

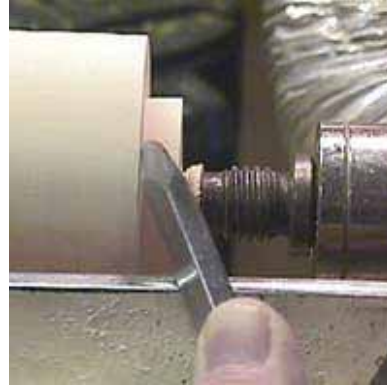


## Turning a Long Stem Goblet

Photos and write up by Larry Hancock



I start turning the blank between centers. Even if the limb section were small, enough to fit in the chuck the bark would not make a good holding surface. You need a good solid grip on the blank to hollow the end grain.

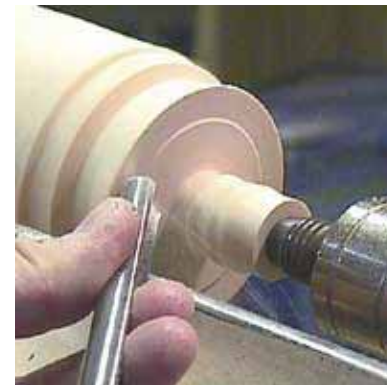


Using the skew long point down to square up the shoulder for a good seat against the chuck jaws. The shoulder of the tenon should be straight or slightly under to seat against the chuck jaws.

You can see the heel of the skew is well clear of the wood and the bevel lines up with the square line we are cutting. Arc the skew into the wood from largest diameter toward the center point.



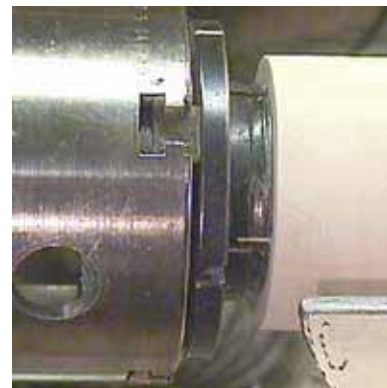
Roughing round with a 3/4" roughing gouge. Like any spindle, I start at one end roughing and work back across the spindle surface until it is entirely round. If you start roughing in the middle of a spindle, you risk tearing the wood off in sections toward the edge.



A spindle gouge also works to cut the shoulder and tenon surface. The angle the gouge presentation to the wood is just different.

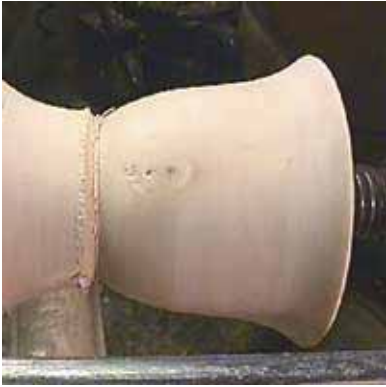


Arcing the skew in a peeling cut to make a tenon for mounting in the chuck. This cut is a fast way to remove wood for the chuck tenon. Depending on the chuck you use the tenon will need to be straight or dovetail shaped. I am using an Oneway Stronghold chuck for most of my turning and a straight tenon is best because of the internal jaw design.

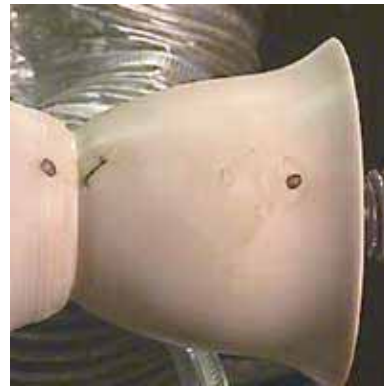


The tenon is now in the chuck jaws. The outer edge of the chuck jaws should contact the shoulder for best support. Do not turn the tenon so long that it bottoms out inside the chuck first. You need the best support you can get when turning an unsupported spindle.

The chuck is not required for turning a goblet. A faceplate and waste block would work as well. Turn a recess in the waste block to match the tenon and super glue it in place.



I shape the outside profile of the cup first before hollowing. Some turners hollow first and then turn the outside. I am most interested in the outer profile seen first so I concentrate on that and hollow the interior to match. I always shape the outside of a hollow form first and then hollow it instead of the other way around so I do goblets the same way. I have a hard time visualizing exactly what I have for a shape internally when I try the hollowing first approach. There is always more than one way to achieve the same goal.

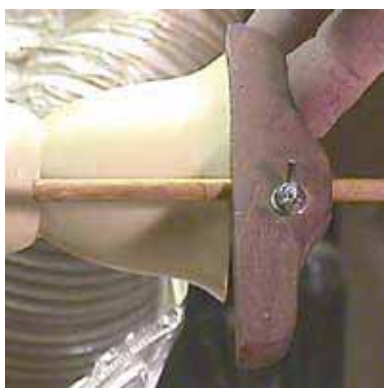


The cups outside finished and ready for hollowing. The finish will help slow some of the moisture loss while hollowing and may help with warping to some degree.

Select a finish that you like to use. I do not turn these goblets for actual drinking so I do not use a finish intended for that purpose. There are plastic coatings and other finishes that might withstand having a liquid setting in them for a long time if you want a drinking goblet.



One way to take care of some of these problem grain areas is to use the skew on its side like a scraper and take a light cut that will give a good surface for sanding without torn grain. I could use a scraper but I already have the skew. Using the skew in this manner will dull it quickly so sharpen the edge before returning to normal cutting.



Setting the internal depth of the cup with a simple wooden depth gauge. I set my depth gauge to slightly less than where I think the finished bottom will be. Once I have hollowed and removed more of the waste wood from the bottom area of the cup, I will be able to match the inside to it. Better to stop a little short when drilling than to go too deep.



The area after the skew scraping cut. No more torn grain. Adapt your techniques to what the wood gives you instead of trying to make the wood do what you want. The wood is not going to change its characteristics but you can change your techniques.

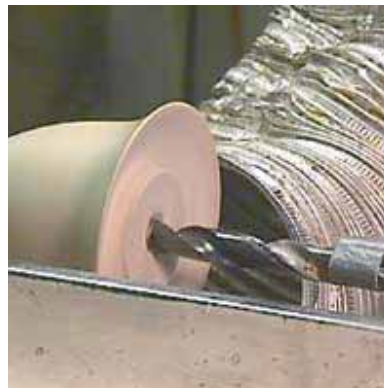


Using the depth gauge setting to transfer the measurement to the drill. I use duct tape around the drill as the marker for the depth. I do not want to buy stop collars for all the different size drill bits I may use so tape is a cheap alternative.

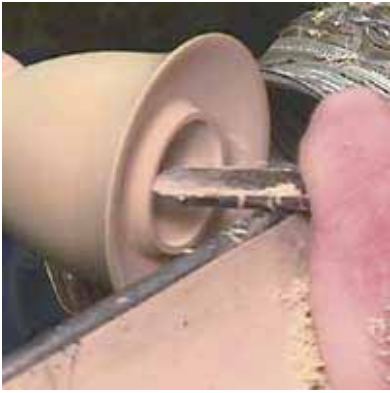


This is a fresh piece of wood and will warp slightly as it is hollowed so sand and finish the outside now while it is still running true. Wet wood will clog sandpaper quickly but as the surface dries it will clog less. Try not to generate a lot of heat while sanding or the wood surface may develop cracks.

Wet sanding will work also and help with the clogging of the sandpaper.



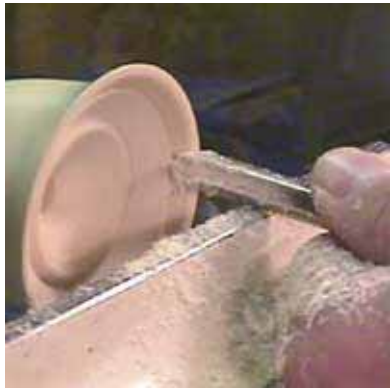
Drilling the depth hole in the cup. End grain is had to cut straight into so this hole will give a starting hole for hollowing.



This is an end grain oriented piece so the most efficient way to cut the wood fibers is to go into the center and cut out to the rim. The tip of the spindle gouge goes into the center of the wood and is pulled or pivoted out toward the cup rim.

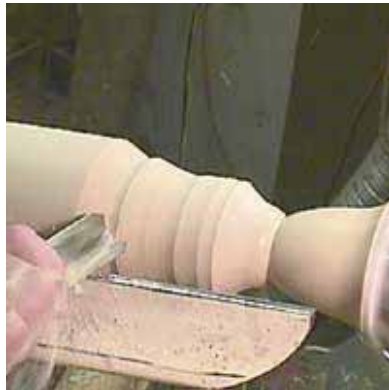


I support the cup end of the goblet with a cone center that is part of the Oneway live center set. A paper towel gives a soft cushion between the finished interior of the cup and the metal of the cone and allows for slipping without damaging the finish. I use just enough pressure to steady the cup but put no pressure in the direction of the headstock that might cause the stem to flex.

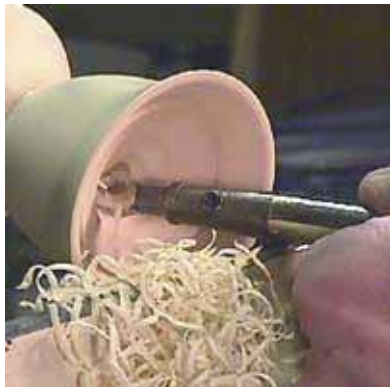


Hard woods and sharp tools will allow a cut against the grain that leaves a good surface. Try to see what the wood will allow while you are in the waste area of the wood.

I have the lathe rotation reversed so I can see the cut as it progress and I am not leaning over the lathe bed so far this way.



Using a roughing gouge to remove some of the waste wood around the stem.

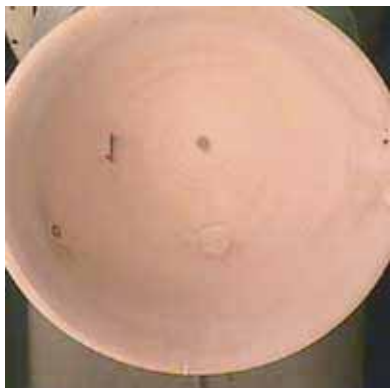


Another tool that I prefer to use for this type hollowing is a ring or hook tool. The tool pictured is Oneway's Termite tool. This cuts very efficiently and cleanly on endgrain but is an aggressive tool and takes time to learn its use. The cut is from the inside and back out toward the rim.



You can also use the skew to reduce the waste areas with a slicing cut or the peeling cut where the wood is thick enough for the radial pressure exerted.

Spindle gouges will work as well. Which ever is the tool you like?



The inside of the cup sanded and ready for finish.



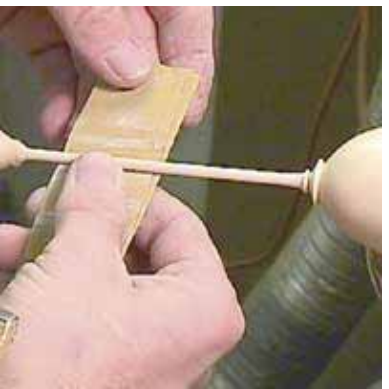
The top of the stem transition detail. I like to have some design element at the transition from cup to stem instead of curving straight in to the stem.



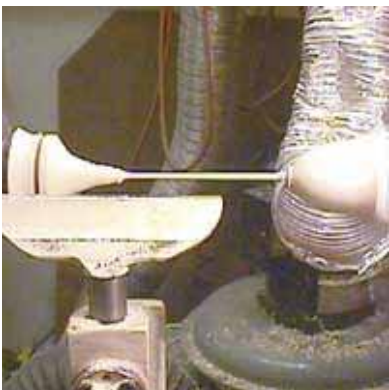
Using the skew with an overhand supporting grip to turn the stem to its final diameter. My fingers are under the stem while my thumb and the skew are riding on the top. Keep the cutting forces in the direction of the tailstock or the headstock to minimize deflection of the stem.



This is the underhand finger support for the stem as I am turning. Apply only enough pressure to steady but not so much your fingers get hot.



Once I have turned a portion of the stem, I sand that area while it is still running true. I reverse lathe rotation between sandpaper grits. I stop the lathe between each grit paper and sand lightly with the grain before going on to the next grit to minimize the circular sanding marks.



The stem is partially turned. I have made a parting cut to show where the bottom of the base will be. I can now turn the rest of the stem and the base to shape.



The base is finished and ready to be parted off. Crisp edges should stay crisp. If sanding dulls the edges of sharp details then touch them back up with a tool before parting off the goblet.



I use the skew to make the finished cut on the bottom. This leaves a cleaner cut surface than most parting tools. Slightly undercut the base so the goblet will sit flat. Gently cut all the way through with the long point of the skew and let the goblet come to a rest in your hand.



The finished cup section of the goblet.



The inside of the cup is finished with no torn grain or rough areas.



Close up view of the transition from cup to stem.



The base details turned to compliment the top of the stem.



The finished Goblet.