

Turning Ornaments and Finials

By Bob Moffett



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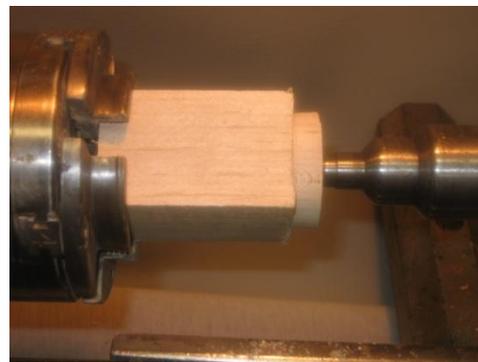
Turning an ornament with a finial is a fun project that incorporates multiple skill building exercises, such as spindle turning, turning a sphere, and hollowing. Features such as chatter, texturing, off center turning, coloring, dyeing, bleaching, piercing and a multitude of other treatments to both the globe and finials can also be incorporated into the project to produce a variety of beautiful turnings. The possibilities are only limited by your imagination.

Steps to making an Ornament

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Make the globe first so that when turning the finial and icicle later, they can be sized to fit the openings in the globe. For this demonstration the globe will be approximately a 2" sphere. It does not have to be a perfect sphere. Some turners make the globe oval, less than 2" from top to bottom. The globe can also be made larger or smaller than 2" in diameter depending on the total overall size of the Ornament desired.

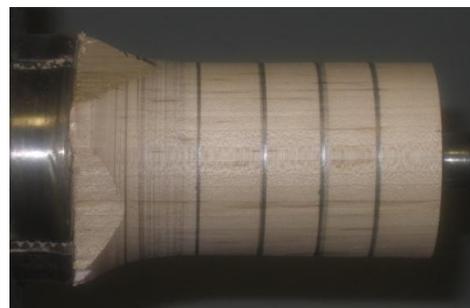
- 1) Start with a 2" square block of wood glued to a glue block. You could also use a piece of wood cut in a rectangle 2" square and 3" – 4" long. The grain should run parallel to the ways of the lathe as you will be doing end grain hollowing and spindle turning.



- 2) Using the spindle roughing gouge turn the block round and turn a tenon on the end..

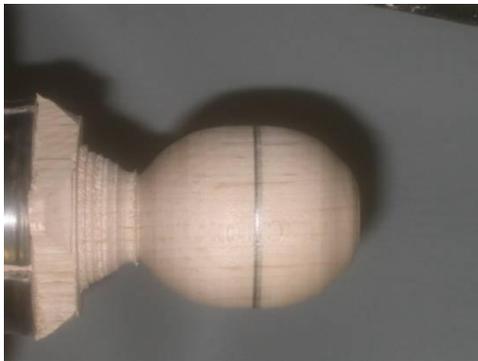
- 3) After placing the blank in the chuck, measure and mark 2" on the blank or the size that you want the globe.

- 4) Divide this distance in half, (this will be the largest diameter of the globe) and divide each half in half resulting in 4 equal divisions, the rest is scrap.



5) Now drill a 5/8" hole to within 1/8" of the base of the globe. This makes the globe easier to hollow since the center has been removed. It also sets the depth for hollowing.

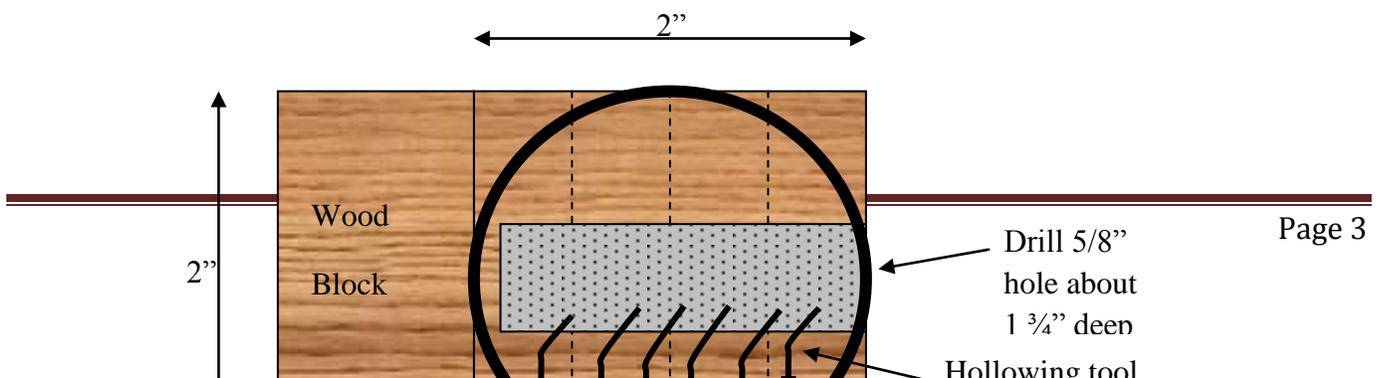
- 6) Now shape the globe. Turn the globe from the mark nearest the end of the globe at about a 45 degree angle to the hole drilled in the end. Then turn from the comparable mark on the other end down to about 1" – 1 1/4" (this should be from the 3rd mark from the tail stock end to the 4th mark which is the opposite end of the globe). You want to leave the end near the headstock larger so the globe will have extra support while you are hollowing it.



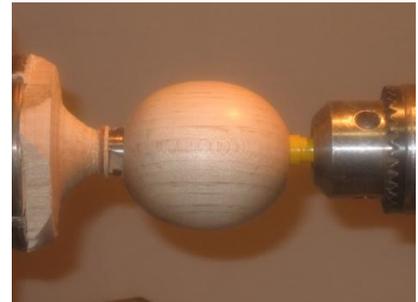
- 7) After you have cut the 45 degree angles on either end move back to the center mark and round out the 45 degree angle cut. You can remove any tool marks and smooth out the shape when sanding the globe.

- 8) Now it is time to start hollowing the globe.

- 9) Use the hollowing tools of your choice to hollow the globe. Start by hollowing near the tail stock leaving thickness in the headstock end to give support. After experimenting with several types of tools, I have found that I prefer the 1/4" square hollowing tool to do most of my hollowing. This tool is made from a piece of 1/4" High Speed Steel about 6" – 8" long and is sharpened on one end like a round nose scraper. When hollowing keep the tool rest slightly below center which results in the cutting edge of the hollowing tool being slightly above center. The hollowing tool needs to be far enough above center so that the bottom of the tool does not rub against the inside of the globe. You are hollowing to take weight out of the globe; therefore, the hollowing does not have to be perfect. Hollow the globe until it is about 1/8" thick. See the following diagram for the sequence of hollowing steps. Use a wire gauge for measuring the thickness of the globe. Measure the depth of hollowing near the tail stock carefully with either the gauge or your hollowing tool. I find it helpful to mark the depth of cut on the hollowing tool with a Sharpie.



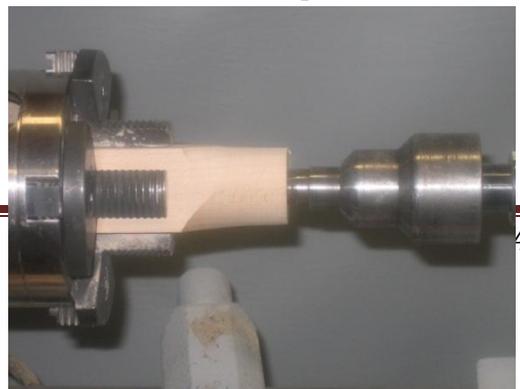
- 10) Once you have the globe hollowed to your satisfaction finish the outside of the globe by rounding out the top of the globe (the end near the headstock). While rounding off the top, cut the end down so that you have a tendon smaller than 5/8" in diameter holding the globe to the glue block.
- 11) When the globe is rounded to your satisfaction and the tendon holding the globe is less than 5/8" it is time to cut the globe off of the glue block.
- 12) Sand the globe until it is as smooth. I usually sand to 400 grit and then finish smoothing with Scotchbrite, first gray, then gold and finally white.
- 13) Turn the speed of the lathe down.
- 14) Using the 5/8" drill bit to part off the globe by inserting the 5/8" drill bit into the globe with the lathe turned off. Turn the lathe back on at a low speed and drill out the rest of the hole. The drill bit will cut through the top of the globe and into the tendon. The globe will remain on the drill bit. Turn off the lathe and remove the globe.



Turning the finial and icicle

First, let's do the finial.

- 1) Select a piece of straight grained wood for both the finial and the icicle. I usually use hard maple or another light colored wood. I do not like to use a dark wood because if it was put on a Christmas tree, it would not show up. Cut the wood about 1 1/4" square and 6" long for the icicle and about 2" for the finial. This gives you some extra stock to put in the chuck jaws.



2) Put the wood for the finial in a chuck with number one jaws (you may also use step jaws) and round it using a spindle roughing gouge. I prefer a 3/8" spindle gouge. If you don't have any number one jaws or step jaws, you could just use a large piece of wood in number two jaws. Use a live center in the tail stock to support the other end of the spindle.

3) Cut a tendon on the end of the spindle sized to fit into the hole in the top of the globe. Taper the inside of the finial so that the curve of the top of the globe will fit into it. I put a slight taper on the edge of the finial. You can stop the lathe, remove the tailstock and check the fit of the globe to the finial. The better fit you have here, the easier it is to assemble the ornament when you finish. Cut the tendon about 1/4" long below the base of the flange. Then rough cut the top of the finial and part it off.



4) Put the finial's tendon in the chuck.

5) Once it is in the chuck, put a #16 brad in the drill chuck and drill the hole for the screw eye. If you drill this hole while there is still some bulk in the wood, it will be less likely to split when you insert the screw eye. You also could screw in the screw eye to thread the hole and then take it out to shape the top.

6) Now shape the finial to a shape that pleases you.



7) Finally screw the screw eye into the finial. I find this is easier while the finial is in the chuck because you can hold the screw eye still and turn the finial using the handwheel on the lathe.

8) You have completed the finial and are ready to make the icicle.

Making the icicle



- 1) Put the stock for the icicle into the chuck with number one jaws (again, step jaws can also be used.).



- 2) Cut the tendon on the end to match the bottom of the globe, the same way as you cut the tendon for the finial in step 3 above.

- 3) Now turn the spindle around and put the tendon end in the chuck. Use the live center at the opposite end of the spindle for added support.



- 4) Make the flange the same size as the flange for the finial. Determine the shape of the icicle that you want.
- 5) Turn the icicle leaving enough extra length on the end of the icicle to have the live center in the end of the icicle. (Since the icicle can get rather thin, when I cut the icicle, I hold the tool so it is cutting along the length of the wood rather than pressing against it.) This takes some of the stress out of the cut.
- 6) And the final result is!



Some recommended sources of reference for design of ornaments are on the Piedmont Triad Woodturners Association club website, www.ptwoodturners.org, as well as other club websites. Bob Rosand's website, www.rrosand.com, has an article about turning ornaments as well as his gallery of ornaments. Woodcentral.com has an ornament gallery on their website, www.woodcentral.com. The Greater

Vancouver Woodturners Guild website, www.gvwg.org, has an article on a ornament demo that Alan Leland, of the Woodturners Guild of North Carolina, did in 2007. It is recorded in their September 2007 newsletter and the web address for that newsletter is www.gvwg.ca/docs/newsletter2007/Sept2007.pdf.

A book on the subject is Turning Ornaments & Eggs by Dick Sing.

Tools needed:

- 1/4" – 1/2" Skew
- 1/4" – 3/8" Spindle Gouge
- 3/4" – 1 1/4" Spindle Roughing Gouge
- 5/8" Drill bit – Either Brad Point or Forstner is fine
- Thickness gauge - can be made from a wire coat hanger
- Calipers or 5/8" open end wrench
- Parting tool

Hollowing Tools

Available from most woodturning supply stores

Home made:

- from 1/4" Allen wrenches
- 1/4" High Speed Steel Rod

3/4" X 16 Brad with head cut off

Small screw eyes # b216 1/2 .062 X 1/2 from Michaels or other craft store

Screw eyes can also be made from fishing hooks. (Cut off the eye part where you would attach the line.)

1/4" Skew can be made from 1/4" X 8" HHS Round Tool Bit available from Enco Supply # 383-7015

Website: www.use-enco.com phone number. (800)873-3626

Drill chuck with morse taper to fit your lathe.