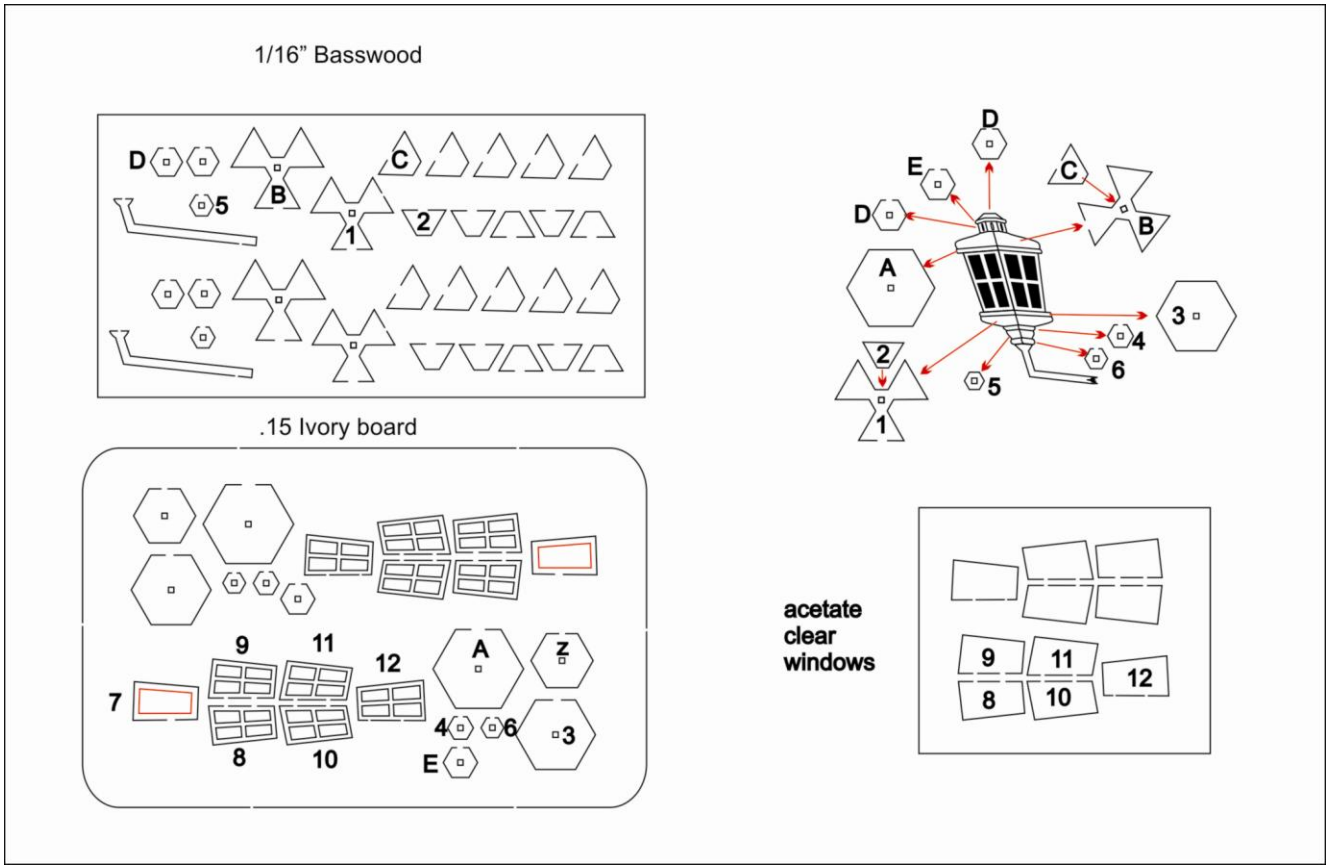
Syren Ship Model Company

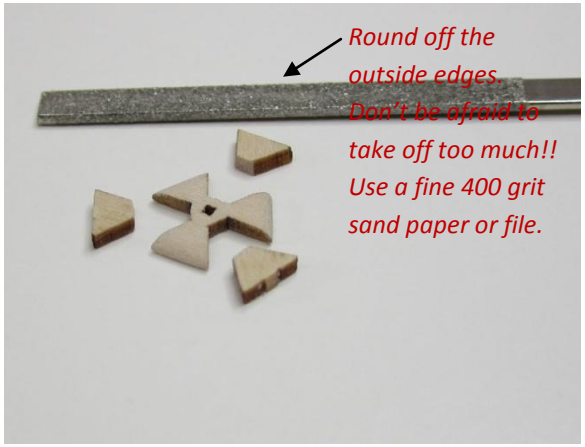
Laser Cut Stern Lantern Kit

Instruction Sheet

We make two sizes of this stern lantern kit. These instructions are for use with both. Please refer to the chart (left) periodically for all part #'s for the 3/16" scale version. There are enough laser cut parts to make two stern lanterns with each kit. The only difference between the two versions is the size of the pieces shown. Part number chart for the ¼" scale version is at the end of this document.



Step One

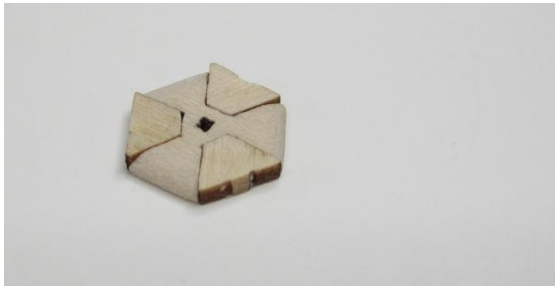


Remove part #1 from the laser cut basswood sheet. This piece looks like a "Y" shaped piece and will become the basis for creating the hexagonal bottom of the lantern. It is sometimes difficult to take a hexagon and sand it to shape consistently without altering the neat, clean hexagonal facets. To overcome this, you will be shaping three facets at a time.

Round off the top outside edge of each hexagonal segment on part #1. See the photo to the left. Try to keep the shape consistent across all three. They will be your guide for shaping the remaining hexagonal facets in step two.

Remove three of part # 2 and proceed to the next step.

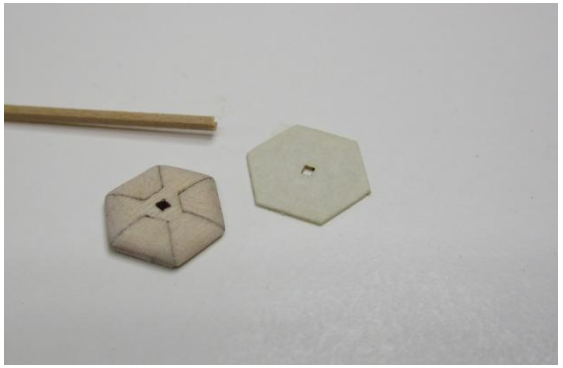
Step Two



After a test fit to ensure that the three wedges (part # 2) fit, glue them into position with some white glue or carpenter's glue. It is best to do this on a flat surface. Sand the edges to remove most of the laser char and get a nice tight fit.

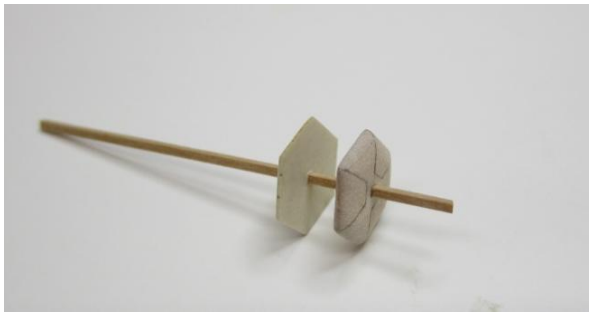
Note how you will be using the shape created in step one to now sand the three new pieces to match. This will complete the initial shaping for the bottom of the lantern. Use a very fine grit sand paper to get a smooth surface.

Step Three



Remove part # 3 from the thin laser cut board. Also take the 1/32" x 1/32" boxwood strip provided with the kit. Very gently file the laser char from the edges of part #3. Try and keep the edges straight and the piece hexagonal. Don't remove too much. Just clean it up. Part #3 should be slightly larger than the assembly you created in steps one and two.

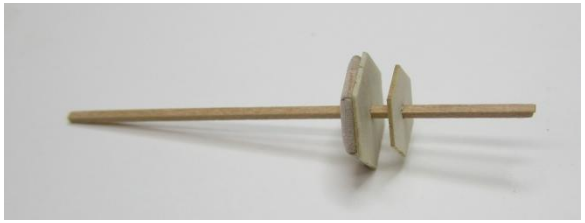
Test both pieces to see how they fit on the 1/32" strip. Don't force it on or you will break the strip. It should be snug and this procedure will be used through the building process. If the strip is too thick, don't enlarge the square hole. Instead, gently sand down the strip until you get a nice clean and snug fit. See below.



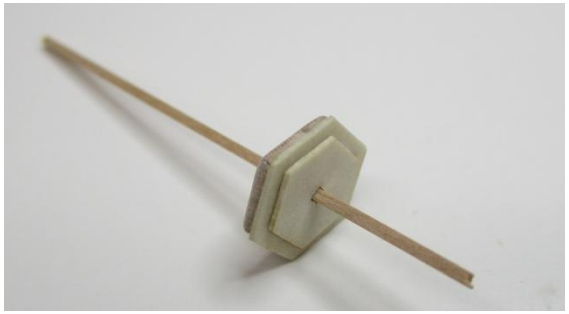
Remove both pieces and sand a rounded edge onto the side of the thicker basswood hexagon where it will meet part #3. This will help create the illusion of a decorative beaded edge once they are glued together. When gluing them together remember NOT to glue them to the stick. You don't need to use a lot of glue. Just one or two drops. Place them back on the stick with some space between both pieces. Apply some glue and then slide them together so they are aligned properly. You must be able to remove the assembly from the stick once the parts are glued together.

Slide them back onto the stick…if you are breaking the stick in the process you are using too much pressure, use a very light touch when sanding and assembling the pieces. The fragile stick was chosen on purpose to ensure the builder use the lightest touch when sanding shaping and assembling.

Step Four



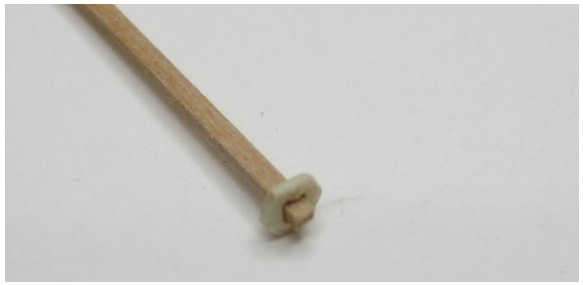
Remove part "Z" from the thin laser cut board. Clean up the edges and slide it onto the stick. This piece will become the base …..around which you will be gluing the window frames later. It is much smaller than part #3.



Remember, you must be able to remove the assembly from the stick so don't use too much glue. Slide it onto the stick with some space

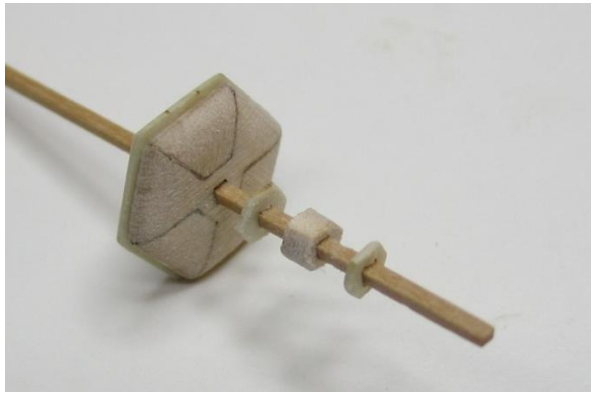
between the pieces. Apply a few drops of glue and then slide them together.

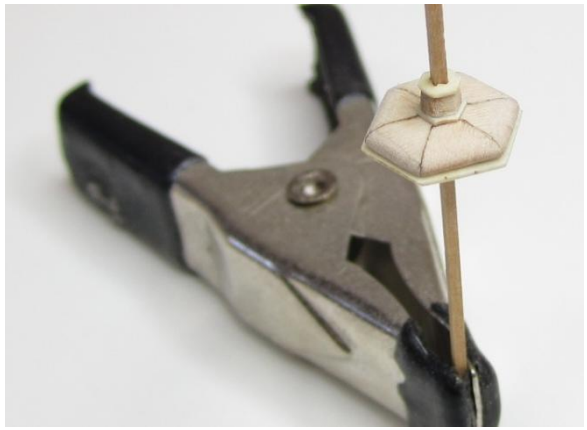
Step Five

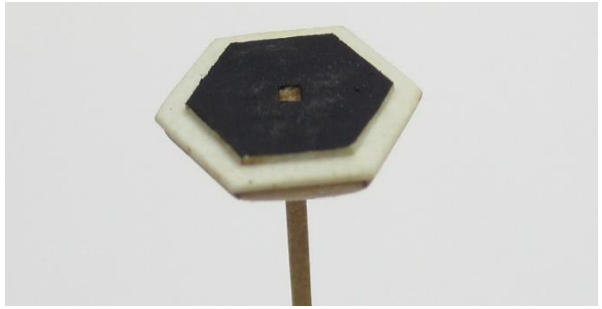


The next few pieces (4, 5, and 6) are incredibly tiny. So tiny in fact… that the laser may not cut a perfect hexagonal shape. They will need to be cleaned up with a gentle touch. The best way to do this is to place them (one by one) firmly onto the end of the stick. This is why it is so important to have a snug fit. Use a file or sanding stick with 400 grit paper to clean up the laser char and create that nice crisp hexagonal shape. Not on the diagram on the first page how part number five tapers. Rotate the stick and file each facet of the hexagon carefully until its completed.

Finally, slide them all onto the stick to test how they fit against each other. The thinner pieces should once again be slightly larger than piece # 5 creating the illusion of a beaded edge. Continue to work on all three until you are satisfied. This completes the assembly of the bottom of the lantern.







Step Six

Paint the top of part “Z” Black as shown above.

It is now time to permanently glue the bottom onto to stick. But do this so that it sticks up about 1/8” from the top of the assembly. This will become your candle. See below. The portion of the candle can be rounded off in an irregular way and then painted white or tallow. If you use thick paint you can create a rough texture and simulate dripping wax. Use many layers of thicker paint. I used acrylic paint.

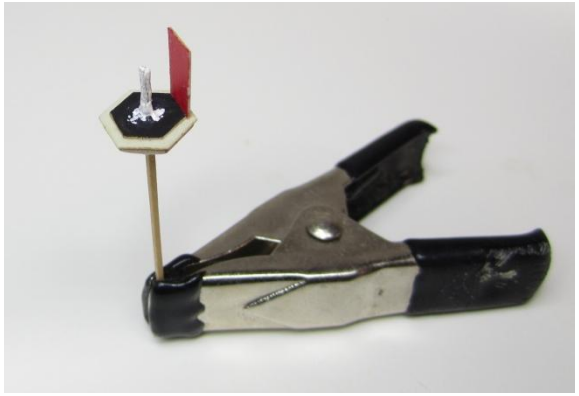
Step Seven

The interior of the stern lanterns (specifically the window frames) were often painted red historically. It will be easier to do this before you remove them from the laser cut sheet. Make sure you don’t paint the etched side of the door panel (part #7). That is the outside of

the door panel. You should paint one side of part numbers 7, 8, 9, 10, 11 and 12.

The inside edge of each window pane should be painted red. Just the inside face. This is challenging to accomplish but can be done. Some touch up will no doubt be required.

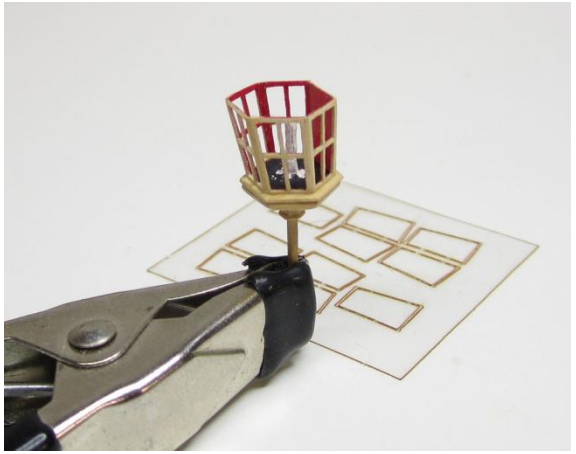
Step Eight



Assembling the window frames. The window frame sections 7,8, 9, 10, 11 and 12 must be assembled in precise order starting with part #7. Part #7 is the most crucial element and must be glued into position properly for the stern lantern to obtain its proper shape and angle. Part #7 should be glued into position so it is straight up and down and perpendicular to the base. Use white glue or yellow glue as it will give you enough time to adjust it before the glue sets.

I recommend quickly adding parts 8 and 9 before the glue dries on #7 so you can adjust them all accordingly before the glue sets. Once these three are in position the others will be quite easy. I would also add that you should prepare the SIDE edges of all of the window frames before gluing them into position. Remove the laser char and also try to give them a slight bevel so the sides of each hexagonal window sit flush against each other. Don't remove too much and sand them very gently.

Do not attempt to remove any laser char from the top or bottom of the window frames to ensure the top of the lantern fits flat when you install it later.



The last window (part # 12) may need a little coaxing to be put into position. Do a test fit first. You may need to spread the two adjacent windows open just a bit to slide that last window in position.

This would be the best time to paint the outside of the lantern. Once all of the window frames are completed and before you glue the acetate window panes into position. Carefully mix a color that simulates the type of wood you are using for the model. Sand all parts smooth and fill in any gaps before painting. Especially fill any gaps between each window frame if they didn't butt against each other firmly. Sand it carefully. The final photo above shows the prototype all painted.

Step Nine

Installing the acetate window panes.

The laser cut window panes should be test fit before gluing them into position. Once again they are numbered in the order that they should be glued. If they need to be trimmed, a straight razor will do the job well. Just push the razor down on top of the acetate to chop off a sliver at the edge rather than slice it off.

I used yellow glue to install the windows. If the acetate got smeared, it could be cleaned up with a wet paint brush using just water. Clean up any excess glue before it sets and try to keep the acetate as clean as possible.

Step Ten

Close up the lantern to keep it clean inside.

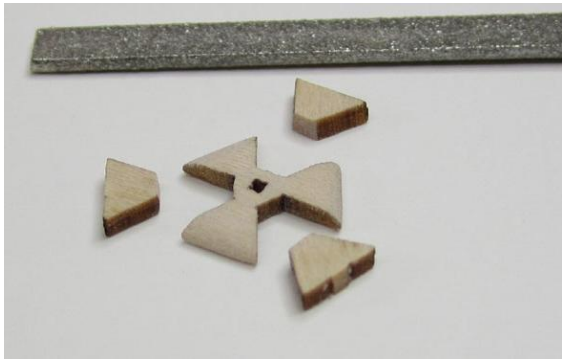
Touch up any paint and then glue the top of the lantern in position. This is part A.

The edges should be cleaned up and then test fit on top of the lantern. It is larger than the lantern which should produce a slight overhang. If you wish, paint the bottom of this laser cut piece black before you glue it on. But keep the outside edge natural by leaving a small part of the perimeter as is. Otherwise it will show. You will be painting it to look like wood anyway so it really doesn't matter though.

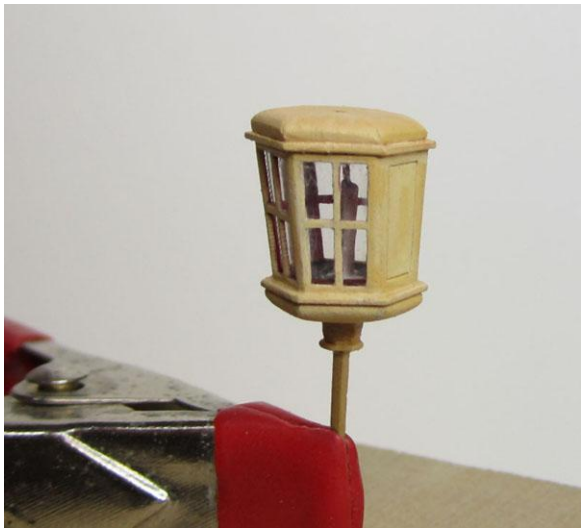
I found it easier to place part "A" on my work table upside down. Then I carefully positioned the lantern over it after I placed some glue on the tops of the window frames. Then I lowered it onto part "A". Try to create a consistent overhang around the lantern.

Step Eleven

Constructing the top.

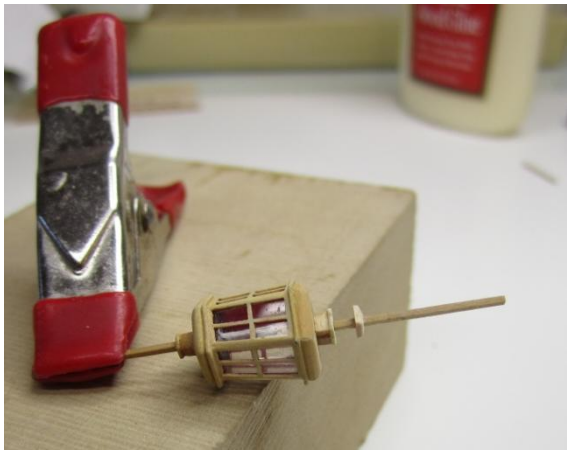


Make the top from basswood parts B & C just like you made the bottom. Then place it on top of the lantern. This assembly should be smaller than part A. Remember to round off the bottom edge to help simulate a nice beaded profile.



Step Twelve

Parts D, E and D (there are two part D's) can be



added at this time. Again, these are really tiny pieces and should be shaped on the end of a stick to clean them up. Part "D" is placed on

top first followed by “E”. Test it to ensure a nice overhand and beaded edge is created with part “E”. You can align these parts on top of the lantern using a stick. Insert it into the hole on top of the lantern and then slide parts “D” and “E” into position. Finally, a second part “D” is shaped and thinned down significantly. This is the cap on the vent of the lantern. Examine the diagram on the first page and the photos for its shape.

To assemble them, glue the stick into the top of the lantern permanently. Then slide each piece into position. When done, snip off the excess length of stick but leave it slightly proud of the surface. Sand it so the edges are rounded and softer so this becomes the “button” on top of the lantern. Paint these remaining pieces after sanding the surfaces smooth.

Step Thirteen

To simulate the holes in the vent of the lantern, use a sharp awl. Just press it into the soft

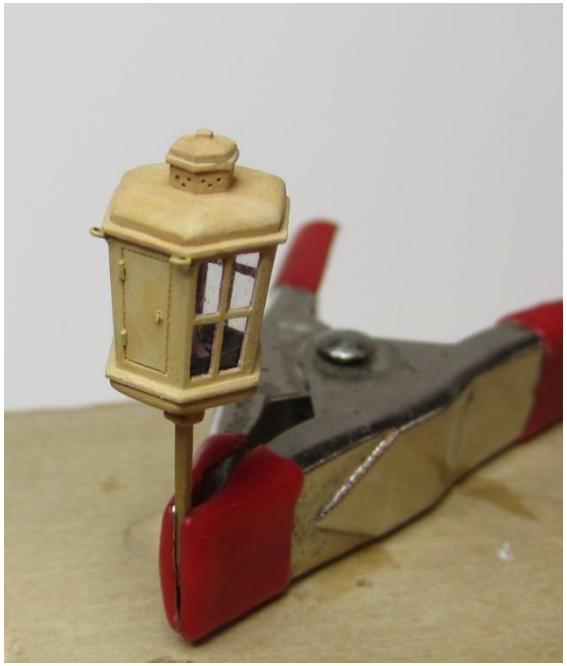
basswood on each facet of the vent to create tiny holes. Practice on some scrap wood first.

Step Fourteen

There is a small amount of metal work that needs to be added to the lantern. These elements will appear on the door of the lantern. To prepare the door, run the sharp point of an awl through the laser etched groove to help define it. This is a good trick as the paint probably filled it in a little bit. Use a gentle touch and the side of the pointed tip. Hold the awl on an angle as you run the point through the groove.

The door hinges can be simulated using the black wire provided. Snip off two of the tiniest pieces you could make. They don’t need to be very long at all. Glue them to the right side of the door inside the laser etched groove.

The handle for the door was made using another tiny length of this wire. I drilled a #80 hole into the door. After gluing some wire in this hole, it was snipped off so a small length protruded from the doors surface. It looks like a small rivet actually but the lantern is so tiny it does the trick. The hinges and handle were painted to look like wood.

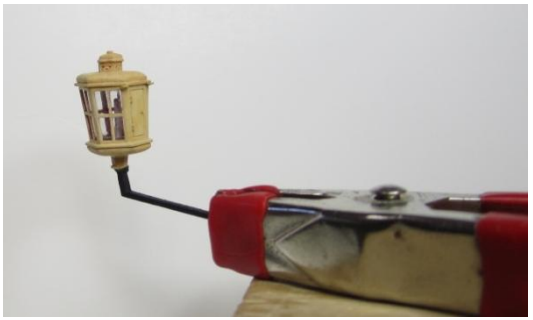


To finish off this step, two tiny eyebolts were formed with the remaining wire. These were glued above the door as shown in the photo. These eyebolts will be used to secure the lantern to the transom of your model. Wire was secured to the eyebolts and then brought to a corresponding pair of eyebolts on the top

of the transom. You should examine the plans for your ship model for the exact configuration.

Step Fifteen and Conclusion…

The final element of this kit lantern is the crank. This is the bracket that secures the lantern to the transom. It is normally made of metal but is supplied in this kit as a laser cut wooden crank. Carefully remove it from the sheet and sand it smooth. The crank was painted black. The stick that I was using as a handle protruding from the bottom of the lantern was finally snipped off. Then I glued the lantern on top of the crank. See the photos below of the completed lantern waiting to be installed on any ship model. *I hope you enjoyed this kit from Syren Ship Model Company!!!*



1/4” scale parts Identification