

Turning a Simple Bowl



I call this turning a simple bowl because I am not using any special tools just bowl gouges and spindle gouges. The shape is a simple one also. I know that when you first start turning bowls trying to get the surface cut cleanly on the end grain areas can present a problem. Reversing the bowl to finish the bottom can also present a challenge.

I hope that this tutorial will help answer a few questions on turning a cross grain oriented bowl.

I band saw this blank round from a 3 1/2" thick slab of dry ambrosia maple. This is a 6" diameter blank. I have the center point of the blank marked where I used dividers to scribe the circle for cutting.



The blank compressed between the chuck jaws and the tailstock center. Stuart Batty demonstrated this technique for our turning clubs. This technique works well for blanks cut from even thickness slabs in bowl and platter turning.

If you are using a swivel headstock lathe, make sure the head and tailstock align to each other or the blank could walk off the chuck jaws because of uneven contact pressure. This method of holding a blank between centers relies on the two points of contact being on parallel planes.





I start rough shaping the bowl shape from the tailstock end. I oriented the blank with the wood I want to be at the bottom of the bowl on the tailstock end on purpose. I have more room to turn down to a small diameter on the tailstock side than the headstock side. This makes turning the tenon for the chuck or faceplate easier.

Start removing the corner of the blank. I am using a side ground bowl gouge, 5/8" diameter shaft. Using a pulling cut with the gouge near horizontal and the flute of the gouge facing the direction of cut. The bevel of the gouge is not riding on the wood in this cut. The unevenness of the blank will need removed before the bevel can rub.



I have my left hand near the gouge tip and pull the gouge toward me.



Using an overhand push grip for a little more strength behind the cut. Put pressure down on the tool rest and steady pressure and control in the line of cut.



Close up of the roughing cut gouge and wood contact. The shaving comes off the lower tip and side of the gouge depending on the depth of cut.



Taking a lighter finishing cut with the bowl gouge angled higher up on the blank with the bevel near the rubbing. The shaving comes off the lower tip of the gouge.



The shavings produced from the finishing cut. The finish cut is a shearing type cut and can produce fine tight curled shavings.



The torn endgrain area of the blank left after using a heavy roughing cut with the bowl gouge. This area needs to be gone over with a freshly sharpened tool and light cuts to get past the depth of the torn grain.

Torn grain like this will not sand away. This area will always have a different look and feel to the rest of the cleanly cut wood if you try to sand instead of cut the wood fibers.

I am not trying to get the finished surface of the bowl at this point. After I reverse the bowl into the chuck jaws, I will turn the finished surface.



My 1/2" bowl gouge is sharpened to the profile of a spindle gouge with a total angle of bevel and flute less than 90 degrees. I use this gouge for turning the tenon and shoulder because it can cut into the tight transition area.



Cutting the straight tenon to fit in the chuck jaws. This would also work for tuning a tenon to glue in the recess of a waste block on a faceplate.



Cutting in toward the tenon to form a square or slightly undercut shoulder against which the chuck jaws can seat.



The finished straight tenon and shoulder.



Be careful with sharp edges on spinning wood. Most of my cuts and scrapes have come from contact with a sharp edge on the rotating wood. Relieve the edge with the gouge.



Shear scraping cut. The gouge angled about 45 degrees to the wood surface and the top flute nearly touching the wood. The shear scrape is a light finish cut used to remove ridges or very slightly torn grain. The gouge moves along the wood surface refining the shape and removing any high spots. The gouge can move back and forth over the wood surface. Stop the lathe and check the wood surface to see which direction gives the best results.



You can see from this view that the top flute of the gouge just clears the surface. This is a scraping cut and will dull the gouge quickly so be prepared to sharpen often for best results.



Shavings produces by shear scrape.



The rough bowl shape and clean cut end grain areas. I am now ready to mount the tenon in the chuck.



Reverse the blank and grip the tenon in the chuck jaws. The outer edge of the jaws should contact the shoulder of the tenon for best support. The larger diameter contact area of the jaws gives better lateral support. This does not mean the foot will be this large on the finished bowl. Visualize the shape of the foot in the finished piece being inside the larger area chucked in the jaws. Never let the chuck or faceplate dictate the shape of a bowl or vessel. Removal of excess wood at the bottom comes later.



True the wood surface and shape the bowl profile now. If the bowl runs perfectly true after reversing in the chuck you only need to turn enough to make sure you have the finished shape and surface you want. The bowl rarely runs perfect for me when I reverse so I save the finish cuts until the bowl tenon is in the chuck.



Shear scraping to remove any torn grain. I leave the tailstock in for support until time to start hollowing. With cross grain turning the wood could split parallel to the face of the chuck if a big catch occurs or when turning large heavy bowls without the tailstock for support.



Clean cut wood surface. I have the outer shape I want so the hollowing can begin.



Set the tool rest so the center of the gouge, with the handle horizontal, hits the bowl center or slightly below. If the gouge tip hits, above center, the handle will have to be raised to cut the center and that gets uncomfortable if your lathe spindle height is already high.

Start hollowing at the center and work to the outer edge in steps. The flute of the gouge faces the direction of cut.



The bevel of the gouge points in the direction of the cut. The flute of the gouge is rolled back slightly up to allow the cut to come off the lower edge near the center of the gouge.



Once a step is cut in the surface of the wood it acts as a stop to keep the gouge from trying to catch and run to the outer diameter of the bowl edge. Push or sweep the gouge toward the center. Come back to the top of the bowl; make a cut closer to the outer edge and sweep to the center again.



Continue hollowing the bowl until you get close to the wall thickness you want in the top area of the bowl. Leave the bottom section of the bowl thick at this stage.



I reverse the lathe rotation to cut the top of the bowl wall. This brings the tool handle back over next to my body for more comfortable turning and better tool control.



Using a pulling cut to round the rim of the bowl.



Checking wall thickness.



The long bevel on this gouge interferes in the cut by rubbing on the bowl wall so I ground part of the lower bevel away until I could get the edge in the cutting position I wanted with no bevel interference.



The finish cut surface on this section of the bowl. Check to make sure there are no torn grain areas and then continue to hollow further toward the center. Do not allow the trailing bevel of the gouge to leave burnished ring marks in the wood either. Try for a uniform clean-cut look to the wood surface. Sanding and applying finish will go much easier if you do.



Deeper in the bowl now I reverse the lathe rotation back to normal so the tool handle comes back to the front of the lathe near my body for more comfort while turning.

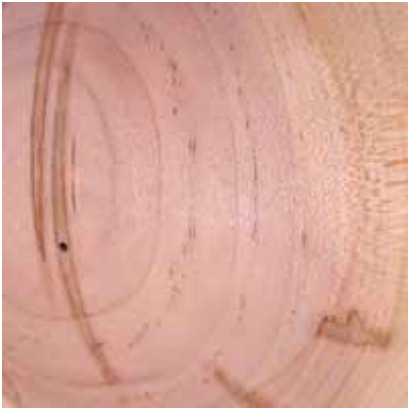
Removal of the cone of wood left in the center.



The center of the bowl spins at slower feet per minute speed than the outer edge. Slow the advance of the gouge to compensate for the change.



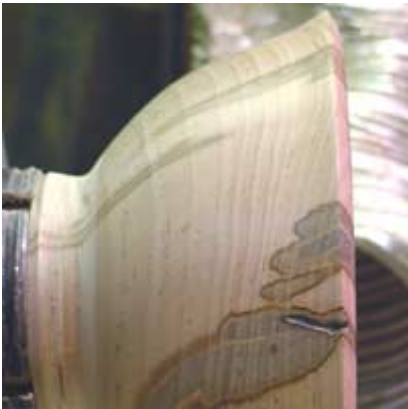
Take your time and remove the center. The curve on the inside should be continuous from side to side without bumps and flat spots. Use your fingers to feel for flat areas and if found take light cuts to remove them.



The surface finish of the wood straight from the gouge.



Slow the lathe speed and power sand the bowl. If you have some areas that need special attention, sand them with the lathe stopped and then turn the lathe back on and continue power sanding the whole surface. Do not push hard on the wood or keep sanding with a clogged piece of paper. The sandpaper needs to cut the surface not burnish it. You do not want to generate a lot of heat the wood may either warp or crack.



The outer surface of the bowl after power sanding through 320 grit.



The interior of the bowl sanded to 320 grit. Any further sanding with finer grit paper I will do by hand.



Measures the thickness of the wood at the bottom to determine how much excess you have to remove. I tape a ruler on the end of my double-ended calipers to see the measurement.



I am going to reverse the bowl on to a jam chuck that fits in the interior of the bowl curve. Make the jam chuck from a wood that is softer than the turned bowl and round the edges of the jam chuck to help prevent marring the finished piece. This also works with natural edge bowl because it does not rely on the bowl rim for support.



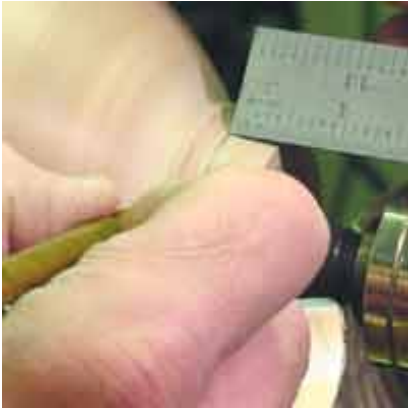
I use a piece of self-stick sand paper with the grit side to the bowl surface. The fine grit will not damage the surface unless you get a big catch and spin the bowl on the jam chuck.



I still have the original center mark from the tailstock to center the bowl by when I reverse to turn the foot.



The bowl compressed on the jam chuck and centered on the tailstock end.



Turn the waste wood down to a smooth enough cylinder to mark where the bottom of the bowl needs to be.



Shape the bottom section of the bowl to blend in with the rest of the bowl profile.



I am going to turn a small detailed area for the actual foot. I am cutting against the grain with a small spindle gouge to define a transition from bowl side to foot.



Cutting a concave profile in to the foot.



The lower bowl area and foot finish turned.



Using the spindle gouge to define the foot edge thickness.



Remove the wood in the center to below the foot edge level. You can shape the inside of the bottom to be convex and mirror the interior of the bowl or concave if you have allowed enough wood thickness.

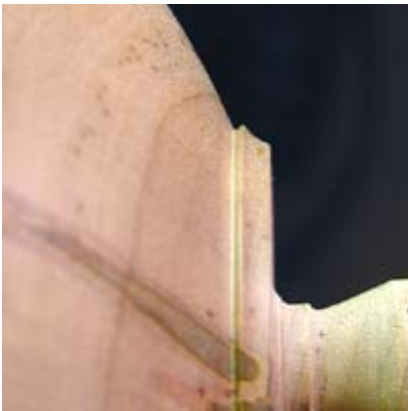
The main objective of reversing to turn the foot is to show you cared enough about what you turned to give every area the same attention.



Power sanding the lower area of the bowl to blend in with the top. Stay away from the detailed foot. If you round over an edge you wanted to be sharp go back and cut the edge again.



Hand sand the foot without rounding over the crisp edges.



The finish sanded detail at the foot. Keep your details crisp.



Reduce the waste at the bottom in preparation for parting off.



Using a shallow carving gouge to part through the last of the waste area of wood. This can be done while rotating the lathe by hand. David Ellsworth shows this technique on his turning videos, the first place I saw this technique demonstrated.



The waste parted off. I cut through slightly away from the bowl bottom and sand the nub off. You can sand away excess but it is harder to add something to fill in a dip if you cut too deep.



I have a 1" sanding disc to power sand the little nub away.



The jam chuck holds the bowl well enough for me to turn the lathe on slow and support it by hand for a little final sanding.



The finished foot. Sign the piece and apply finish of choice.



The inside of the finished bowl.



The finished outer profile.

Except for the spindle gouge and carving gouge used on the bottom, I only used the 5/8" bowl gouge with a side grind to turn the bowl. There are many other tools used in bowl turning but in most cases, one gouge does the job.