

Suspended Vessels

When surfing the web, I noticed several suspended or hanging vessels and thought they were kind of neat.





I tried to make a couple of prototypes (which were pretty much failures) before I discovered a demonstration by Alan Carter on You Tube.

So I tried another prototype and actually got a decent looking finished piece.



I put this prototype up for sale and it sold in just a few days.

So I decided to get further into this.

The basic elements of a suspended vessel are the vessel itself, the support from which it is suspended and a base for stability. There are a lot of different types of supports. Single, double and triple supports and turned supports with a hole to accept the vase.

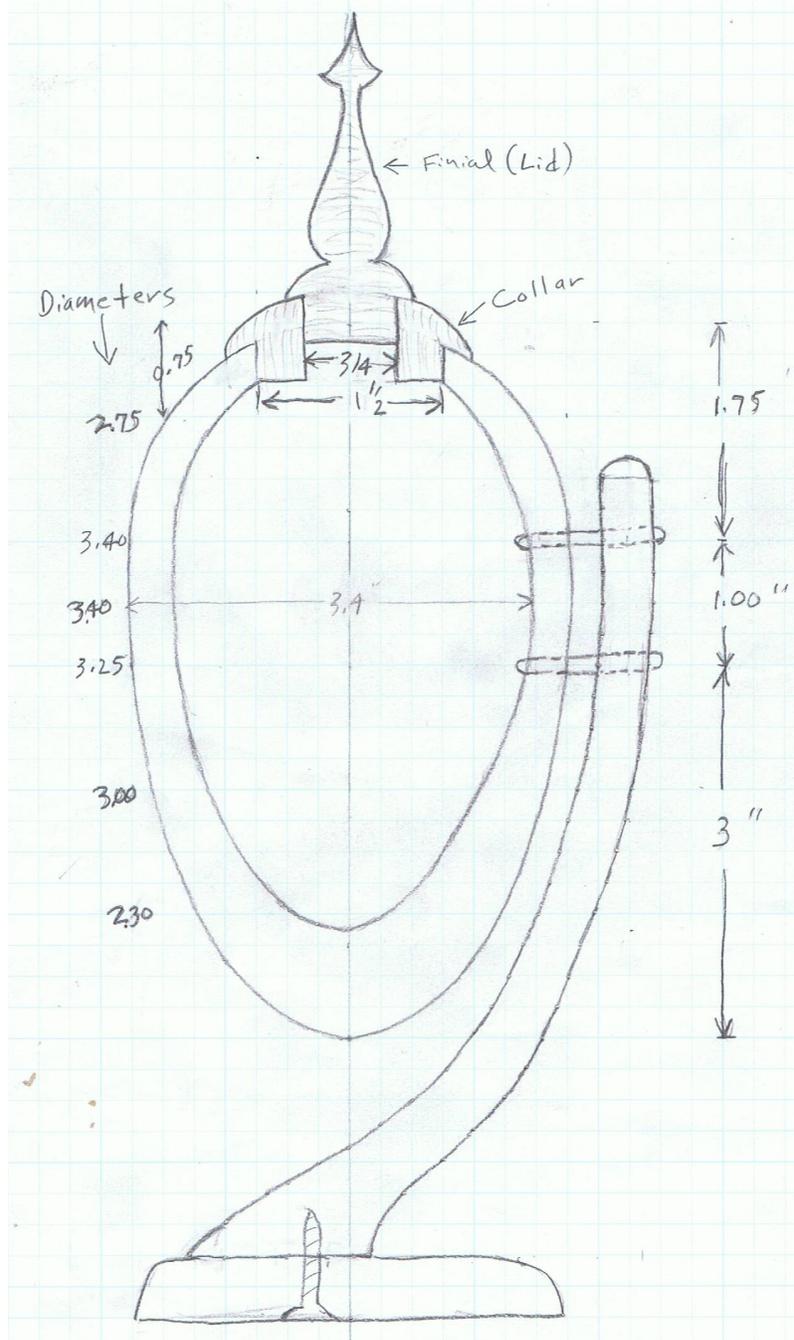
I use 1/8" brass rods to connect the vessel to the supports. I buy mine from the hardware store. It is nothing more than brazing rod without flux and it is exactly 1/8" in diameter.

Today I am going to demonstrate a fairly simple vessel suspended from a single support on a base.

Here are the steps in making the suspended vessel.

Step 1 - Plan and draw the vase and support(s)

The very first thing to do is to sketch the vessel and its support with base to scale. Using a sketch is pretty much a must in order to locate the holes for the brass rods that hold everything together and to have a template to follow when turning and to insure that the base, support and vessel fit together properly.



Step 2 - Prepare the vessel blank and support blank

Select a piece of wood that is large enough for the vessel (remember to add a couple of inches extra to the length for chucking etc.)

Square up the blank so that all sides are equal and perpendicular to each other. Precisely locate the centers on each end and punch a starter hole with an awl for your drive and live centers.

Draw a circle for locating the tenon that you will turn on the bottom.

Find the mid point of the sides and draw a line along it. This is where you will drill homes for the brass rods.

Find a piece of wood of sufficient size for the base and support. Make sure that the ends and sides are perpendicular to each other. Clean up the faces if necessary

Step 3 – Layout the vessel, supports and base

Vessel - Using your sketch, determine how far down from the top you want the top hole for the brass rods to be and mark it on the vessel centerline. Make your self a stick with nails protruding through and located at the distance that you want between the brass rods. Put one nail on the mark for the first hole, press the second nail onto the midpoint line to mark the location of the lower hole. I use an awl to punch starter holes for my drill.

If you are making a single support system you only need to mark one side. Drill opposite sides for 2 supports. If you want to put on 3 supports you will have to use the indexing system on your lathe to locate the drilling holes after you have turned the blank round.

I never use 4 supports because the supports unnecessarily block the view of the vessel and it is hard to get 4 supports or legs to set level.

Support - Layout the support (s) and base. You can transfer the support from your sketch with carbon paper or by pricking the drawing every 1/4" or so if you don't want to mess with carbon paper. Determine where the top hole for the brass rods will go. Use the nail stick to locate the lower hole. Be sure to locate the holes on the middle of the edge of the board that you are cutting the support from. Locate the hole(s) for the bottom of the support to attach to the base.

Make sure you have enough wood above the bottom of the support where you drill the screw hole to avoid drilling through the support.

Base – I usually sketch the base directly on to the wood. In this case I used a compass. Locate the attachment hole(s) from your original sketch. Note that they will have to correspond to the hole(s) in the bottom of the support.

Step 4 – Drill holes for brass rods connecting the support(s) to the vessel.

Vessel - Before you do any turning, take the blank to the drill press and drill the appropriately sized hole for the rods at the locations you just marked. (Drill a hole in some scrap wood and make sure the brass rod fits. It should be snug but not so tight that you have to force the rod through or hammer it in.)

Drilling at this point makes it easy to have all your holes straight and at the right location.

I usually drill the holes about 1/3 of the way through the blank to make sure that the hole reaches the inside of the vessel. It is really hard to figure out how deep to drill if you don't want the end of the brass rod to show on the inside.

Support – Drill the holes for the brass rods attaching to the vessel. Make sure to drill deep enough to go all the way through the support. (I was originally going to

not have the hole go all the way through the support so the rod end wouldn't show. Just about impossible to figure out how to do, so I went all the way through.) I kind of like having the polished end of the rod show.

Step 5 – Drill hole(s) for screwing base to support

Drill the hole(s) in the base and counter sink them on the bottom side of the base.

Determine the depth of hole(s) needed in the bottom of the support. Mark your drill bit (a piece of tape works) so that you don't punch through the top of the support.

Step 6 – Turn the vessel

Put the vessel blank on the lathe and turn it round.

Turn a tenon on the bottom using the circle you drew on the blank earlier as a guide.

Secure your vessel blank in a chuck, grasping it by the tenon you just turned. Using your drawing as a guide, determine the diameters of the vessel along its length.

Mark a line on the cylinder where you took each diameter measurement from your sketch.

I usually use 1" increments along the length.

Use a parting tool to cut a groove at each line that corresponds to the diameter taken from your drawing. I usually stop the cut about 1/16" larger than my drawing.

After cutting all the grooves, turn the vessel profile using these grooves as guides.

Leave the bottom inch or so of the vessel unturned to provide support while hollowing or doing other shaping. I usually stop cutting the profile when I get down to a diameter of 3/4" or so.

Step 7 - Hollow the vessel.

Since the opening at the top is usually quite small, it isn't all that easy to do a complete or really neatly sanded hollowing. In this case, I hollowed before I glued the block for the collar onto the vessel. Apparently most turners do not finish the inside of these type vessels so I didn't either.

Step 8 – Attach collar

If adding a collar, turn a tenon on your piece of collar wood that will fit snugly through the opening in the top of the vessel. Glue the collar on and turn it to the desired shape and dimension. I don't think I will put on a collar next time. I will just turn the top to accept my lid. I spent a lot of time fussing with and trial fitting the collar and don't know that it really adds all that much.

Step 9 – Sand the exterior (and interior if you are so inclined) of the vessel and collar. Seal. We will apply finish later.

Step 10 - Cut out the support and base Sand, seal and finish them.

Step 11 – Trial fit the support to the vessel. Leave the brass rods longer than final length so you have something to hang on to. If you have been careful to

locate and drill the holes in precisely the right locations, it should go together without much difficulty. Adjust the distance between the support and vessel so the center of the vessel is over the center of the base. Make sure the vessel is vertical. You can usually slide one rod in or out to achieve small adjustments. Disassemble.

Step 12 – Turn the underside of the lid. Take care to get a good, but not extremely tight fit to the vessel. Sand, seal and finish the underside of the lid because you won't be able to get at it later.

You can use the vessel to hold the lid while you turn the topside. You may have to use a paper towel to get a tight enough fit to hold the lid.

If desired you can attach a piece of wood for a knob or finial to the top of the lid at this point. Then turn the finial or knob along with the top of the lid. Sand, seal and finish the knob or finial and the top of the lid.

Step 13 Turn almost all the rest of the vessel. I leave a 1/4" to 3/8" piece of wood connecting the vessel to the waste portion of the blank. Sand and seal the exterior of the vessel before cutting it the rest of the way off.

Step 14 – Cut off the vessel and use some sort of chuck to hold the top of the vessel while you finish shaping the bottom of the vessel. I usually end up using sandpaper to do the final shaping. Blend in the newly formed tip with the rest of the vessel as you do the final sanding on the tip.

I use my spigot jaws in an expansion mode to hold the vessel while I work on the tip. For larger diameter vessels I use my cole jaws.

Step 15 – Seal and finish all the pieces.

Step 16 – Attach support to base. I use deck screws.

Step 17 – Determine exactly how long each brass rod needs to be. Cut them off and finish the ends. I put my drill chuck into the head stock to hold the brass rod while I cut it to length and smooth the ends with a file and emery cloth.

Step 18 – Assemble support & vessel. Carefully insert the brass rods through the supports so the ends on the outside stick through exactly as much as you want. Put a drop of super blue on the rods on the inside of the support. Immediately remove any excess glue on the support with a paper towel. If you have a good finish on the support, the glue will wipe right off. Give the glue a few minutes to set up. I don't spray on accelerator because it will ruin the finish. Push the brass rods through the holes in the vessel to the exact depth you want and apply glue to the inside of the vessel where the rods come through. Let the glue set up for a few minutes and you are done!
Lot of work wasn't it?

This is what it turned out to look like. Ignore the bluish tinge at the top. One of those good ideas that turned out badly.

