a project. Don't put yourself at risk of starting a project that you might never finish. It is best to start off small, get experience, better understand your likes and dislikes as well as the amount of time and effort you personally require that would allow you to finish a model. For the intermediate modeler, I recommend getting on line. It is a great idea to get connected and see what others are doing. For the expert modelers, look at the other accomplished model makers and continue to be inspired. Actually, in retrospect, this latter advice is good for all levels of modelers.

**Question:** David, as a last question, what lies ahead for you professionally?

**David:** (With a twinkle in his eye and a slight smile) There is an embryo of an idea that Greg Herbert and I are working on. The ketch *Speedwell* of 1752. It will follow the TFFM philosophy. We are still working through the details of that project and will share them as they become available.

At the close of my interview with David, I took the opportunity to share with him some of my CAD drawing work. Ship plan drawing has become an adjunct hobby of mine that compliments my own model ship building efforts. In the few minutes we had left, David opened my eyes to a few areas that needed attention in my drawings as well as giving me the encouragement to strive further. It was the fitting end to a wonderful interview and it really helped encapsulate the themes that David spoke of during our time together: Do primary research, get connected, and continue to be inspired.

## ***The Model Shipwrights Lumberyard***

by Dave Stevens



In this series I will cover various aspects of the lumber trade: collecting and processing your own wood or buying wood as well as the properties of different woods. Let's begin the series at the beginning of the wood process.

In the photos below the logs are brought in to the yard and unloaded. From here they are sorted into saw logs and logs for blocking. The blocking logs are cut with a chain saw for wood turners and carvers. These blocks are from the crotches where the grain of the tree is twisted and swirls, spalted wood or curly grained wood. The saw logs are for the most part clear of knots and straight grained, the rest is firewood. In the fore ground are small logs from fruit trees such as apple, pear, and plum, and various other types of small trees.



In one section of the log field there are logs of cottonwood, hard and soft maple, basswood, box elder, birch, and cherry.

When a load comes in the entire load is purchased, you cannot just buy a log or two, it is all or nothing. At this stage logs are bought by the ton and ungraded. You may get a beautiful spalted curly log of maple worth \$2,500.00 or a load of firewood. This is at a commercial scale and it is helpful if you have a logging crew, a crane, logging trucks, and you're working with saw mills or you have a tree removal business. This entire operation can be scaled way down to collecting and processing for hobby use. After the logs have been sorted select logs are sent off to the saw mill.



When lumber comes back from the saw mill it is stiked and stacked in the yard to air dry. The stack in the photo to the right is about 1,000 board feet of beech. The stack will sit under the tin cover for a year or more until it has lost enough moisture and is seasoned and ready for use. Once this wood has been sorted and graded then the better grades are sold at a higher price. Lower grades are sold off as shorts or defects with knots and splits or excessive warping. Discussion of lower grades will be covered later in the series.



In some cases smaller logs are just split down the middle and dried. These half logs can then be cut again or if small enough re-sawn with a band saw.

Some smaller logs such as pear wood are cut into square billets and stacked to dry.



For the most part model builders will just buy the wood they need. Let's face it, to harvest and process your own wood requires hunting it down, using a chain saw to trim it out, a truck to transport it, re-sawing it into usable sizes, then stacking and drying it. A year later you're finally ready to use the wood. If you have an understanding of the lumber trade and know what to ask for you can save yourself a lot of time and money.

All lumber goes through a grading system, and the higher the grade the more wood costs. The highest grades are FAS, which stands for first and second grade, and No.1 common. These two top grades are what you will typically find on the lumber market. The other grades are 2A, 2B, 3A, and 3B. These grades are rarely sold on the retail market because of the low profit margins.

Grading is based on board size and defects like bow, checking, crook, cup, knots, shake, splits, and twist. When a wood dealer buys in bulk, the lumber is graded for the very best pieces. The price on these pieces is jacked way up to cover the cost of the entire bundle. Lower grades are either just scrapped or sold off as low grade.

For example, a 100 board foot bundle of holly may contain 30% top grade boards, 40% No. 1 common, and the last 30% is considered scrap. Top grade can sell for as much as \$35.00 a board foot whereas the low grade can be bought for as low as \$6.00 a board foot. All the profit is made with the FAS boards.

Shown below is an example. Both these boards are holly. The bottom board is graded as FAS and will sell for as much as \$105.00. The top board is in the 2 or 3 common grade and either scrapped or sold for about \$25.00. For model builders using short strips of wood (18 inches or less) there is a lot of usable wood in the top plank. A dealer really does not like to bother with planks like the top piece because there is very little profit to be made from it due to the amount of work and expenses required to process it so he would rather sell you the bottom board and toss the top one on the scrap pile. When both planks are cut into strips for planking the wood is exactly the same.



You may wonder why a wood dealer scraps the lower grade wood and does not cut it down into smaller pieces of clear material. After a while their shop would start looking like this and that is just crazy.

It is worth the asking a wood dealer if they might have something other than the FAS grade boards. You might find a good deal if you don't mind a little trimming.



## Lemon Wood

The first wood I will discuss in this series is lemonwood donated by Gary Milgram. This is not to be confused with the wood sold under the trade names of Lemonwood, Degame or Castello Boxwood; this wood is from the multi-florum family. What we have is from the citrus family known as Rutaceae which include oranges, lemons, grapefruit and lime.

When the log arrives the first step was to cut it down the middle. To do this a thin slice is taken off the log then turned 90 degrees and another thin slice is made. Doing this prevents the round log from turning and pinching the saw blade.

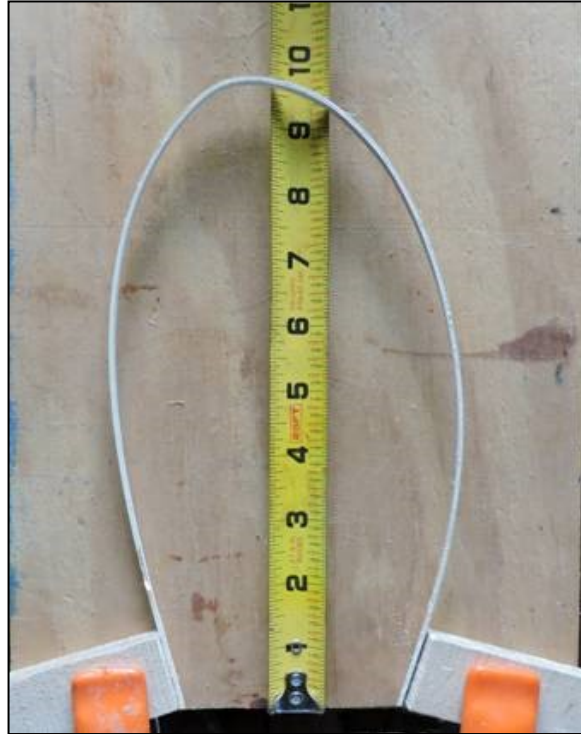


Once the log is split the first thing to look at is the color. In the photos below, you can see that the lemonwood is a very pale yellow compared to West Indian boxwood on the right and pear wood on the left. When any wood is fresh cut the color will be lighter and brighter, in time the wood darkens. Lemon wood (as well as other fruit woods) will darken in time. Looking at the side of the log which was exposed for a while you can see the wood will turn to an ivory color.



There is very little feature or grain pattern to the wood. It is a uniform color like holly and boxwood. The color and look of the wood lends itself well to simulate a model built of ivory. The light color of the wood can also be used to replace holly for decking.

The bendability of wood is also important to the model builder. Using a Test-o-meter, a strip of wood 24 inches long x 1/16 thick and 3/16 wide is bent to see how far up a scale it can go without breaking. With the lemon wood as can be seen we get a solid 10 - it does not get much better than that.



In general, wood that is heavy and hard with a very fine grain is useful for very fine structures, fittings, and carvings.

There is no lemonwood available on the lumber market, as the trees themselves are too small to be commercially viable as lumber. The only way to get lemonwood (or any citrus wood for that matter) is to collect it yourself or buy pieces from firewood dealers. The problem with that however is that most large orchards of citrus are found only in Florida, Texas and California. If you live anywhere else in North America, the wood is unavailable. Cost-wise if you live in an area where it grows it is free for the asking or priced as firewood.

If you're thinking about contacting someone (maybe a firewood supplier) to have them send you the wood, expect to pay a high price for it. Because of the heavy weight of lemonwood, the shipping cost for a small log (3 inches in diameter by 24 inches long) will be approximately \$32.00 in postage, making it a very expensive wood outside its source.



# One Eyed Willys Treasure Hunt



*Welcome to One Eyed Willy's Treasure Hunt!*

This months Treasure hunt prize is a practicum of your choice from One Eyed Willy's Treasure Hunt sponsor Lauck Street Shipyard LLC (excluding specials).

### How to play

As the contest title suggests as part of the Treasure Hunt you will be required to go on a quest. First you will be required to find words to complete two short sentences. To find the words visit the various pages below on the Lauck Street Shipyard LLC website. Once you have found the words, unscramble them to complete the sentences. That will provide you the clue to determine the location of a page where you will find a secret phrase.

When you believe you have the secret phrase email your submission to:

submissions@msbjournal.com. In the Subject Field put: "TH Winter 2015"

All entrants with the correct answers will be entered into a draw. The Treasure Hunter whose name is drawn from the list of contestants will be the winner of this months treasure. The winner will be contacted after the draw and announced in the next issue.

**Website URL:** [www.lauckstreetshipyard.com](http://www.lauckstreetshipyard.com)

### The Clues

1. Constitution practicum page - last paragraph, 10th word
2. Home page - 7th word
3. About page - 1st word in quotes
4. Mini-practicum page - last paragraph, 2nd sentence, 17th word
5. Vanguard page - third paragraph, 4th word
6. About page - 31st word
7. Fair American page - 3rd paragraph, last sentence, 8th word
8. Home page - 25th word
9. Victory page - 1st paragraph, 4th sentence, 5th word
10. Endeavour page - 4th word

\_\_\_\_\_ .  
 \_\_\_\_\_ ?

The Secret Phrase

\_\_\_\_\_ .

## Copper Plating Techniques

By Robert E. Hunt - Lauck Street Shipyard

Many of the model ships that we build today require the addition of copper plates to the lower hull in accordance with the original ship. Some kits include the materials needed while others do not, and sometimes a model builder just wants to upgrade the materials included so as to make the model ship look more historically correct.

There are several products on the market that are commonly used to copper plate a model ship's lower hull. They range from a simple roll of copper tape (Photo 1) often used by stain glass artists, to individual photo etched copper plates (Photo 2).

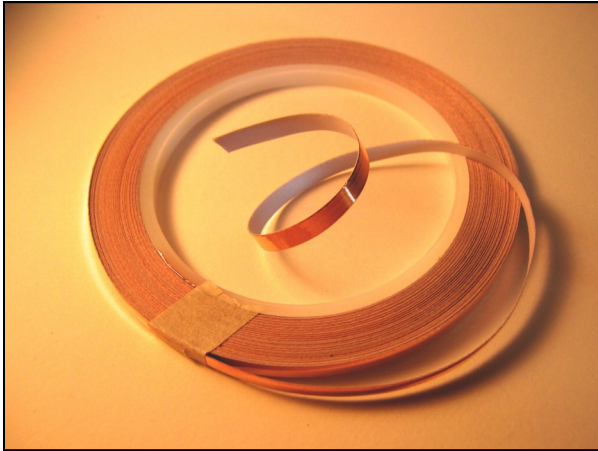


Photo 1

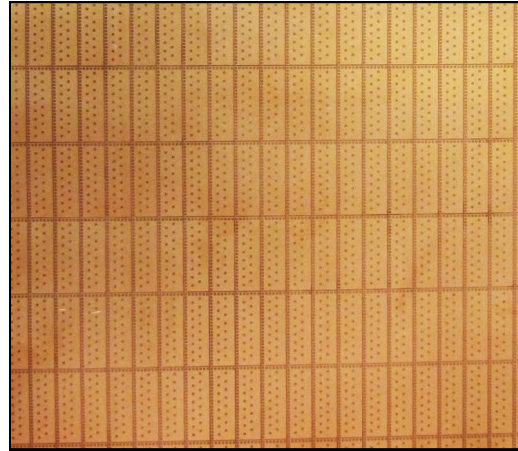


Photo 2

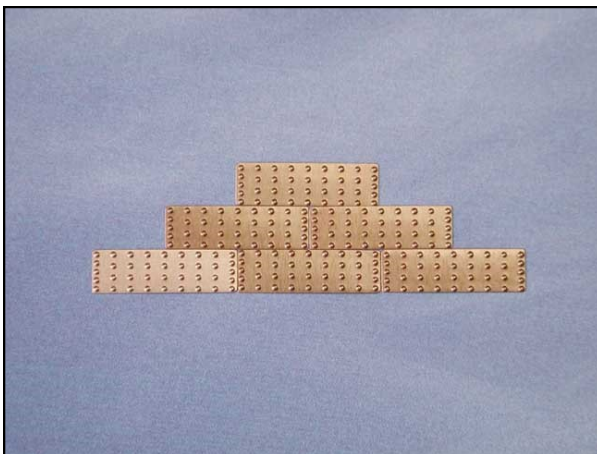


Photo 3

Another type of copper plate available from various retail sources are stamped plates with nail head impressions embossed into the copper as shown in Photo 3. These plates tend to be thicker than the tape or photo etched versions making them more difficult to apply.

The photo etched plates offer very detailed etchings of the copper nails used to attach the plates to the hull, but can

become quite expensive given the number of plates needed for a particularly large model ship.

Copper tape offers the most economical method for plating a model ship. However, the individual plates must be cut from the tape which adds additional time to the plating process.

Photo etched and stamped plates require an adhesive of some sort to attach the plates to the hull. I normally use a medium viscosity super glue such as Zap A Gap in the green bottle as shown in Photo 4.



Photo 4

Copper tape has an adhesive back making it the easiest to apply. Because this is a roll of tape, custom size plates can be easily made.

Turning our attention first to the copper tape, let's look at some methods for cutting the tape into individual plates. The first method that comes to mind might be using scissors or a sharp knife such as the Xacto #11 blade. Although these tools can be effective, the time it takes to cut each individual plate, and the accuracy of repeated cuts does not make either of these methods efficient nor accurate.

My preferred tool is the Chop-It, sold by Micro Mark (item 84046) as shown in Photo 5.

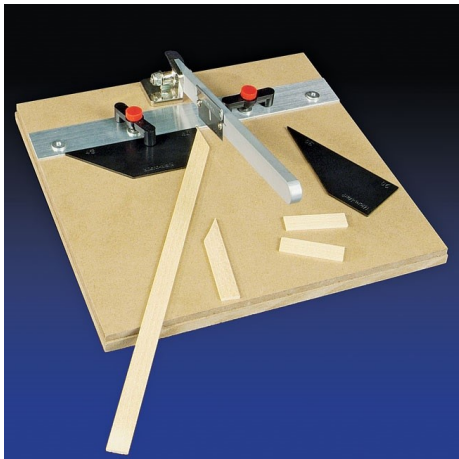


Photo 5

The Chop-It offers a number of advantages for cutting copper plates.

The sharp razor blade produces a clean, straight cut. The metal strip that is oriented perpendicular to the blade provides an edge to place the edge of the tape against so that the cuts are at a true 90 degree angle.

The plastic accessories provided can be used as a stop so that the tape is butted against the stop at a precise distance from the blade. This ensures that each plate is cut to the exact same length.

The process of cutting the plates is much faster and more accurate than any other method.

Cutting the plates is simple and easy, but one important feature is missing from each plate - the nail head impressions. Model ship builders demand detailed parts and historical accuracy as much as possible. Plain cop-

per plates without the nail head impressions simply aren't acceptable.

Most modelers who have worked with the copper tape method are familiar with the ponce wheel as shown in Photo 6.

The ponce wheel looks something like a spur worn by American cowboys. It has a series of spikes arranged in a circular pattern on a wheel that turns freely. The wheel is attached to a handle. By rolling the wheel across the copper plates, impressions are made that can represent the nails used to hold the plates to the hull.

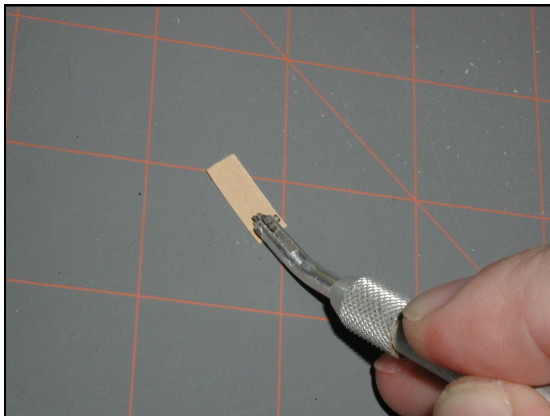


**Photo 6**

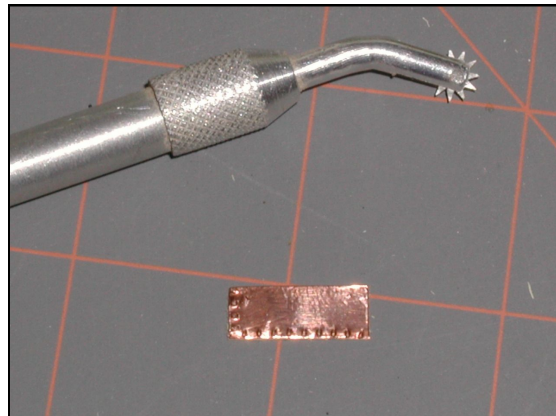
You can roll the wheel across the back of the copper tape as shown in Photo 7 which will cause the copper tape plate to show raised points as shown in Photo 8.

As you can see in Photo 8, the nail head impressions are across the bottom and one side of the plate. Additional rows could be added but doing so may be difficult to duplicate so that each plate looks identical. Most modelers add these impressions along one side and one edge since the plates will overlap on one side and one edge.

In my quest to make a more accurate nail head impression, I stum-



**Photo 7**



**Photo 8**



bled upon an idea I have not seen commonly used. That is, to use stainless steel blunt needles to make the nail head impressions. These come in various gauges. Photo 9 shows a 21 gauge needle that I purchased on Amazon (25 to a bag).

By inserting a small dowel in the plastic end, I had a simple handle and could press the needle into the copper tape thus leaving a perfect round impression. Photo 10 shows several plates that I made using this needle.



Photo 9

Of course, the biggest disadvantage to this method is the time it takes to make the nail head impressions in a single plate. This brings me to a solution to that problem.

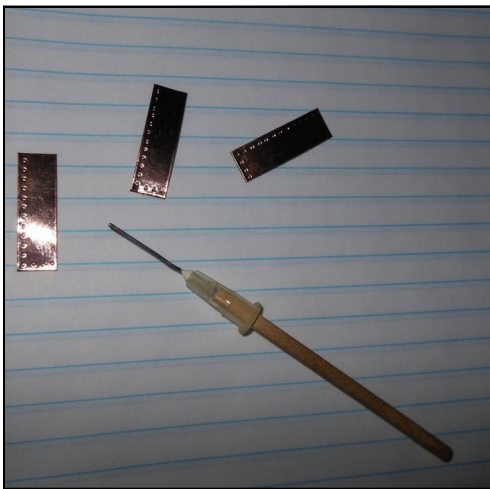


Photo 10

Having a laser cutter available to me to make all kinds of model ship parts, including kits, makes it quite easy to create a stamp with these needles tightly glued into the stamp so that a complete set of plate nail head impressions can be made with one press of the stamp into the copper tape. By creating a CAD file the size of my plate and laser cutting small holes into the wood I was able to cut the needles off of their plastic holder and glue them into these holes thus creating a stamp with the needles accurately lined up and evenly spaced. This can be seen in Photo 11.

Now, using this stamp, I am able to stamp all of the nailhead impressions onto a single plate with ease.

Ok, so you've got your copper plates, they're either photo etched, stamped, or copper tape stamped, and you're ready to copper your hull.

The first thing you must do is mark the waterline across the hull since this is the topmost location of the copper plates. To do this, I use a waterline marker as shown in Photo 12.

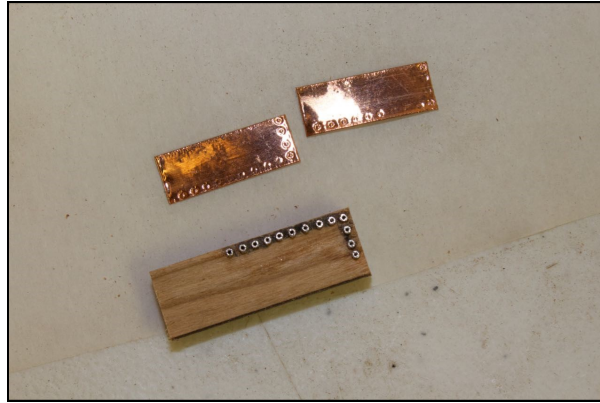


Photo 11

This particular holder comes from Poland. As you can see from the simple design, it could be easily made at home from plywood or particle board and a few simple tools.

The principle behind the waterline marker is that the location of the pencil can be raised or lowered. The model must be properly oriented on the same surface as the waterline marker so that the keel is perfectly perpendicular to the surface. The model must be held in this stable position as the marker is dragged across the table surface thus marking a pencil line across the entire length of the hull.

You should be able to obtain the height of the waterline from your set of plans. Keep in mind that if the ship is one that does not have the waterline parallel to the keel, some supporting pieces that raise the bow (usually the bow is higher) so that the keel is at the proper angle in relationship to the plans to properly mark the waterline.



Photo 12

With the waterline now marked on both sides of the model, you are ready to add the copper plates. I like to lay the model on its side with a soft smooth cloth underneath it. This will help protect the copper plates, but you must ensure that the cloth does not snag any plates already installed thus bending them or tearing them off.

Copper plating always starts with the keel at the stern. In this example of a model of the Constitution, the plates are made of copper tape. If you are using photo etched plates or the thicker stamped plates, the method of laying them is the same with the exception of how they are physically attached to the model.

I use Zap A Gap super glue to attach those types of plates. You must be careful to add just a small drop of glue to the backside of the plate spreading it so that it covers the entire surface area. I use tweezers to hold the plate in position (and to apply the glue) before pressing the plate against the hull. Plating with glue is a bit more difficult because too much glue will cause it to ooze out and get all over the other plates. If you don't position it correctly, you'll ruin the plate trying to remove it and could cause damage to other plates previously glued in place. There's no easy solution but to gain some experience first, and that's why using copper tape is a bit easier for a new modeler.

On the starboard (right) side, the plates progress forward and upward as shown in Photo 13.

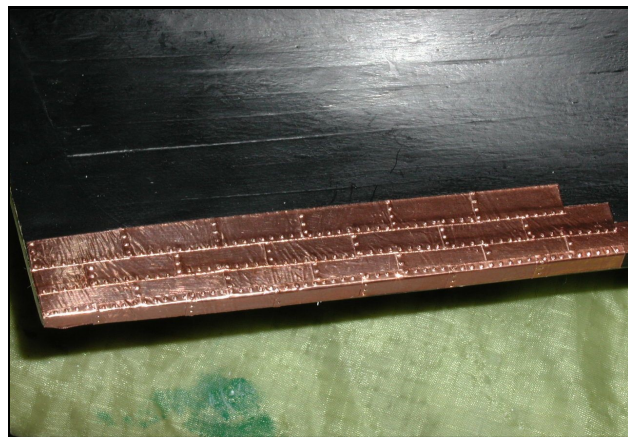
On the port side, the plates run in the same manner but the nail head impressions on the side of the plates are actually on the opposite side as the ones on the starboard side.

The first row of plates should start even with the sternpost and along the bottom edge of the keel. Each plate overlaps the previous plate slightly. I like to also add a row of plates along the bottom of the keel with the upper edge bending over the keel edge and overlapping the bottom row of plates.

The second row of plates starts with a half of a plate so that the seams are staggered. This staggered pattern is similar to the way modern day bricks are laid.

When a row of plates reaches the bow, again, I trim them to match the curvature of the stem and then continue the row of overlapping plates along the bottom surface of the stem as shown in Photo 14.

You will notice in this photo that I have placed some pinstripe tape along the hull a considerable distance from the waterline (show as white tape). This line denotes a change in the layout of the plates, and is quite common on most ships, especially larger ones.



**Photo 13**

The reason for this change in layout is due to the accumulative rise in the plates at the bow and stern. This change in layout lessens that rise by establishing a new course for the bottom row of plates.

When the rows of plates get close to the actual waterline near the bow and/or the stern, you need to stop once again and add a second waterline that is about 2 plates wide beneath the actual waterline. This is where you will continue all of your rows until each row reaches this second waterline.

Photo 15 shows how I used a second piece of pin-stripe tape beneath the original pinstripe tape I used to mark the actual waterline.

(Because the hull of this model is black, it was difficult to see the pencil mark so I chose to use white pinstripe tape laid with the bottom edge along the waterline to more clearly mark its location).

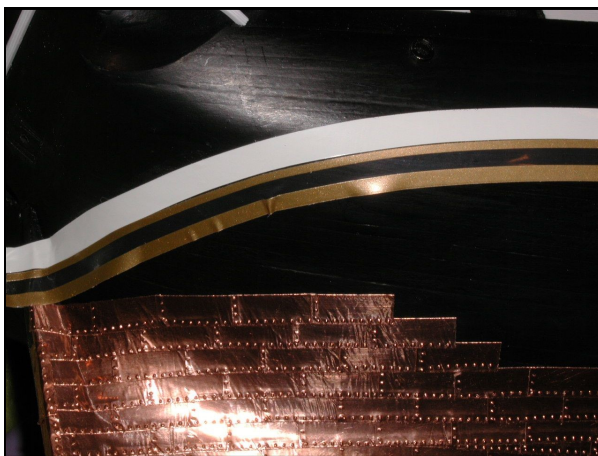


**Photo 14**

You will find that plates at the bow and stern meet this second waterline at an angle. I find it easier to hold the plate in position with tweezers and mark the cutoff line with a pencil so that I can cut the plate off before I attach it to the model.

Once all of the plates have reached this second waterline, the final two rows are applied parallel to the waterline as shown in Photo 16. You can see in this photo that the first of the two final rows has been laid overlapping the plates below it. The final row will touch the bottom edge of the white tape and overlap the first row shown in this photo.

Photo 17 shows the white tape removed and the completed copper plating at the stern of the model.



**Photo 15**

Photo 18 shows the completed plating at the bow. Here you can see how the changes in row layout appear.

I hope that this article will help you in making your own copper plates and plating your own models.

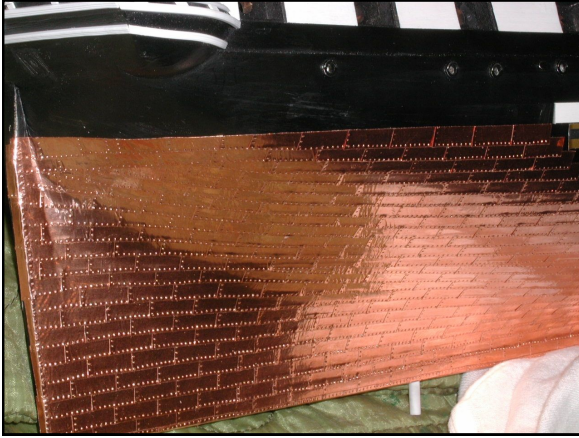


Photo 16

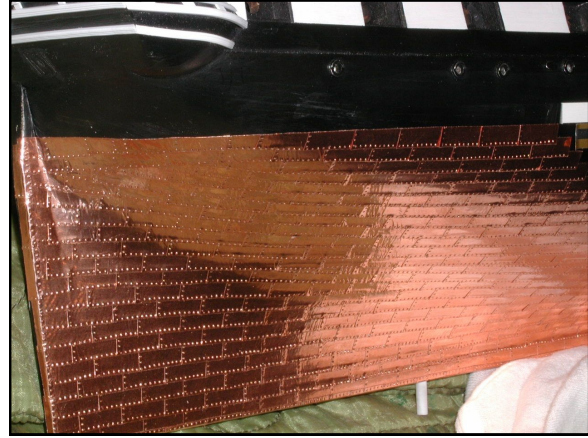


Photo 17



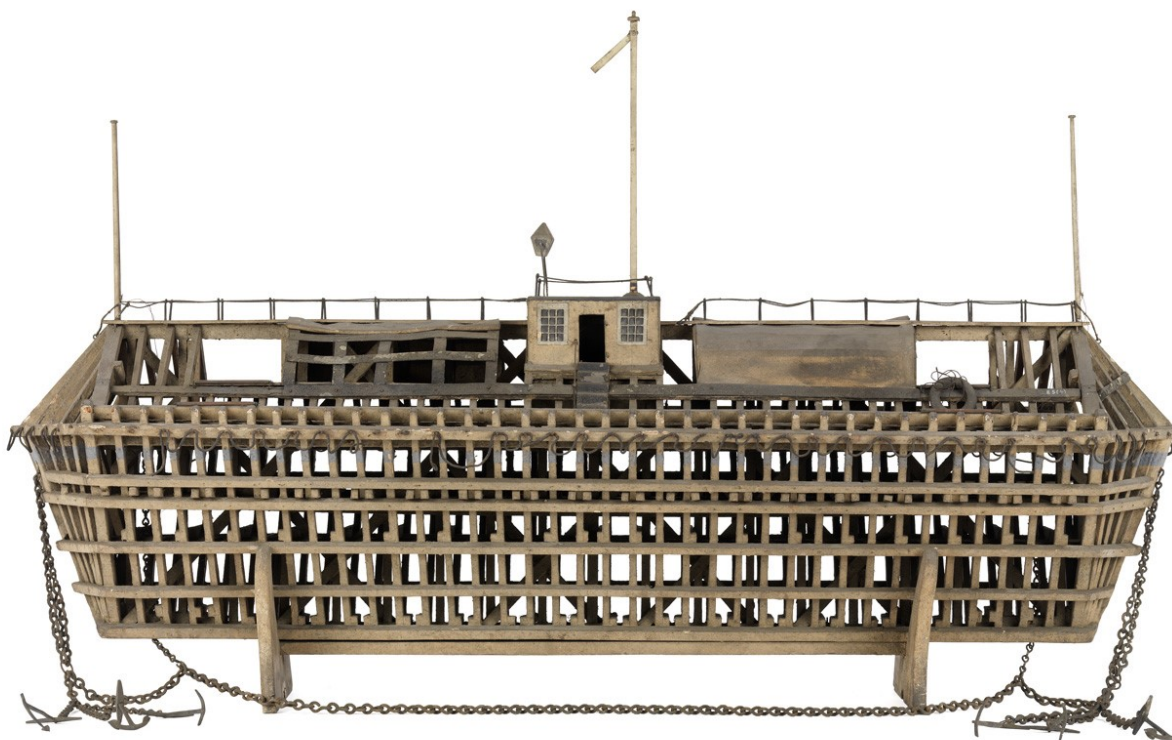
Photo 18

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The College of Model Shipbuilding is a series of instructions that teach you every aspect of model shipbuilding. These instructions are progressive in nature and are based on a specific kit. You will learn techniques that can be carried over to other model ships that you might wish to build. Please visit our website at [www.lauckstreeshipyard.com](http://www.lauckstreeshipyard.com) or give us a call at (540) 931-3918. (A division of LLS Enterprises Inc.)

## On the Cover



A contemporary model of a refuge asylum circa 1820. Built in frame, the model is equipped with four mooring anchors and chains, a shelter with a distress lantern above, and space for two lifeboats (missing) which were launched from across the deck using rollers on either side. The hull structure has a waterline indicated by a blue line and rope grablines are secured just below the deck to enable casualties to hang on and haul themselves aboard. The asylum was designed to float over areas of shallow and hazardous waters, such as the Goodwin Sands in the English Channel, and settle upright into a hollow at low water. The framework of the hull was never planked and was 'awash', giving minimum resistance during heavy weather.

Date Made: 1800-1820

Materials: cotton; iron; lead; metal; wood

Scale: 1:48: Overall model: 509 x 1392 x 384 mm; Support: 192 x 16 x 255 mm

Source: rmg.co.uk



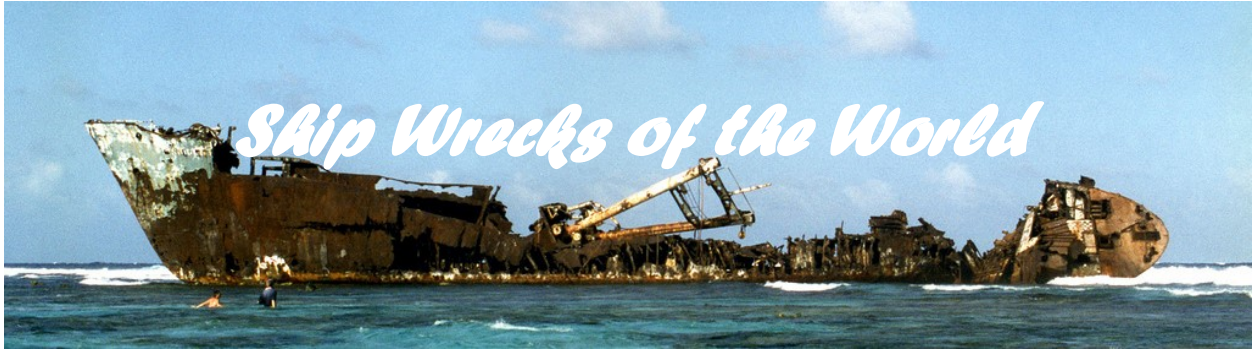
## The Modelers Tool Chest

### Forceps

Typically when we hear of forceps we know them as a tool used in the medical field and in operating rooms. However they can be an indispensable tool to have on hand when in the rigging phase of your model and can be used as a third hand to hold rigging lines in place while tying off knots, aligning lines etc.

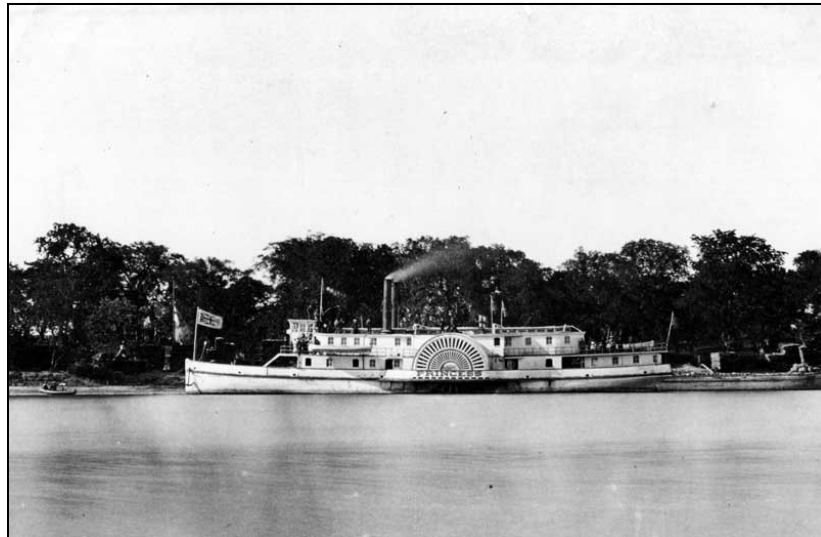
Forceps come in a variety of sizes and shapes.





## S.S. Princess

The SS *Princess* was a steamboat that operated on Lake Winnipeg in Canada from 1881 until 1906. The vessel was built in Winnipeg, Manitoba by the Jarvis & Burridge shipyard, and it was regarded as the pride of Lake Winnipeg and as the finest lake steamer west from the Great Lakes and east from the Rocky



Mountains. The vessel has a total of 40 spacious passenger cabins, and outwardly it resembled many of the Mississippi River paddle steamers. The vessel had a top speed of approximately 25 knots.

In 1885, together with SS *Colville*, *Princess* moved the thousand men that had participated the North West Rebellion from Grand Rapids, Manitoba to Winnipeg.

Soon after 1885 the vessel faced downgrading. The passenger cabins were removed and she was downgraded to a cargo vessel. The paddlewheels and the original steam engine were replaced with a new steam engine and a four-blade propeller. During the work the hull was also lengthened to 49 metres (161 ft). Only six cabins, a kitchen and a small dining room were left. After the work the vessel was primarily used to carry bulky goods and railroad ties, and often she was towing a barge.

Her career ended in an autumn storm in 1906. On 24 August *Princess* left from the Spider Islands and headed towards Little George Island carrying 1,600 boxes of fish. The weather was fine until, at about 6:00pm, a



strong northeastern wind rose. After *Princess* had rounded the Little George Island, Captain Hawes turned her for the Berens Island. As the winds turned into a storm the crew urged the captain to seek shelter from George Island.

Finally, as the storm grew stronger Captain Hawes ordered to turn the vessel around and ordered "full speed ahead." This double order proved to be her fate. As the vessel turned, and had turned about half-way around the hull was torn asunder by the fury of 8-metre (26 ft) waves, trapping three of crew below. The passengers and crew quickly moved into two small lifeboats, but Captain Hawes, 17-year-old cabin servant Flora McDonald of Selkirk, and 19-year-old cook Johanna Palsdottir never made the last boat. Also lost were 19-year-old sailor Johann Jonsson, Loftur Gudmundsson of Gimli, and Charles Greyeyes, native Canadian.

Both lifeboats survived the storm. The first one landed on Berens Island, and the other one made it the shore near the village of Berens River, where the survivors were picked up the next day by SS *City* of Selkirk.

Six people were lost in the accident, and only two bodies were ever found. One of the bodies was Captain Hawes, wearing nothing but the straps of the life preserver. Everything else was torn away.



## Heraldic Ship Badges



### **HMS/HMAS Queenborough (G70)** Royal Navy/Australian Navy

**Motto:**

Seek and Slay

Builder: Swan Hunter and Wigham Richardson  
at Wallsend-on-Tyne, United Kingdom

Laid down: 6 November 1940

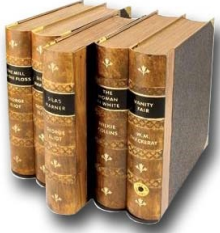
Launched: 16 January 1942

Sponsored by: Lady Hill-Norton

Commissioned: (RN) 30 November 1942

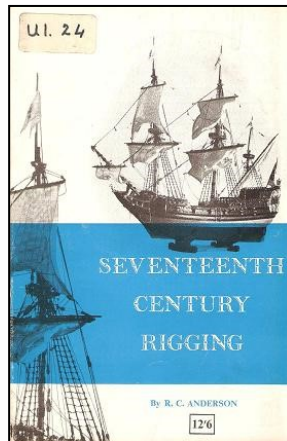
Commissioned: (HMAS) 20 October 1945

Decommissioned: 7 April 1972



# The Book Nook

Books of interest for the Model Ship Builder and nautical enthusiasts



## Seventeenth-Century Rigging: A Handbook for Model-Makers

by R. C. Anderson

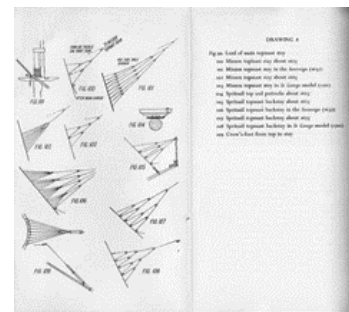
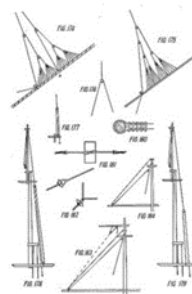
Published by Percival Marshall, 1955

146 pages, illustrations

AINN: B000N7DFJ8

Dr. Roger Charles Anderson was a noted naval historian and a founding trustee of the National Maritime Museum. Anderson was president of the Society for Nautical Research between 1951 and 1960 and was, for a number of years, honorary editor of 'The Mariner's Mirror'. Considered an expert in early sailing ship rigging and building, his writings are at times a bit dense and lacking in excitement, but are also considered highly factual and accurate. This work is no exception.

Originally published in 1955 as an update (and narrowing of scope) from his 1927 The Rigging of Ships: in the Days of the Sprintsail Topmast, 1600-1720, then re-issued in 1969 and 1972, it is perhaps the most complete description of the rigging practices from the 17<sup>th</sup> century. Covering British methods only (unlike his 1927 work), he goes beyond a mere narrative description of the rigging to offer suggestions to the model builder for how to accomplish the desired outcome on a model. With more than 280 line drawings illustrating the items, along with a rigging plan for the Second Rate *St. George* (96 guns, 1701), the book has a wealth of detail for those attempting to build a model of this era.



Writing before the internet, and while many of the primary archives we take for granted now were firmly established and catalogued, Dr. Ander-

son was adept at incorporating not only information from manuscripts and treatises (such as those by Falconer and Deane), but also contemporary models (such as the *St. George*, 1701) to not only describe the practices, but also to discern the purpose for which the sometimes overly complex approaches were developed. I would highly recommend this book to anyone considering a fully rigged model of a ship from the late 16<sup>th</sup> through early years of the 18<sup>th</sup> century.

Source: amazon.com

**Get the help you need to build  
that model ship!**

## The Lauck Street Shipyard Presents The College of Model Shipbuilding

The College of Model Shipbuilding is a series of instructions that teach you every aspect of model shipbuilding. These instructions are progressive in nature and are based on a specific kit. You will learn techniques that can be carried over to other model ships you might wish to build. Here are some of the detailed courses available:

Prep School Course, Bluenose  
Freshman Course, Armed Virginia Sloop  
Freshman Course, HMAV Bounty  
Freshman Course, HMS Pegasus/HMS Fly  
Sophomore Course, Constitution  
Sophomore Course, Vanguard  
Junior Course, Rattlesnake  
Junior Course, HMS Victory  
Senior Course, Hannah

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Freshman Course  
Armed Virginia Sloop

## Turning Brass Cannon on a Wood Lathe

By Bill Edgin

---

Many of the models we build are of military vessels and as such require armaments. These tend to be focal points of a model and as such require careful attention to how they are represented on the ship. I am currently a year and one half into a scratch build of the USS Brig Eagle. I was looking for something that would hook my interest in both the construction techniques as well as history. During my searches I found Gene Bodnar's Practicum on the USS Brig *Eagle* and found it to be just what I was looking for.

Here are some brief notes on the *Eagle* from the Texas A&M Nautical Archaeology Program site.

*The United States Navy brig Eagle was built at Vergennes, Vermont, and constituted the final addition to Commodore Thomas Macdonough's War of 1812 naval squadron on Lake Champlain. The 117-foot-long hull was constructed and launched by master shipwright Adam Brown in only 19 days during the summer 1814. Outfitted with two masts and 20 cannon, and manned by a crew of 150 men, the brig participated in Macdonough's defeat of an invading British naval fleet at the Battle of Plattsburgh Bay. The Eagle was maintained for several years after the war, until her timbers became decayed and she was abandoned by the Navy in 1825.*

*The submerged and partially-dismembered wreck of the Eagle was discovered in 1981 near Whitehall, New York. A two-year archaeological study of the vessel was sponsored by the Champlain Maritime Society, during which time the dimensions of the hull timbers were documented by divers. Archival research was also conducted on the history of the warship.*

*Wreck plans were prepared from the measurements recorded by the divers, and the techniques of hull construction employed by Adam Brown were examined. The wreck plans and contemporary construction information were then used to reconstruct the original appearance of the brig. The design and assembly of the Eagle were graphically depicted in the form of hull lines, construction plans, and rigging plans. The hull of the brig was compared to other War of 1812 warships on the oceans, and on Lakes Erie, Ontario, and Champlain.*

*The evaluation of the hull and the comparison with contemporary vessels have led to the conclusion that the Eagle was specially designed for accelerated construction and a career on the shallow, protected waters of Lake Champlain.*

Fully rigged the model's dimensions will be:

L = 45"  
H = 31 1/4"  
W = 6 1/2"

Her armament was eight 18-pound long guns and twelve 32-pound carronades. My plan is to leave much of the berth deck visible through the beams and will only make armament for one side.

On the next page is a photo of where my build stands. Once she is partially decked I will be ready to install the armaments.

A key factor keeping me going down to my shop daily is learning new skills and overcoming challenges in completing a build. As I approached the cannons I had a number of options for the barrels. Buy them ready made, or fabricate them in my shop.



Figure 1. The Brig Eagle as she sits today

I will discuss some of the pros and cons that factored into my decision to turn them in brass.

### **Buying Premade Cannon Barrels**

Pros – Easy to obtain in brass, or other materials

Cons – Is not “scratch built”

This is certainly an option. There are a number of great vendors available that supply cannons in 1:48 scale, which is what I required. However, since my goal is to build them myself, this was not an attractive option for me.

### **Turning Cannon Barrels out of Wood/Plastic**

Pros – Easy to turn

Cons – Creating multiple exact copies of each barrel challenging, moderate material cost, new smaller tipped turning tools required



**Figure 2. Test Carronade (wood)**

If you have a lathe, this is an option. The selection of the material is important since wood can be too coarse or soft to turn well in small scale. Plastic is not a material I want to include in this build. I decided to turn a test barrel out of hardwood scrap to test my tools and possible finishing processes

I found my standard turning tools were too large to effectively cut the small details on the barrels. It was an interesting exercise but did not produce the results I wanted. The photo below shows the test carronade done in walnut and painted with black acrylic paint. You can still see the grain of the wood since walnut is fairly coarse. I would have used a different wood if I made these for the model. I also would probably use India Ink as an eb-onizer since it would not cover any detail in the cannon.

This was a great exercise to test the turning tools.

### **Casting the Cannon Barrels in Pewter**

Pros – Exact copies of barrels are assured, easy to turn single prototype barrels in media like boxwood or plastic, new pewter casting skills

Cons – More complexity, need new materials, learning curve in the casting process

In the David Antscherl’s “The Fully Framed Model,” he suggests turning the cannon barrel in plastic or boxwood until you have the design exactly like you want. A silicone mold is made of this and the ship’s cannon are all cast in pewter. This allows the reproduction of exactly the same barrel many times over. This option would be very attractive building a model with many cannon however, the *Eagle* does not so this option is also not very attractive.

### **Turning the Cannon Barrels out of Solid Brass**

Pros – Solid brass barrels, new metal handling /forming processes skills, consistent use of materials (brass)

Cons – Time consuming, learning curve turning brass, moderate materials cost, new tools required for turning

When looking at the various materials I could have used in my Brig *Eagle*, I decided to keep it simple. I chose a pallet of Rock Maple, American Cherry, and Black Walnut. I wanted to keep paint to a minimum. I chose to use Minwax Golden Pecan as a stain. This is a light stain that allows the wood to show through. By staining all the wood lightly it provides a consistent pallet and ties all the colors together while enhancing the joinery and beauty of the wood. I found that bright brass complimented the look I wanted and even though it would eventually darken, it would mellow with the wood.

The Brig *Eagle* also was built with iron spikes instead of treenails. I used bright brass wire to create the iron spiking throughout the ship.

Given the above, using brass to make the cannon seemed a natural choice for my build.

Learning to turn brass with my wood lathe was also a very enticing possibility. *If* I could do this, it would open up many doors for creating future fittings for my builds. My practice when approaching a new part of a build is to first read all the primary source material pertinent to the section. For the *Eagle*, the primary source is that published by Dr. Chrisman on the ship. Next I look at other builds of the ship, starting of course with Gene Bodnar's practicum then looking at other's *Eagle*'s. Lastly I use the Internet to find similar examples I could use in the build. Google Search and YouTube can be a great asset in building ships.

However I found very few examples of turning brass on a wood lathe. It appeared to be possible but it was very hard to find anything of substance. There was also conflicting information that had to be weighed.

A summary of what information I did find was:

- Soft Brass would be required - 360 Brass
- Turning tools could be high Speed Steel (HSS) or Carbide tipped
- Assorted files and sandpaper would be required
- Turning speed would be important (although there were conflicting sources on whether high speed or slow speed would be preferred)

My lathe is a Delta 12" Variable speed floor mount that I have had for about 25 years. It still runs like a top. I did some test runs with a brass rod inserted into a drill chuck mounted in the lathe. I found this the chuck had a slight wobble that resulted in an oval turning.

I had a Nova Chuck could be used to hold a rod more centered. I ordered a 3/8" soft brass rod off Amazon as well as some smaller carbide turning tools from Easy Wood that had carbide tips, which could be replaced when dulled. The preferred tool seemed to be HSS steel but they also would require frequent re-sharpening. The four turning tools I used had profiles of a diamond, square, round, and I thinned a HSS parting tool to allow for a narrow square edge cut.

I also ordered a "long angle" lathe file and a file card (wire brush) to keep the file teeth clean. Brass tends to clog the files. Keeping the file teeth clean results in a cleaner finish and less sanding/polishing at the end. The "long angle" also was recommended for using with a lathe.

First I turned a 3/8" rod for a few test barrels. I chose this size because it was just larger in diameter than the finished barrels. Unfortunately I found the hole in my Nova Chuck was too large to firmly hold the 3/8" rod. It was cheaper to buy a larger diameter rod than a new chuck. So I procured a 1/2" brass rod from Amazon. I would have to remove more material, but I would be able to firmly chuck it in the lathe with the chuck I already had.



I found the brass blank needed to be longer than the finished barrels by a few inches to allow it to be inserted into the chuck on one end and the live center on the other end. If the live center was too close to the finished barrel end, it would tend to spread the bore of the barrel during the turning. Allowing more waste at the live end kept the bore end the correct diameter.

As in all wood working, there are some inherent dangers. Please use eye protection as well normal lathe safety guidelines. Also be aware that the brass shavings that come off in this process can be extremely fine and sharp.



**Figure 4 - Spindle Support (Grizzly)**

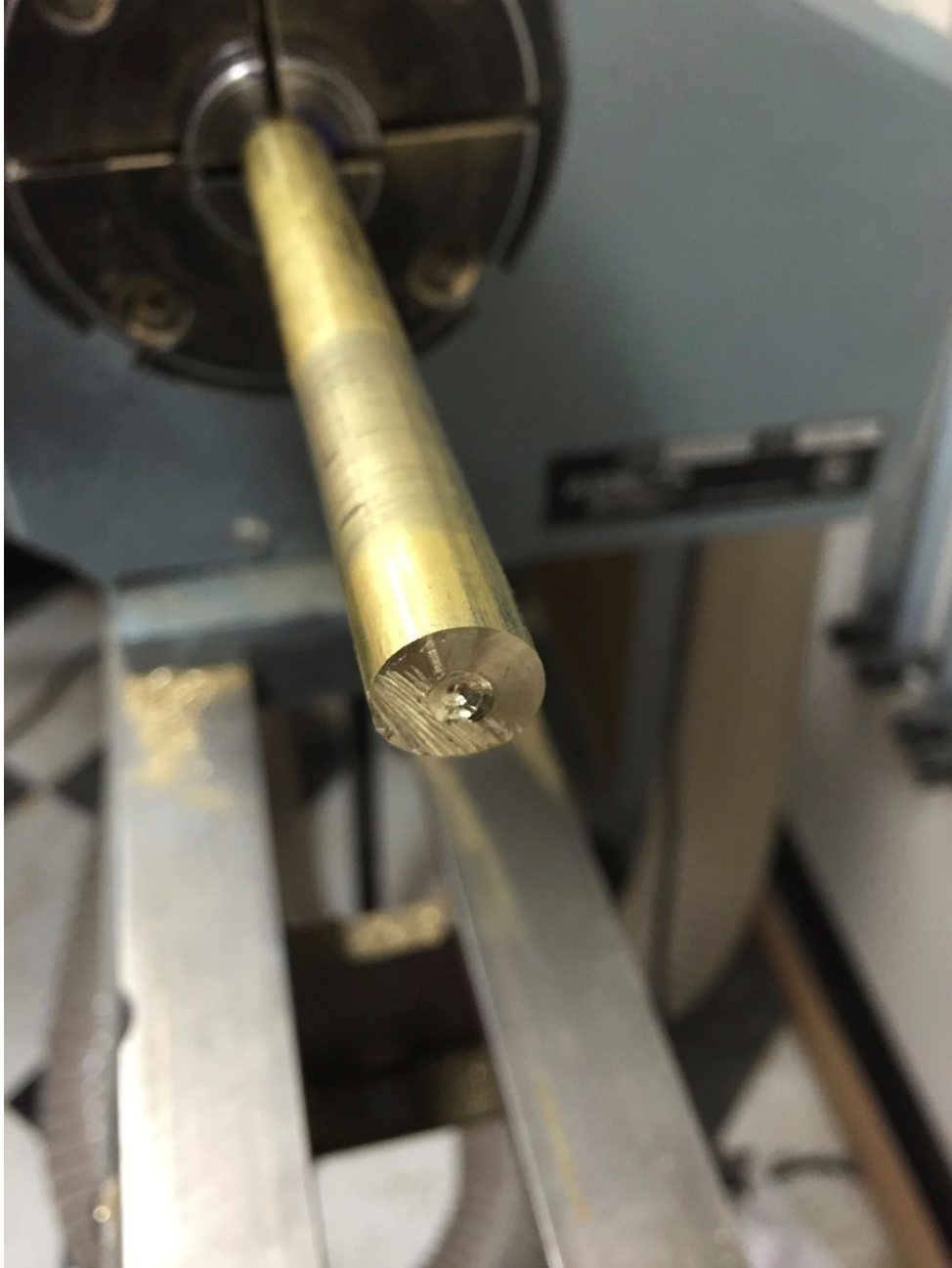
Here are some photos of the process start to finish.



**Figure 4 - Spindle Support (Grizzly)**

This is the Grizzly spindle support. I installed the spindle support on the lathe bed and slid it as close as possible to the Nova Chuck face without the lathe running. Then, with the lathe turning, I adjusted the three bearings up against the rod. This insured the spindle support was centered on the rod and the chuck. Once this was set, I slid the spindle support outward almost to the right end of the rod. This stabilized and centered the end of the rod opposite the Nova Chuck to allow for milling the end.

I moved the tool rest to the end of the rod and milled the end flat and bored a dimple using the diamond shaped tool into the end center. The milling does not have to be perfect since this is waste, but you need enough of a flat to set the center dimple.



**Figure 5 - Dimple cut into the rod and ready for boring**

Once the dimple was done, I slide the tool rest out of the way. I chucked a drill bit the size of the cannon bore into the electric drill and turned it slowly it while the lathe was spinning and drilled the center bore hole in the cannon. This could also have been done by inserting the drill bit chuck into the live center head and boring out the shaft. The dimple made previously assures the drill is centered on the shaft. By allowing the lathe to spin around the bit, you get a well-centered hole down the center of the brass shaft. Since there is still waste material to support the live head, the hole might not go as deep as required but that could be deepened later once the waste was removed.

Once the hole was drilled I removed the spindle support, and set the live center into the hole. This provides the rod stability between centers.



**Figure 6 - Once the barrel is bored the live center is moved into the bore to stabilize the rod for truing**

The rod requires truing along its full length, just like wood. While it was centered fairly well, it still required careful truing along the full length. For this I would use the turning tools and finish it with a file. I found out without this step, the tools had a tendency to chatter and cut unevenly. Truing required very light passes of the tools and finally the file until it was shiny all around.



**Figure 7 - The rod after starting the truing. The shiny areas are where material has already been removed. Once trued, the rod will not have any dull areas along its length**



**Figure 8 - The long angle file was used in the final truing. Notice the clogged teeth on the upper edge of the file. These must be cleaned before using this side again or it will result in scoring of the finish**

Once trued, the rod was ready for turning.

Note: At this point, I turned a number of barrels using dimensions from the CAD drawings until I had one example of both Carronade and Long Gun barrel I liked. These became my prototypes. The process below shows not only how to turn the brass but also the process I used to make duplicate copies of the prototype barrels.



Figure 9 - Trued and ready for shaping

Using calipers, I carefully measured the dimensions from the prototype barrel I was copying. Critical dimensions were at the barrel mouth, each side of the support rings, and the rings themselves. I wrote these dimensions on a sheet of paper and taped them over the lathe for easy reference. As I would turn a section I would stop frequently to measure the turning against the prototypes dimensions. The key was to slowly approach the dimension and leave it slightly proud to allow for final sanding and buffing.

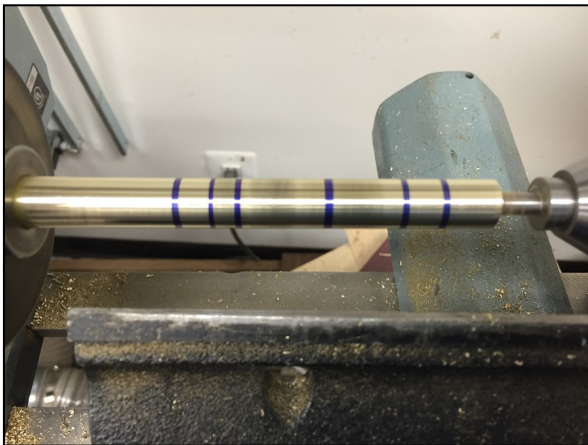


Figure 10 - The barrel with the principle lines marked. These will be used to measure the barrel

The photo left shows the blank after marking each of the sections off. The right most line is the mouth of the cannon. The second ring is the first support ring and so on. The last mark to the left is where the end of the cascabel will be. To mark the rings I held the prototype barrel to the blank and used a sharpie to mark off each of the sections.

I used a combination of the carbide tools and files to shape the barrel to the correct sizes. Once a section was sized, I used teh modified (thinned) HSS part-

ing tool to do the final smoothing of the barrel. I frequently would take caliper measurements as I removed material to insure I did not overshoot the dimensions.

I would start each section between the marks, by cutting the barrel nearly to the final dimension. Then I would shape and smooth each section between the cuts. Once two sections were cut, the band in between would be cut down to the final diameter of the reinforcing ring between the sections.



**Figure 11 - Once the barrel has been shaped, I re-marked the muzzle end for parting**



**Figure 12 - The muzzle end cut down. Since it is already bored, this is nearly parted at this point**

Finding the turning sweet spot took some practice. I found pushing too hard resulted in chattering, too soft and it created small pins or chips coming off the tool. The tool angle is much narrower than working with wood. However, once you found the correct spot, you get the nice spiral shavings off the blank.

Once the barrel shape was completed, I would cut the muzzle. Once parted, I would true the end with a file then return the live center back to the barrel end to stabilize it for finishing. Care needed to be taken to not insert the live end too hard into the barrel. This would result in widening the bore. The goal here is just to stabilize the end while performing the final sanding and polishing on the lathe.

I used a fine 3M sanding-pad followed by 0000 steel wool to smooth the barrel while turning at high speed in the lathe. At this point I would use the electric drill to complete the boring of the cannon to the correct depth while the lathe continued to spin.

The cascabel would then be shaped and the barrel cut off by carefully holding hacksaw where the cut needed to be and let the lathe do the work.



**Figure 13 - The power buffer**

Once off the lathe, I used a rotary tool to clean up the end of the cascabel. Final polishing was done on the power buffers starting with fine (F), and progressing through very fine (VF) and finally, very very fine (VVF) jewelers rouge. This produced a bright shiny finish on the barrels.



**Figure 14 - Final turned barrels. Note the upper left Carronade has already been fitted with the pivot point. This will be covered in a future article**

In future Journals I will cover designing and building the carriages for the barrels as well as the jigs necessary to bore the trunnions, breeching rings, and touch holes. I will also cover using Photoresist Etching (PE) to construct the gunlocks. Lastly I will cover the installation and rigging of the completed armaments on the ship.

I hope you try turning your own brass. It is a fun project that will result in a great final product.

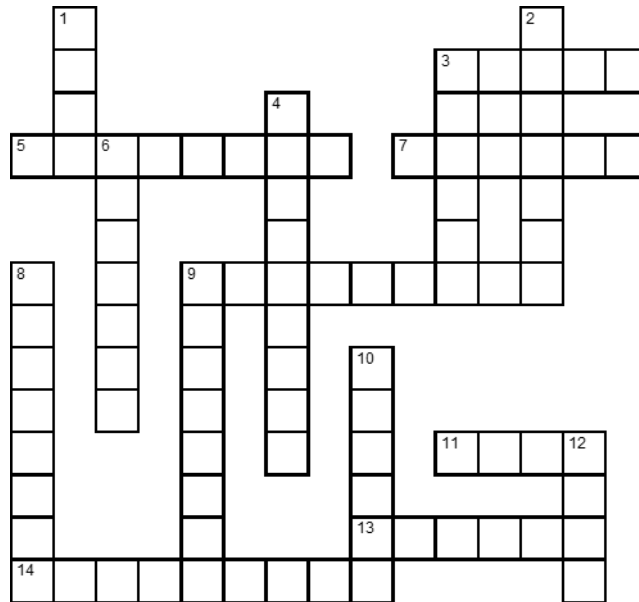




# Gene's Nautical Trivia

## Maritime Writers

Use last names only for all answers.



### Across

- 3** "Open Boat" writer
- 5** "Mr. Midshipman Hornblower" writer
- 7** "Lord Jim" writer
- 9** "The Cruel Sea" writer
- 11** "The Caine Mutiny" writer
- 13** "The Commodore" writer
- 14** "Treasure Island" writer

### Down

- 1** "Toilers of the Sea" writer
- 2** "Mr. Midshipman Easy" writer
- 3** "The Pilot" writer
- 4** "The Old Man and the Sea" writer
- 6** "The Wreck of the Grosvenor" writer
- 8** "The Riddle of the Sands" writer
- 9** "Moby Dick" writer
- 10** "The Sea Wolf" writer
- 12** "A Tradition of Victory" writer



## Planking Match-up

Match the definition on the left with the word or phrase on the right.

- |   |                    |
|---|--------------------|
| 1. ____ That part of a ship's bottom on which the ship would rest if aground.                     | A. Skin            |
| 2. ____ The end of a plank in a ship's side.  | B. Spirketing      |
| 3. ____ The first strake laid along a vessel's bottom next to the keel.                           | C. Butt            |
| 4. ____ Second strake down from the gunwale.  | D. Bilge           |
| 5. ____ A strong board from one to four inches thick, often cut from oak, pine, or fir.           | E. Garboard strake |
| 6. ____ The uppermost plank running along the top timbers of a vessel's frame.                    | F. Plank sheer     |
| 7. ____ Longitudinal joint between planks in a ship's decks or sides, filled with oakum.          | G. Stealer         |
| 8. ____ Outside timbers of a vessel.  | H. Landing strake  |
| 9. ____ The planks running between the waterways and the sills of the ports.                      | I. Seam            |
| 10. ____ Plank used to compensate for the tapering of a ship's planking toward stem or sternpost. | J. Plank           |

## Say What You See

The following five puzzles represent nautical words or phrases in a more pictorial fashion. Say what you see.

1. H  
A  
U  
L
2. K N  
T O
3. BO AT
4. D  
N  
I  
W
5. Y A T S



## Answers

### Maritime Writers:



Planking Match-Up: 1-D, 2-C, 3-E, 4-H, 5-J, 6-F, 7-I, 8-A, 9-B, and 10-G

Say What You See: 1-DOWNHAUL, 2-SQUARE KNOT, 3-OPEN BOAT, 4-UPWIND, 5-BACKSTAY.