

CHRISTMAS ORNAMENTS WITH LONG THIN "ICICLES"

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I certainly do not profess to be an expert on turning hollow forms and long thin finials but I have done quite a few and they have earned a bit of attention. I got the basic idea from Robert Rosand when he was our professional hands-on instructor/demonstrator a few years ago. See Bob and his wife Susan's web site at

<http://www.rrosand.com/index.shtml> for some more detailed articles.

I find the hollowing tools he makes very easy to use and are also easy to make yourself.

I do deviate a little from his method of turning the globe as I have incorporated a couple of techniques from other turners, and my own innovations

Long thin finials are the forte of Cindy Drozda

<http://www.cindydrozda.com/> and I picked up a lot of pointers from her while she was instructing and demonstrating here a couple of years ago, and again incorporated other turners procedures into my method.

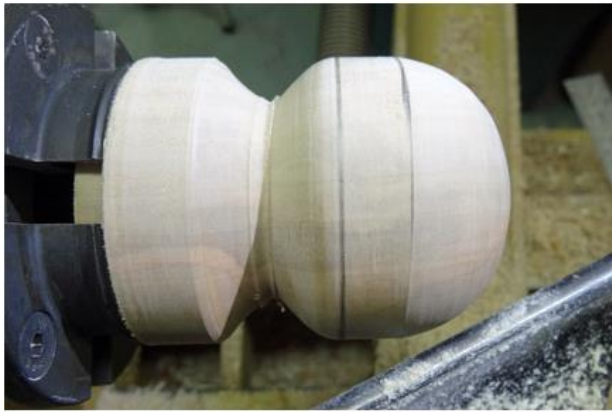
What I am demonstrating is the way that works for me. It is not the only way to do it and don't let any demonstrator tell you that their way is the only way.

GLOBE:

I usually start with a hard wood blank of Maple, Cherry, Elm or Pecan about 2 1/2" diameter by 9" long. This will be an end-grain turning so the grain will run the length of the blank. Mount the blank between centers and turn a tenon on each end. Cut the piece into two equal lengths to make two globe blanks. Since you will not be rechucking the piece you can start with a square blank and just clamp it in the chuck without turning a tenon. If your blank is long enough you can turn two globes without taking the stock out of the chuck. If you do not have a chuck you can mount the blank on a face plate or glue block. Be cautious of this because it is end grain and the screws can crack the blank or it may not bond well.

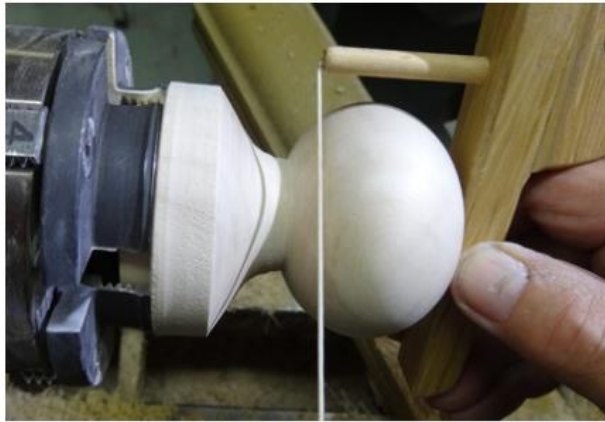
Turn the blank to about 2 3/8" to 2 1/4" diameter and determine the desired height of the globe. I prefer a somewhat flattened contour rather than spherical. I think it looks nicer and it is easier to hide your goofs. Using a pencil, divide the height into quarters and mark them on the cylinder. If you wish you can also make a mark on the right hand end at the 1/2 radius point. This will help in making a smooth and centered contour while turning. Once you become an expert you won't have to do this, but I still do.





Using a small spindle or bowl gouge turn the contour to the first pencil mark and down to $\frac{1}{2}$ of the radius. This should be a smooth curved contour with no flat spots. When you are satisfied with this contour continue to turn to the center line and the center of the end developing your final contour.

Turn the left hand side of the globe to the first quarter mark and as deep as $\frac{1}{2}$ radius. Here is where it gets a bit tricky. You will need to start turning the final contour on the left hand side but not cut into the boss holding the globe to the waste stock. Use your imagination as to where the contour will intersect the supporting boss.



Use a gauge of your choosing to determine the depth of hole you are going to make to assist in hollowing. The hole should stop about $\frac{1}{8}$ " short of the globe's projected outside contour. I use a $\frac{1}{2}$ " diameter bullet drill but you may use any type you choose. I would not recommend going smaller than $\frac{3}{8}$ " or larger than $\frac{5}{8}$ " diameter. Be sure and mark your drill bit for depth, and do not drill through the bottom end of the globe as it will weaken the supporting boss too much.



I use a simple shop made hollowing tool fabricated from $\frac{1}{4}$ " square cold rolled mild steel bar with a $\frac{3}{16}$ " square M2 steel cutting tool silver brazed to the end. The edges of the bar are radiused where they will be inside the globe to prevent enlarging the entrance hole. The flat surface of the bar is a good index for the position of the cutter. By keeping the flat on the tool rest the cutter is in the correct cutting position.

The cutter is ground with a 35-40 degree angle and a secondary relief if necessary on small hollow forms.



It is advisable to turn a small flat around the drilled hole to facilitate installing the "icicle" (you will not have to undercut the flange as much).

Finish sand the outside to about 400 grit. More if you like.

Turn the inside of the globe to a fairly constant wall thickness. I like to make them as light as possible so I try to maintain around 1/8". Yes, I do cut through some. Use the drilled hole as a guide to find the bottom.

When finished hollowing turn the bottom outside contour until there is a supporting boss about 1/2" in diameter. Finish sand this side of the globe.



Drill a 1/4" diameter hole through the bottom of the globe and into the supporting boss. The support will be pretty fragile now so be careful. Using a parting tool gently cut through the boss while creating a small flat surface around the 1/4" hole as was done on the opposite surface of the globe.

I built a tool to help finish sanding the bottom of the globe. This is the primary reason I drill a 1/4" hole through the bottom in lieu of a 1/2" hole. I use the shoulder of the tool to rest on the inside of the globe while it is squeezed with live center end. The 1/2" shaft of the tool centers the globe through the 1/2" hole. Of course you can hand sand it and not build a tool.



ICICLE FINIAL:

Although it is possible to turn a long thin finial "icicle" without using a chuck it a great deal more difficult. I highly recommend a chuck with long thin jaws as the best method of gripping the stock. A collet chuck also works well. A close fitting tenon is necessary.

It is very important to carefully choose the turning stock. To prevent warping and splitting the material needs to be very a tight and straight grained hard wood. Many exotics such as Ebony, Rose Wood and Cocobolo are great but are expensive and many are toxic. One of the best domestic woods is American Holly though it is not easy to get. I find that hard Maple, and even some Big Leaf Maple, work very well. These may be dyed to any color you choose.

I start with a piece of stock about 1" square by 8" long. I can clamp the stock directly in the chuck since I will not be removing it. If your stock is not square then you will need to put it between centers and turn as large a tenon as you can. If you have one, use a spring loaded live center to prevent a deep indentation on the end of the stock. An indentation here compresses the wood fibers and interferes with turning a smooth point on the finial.

