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"The Fine Art of Woodturning"

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Waterfall Natural Edge Burl Bowl

Part 1: Prepare the blank:

I am starting this project with a piece of burl, with a natural top. This method works on any size of project, so no dimensions are mentioned. This is my way to balance the natural edge so that the bowl has a relatively level-looking rim. The method works equally well on wet or dry wood.

Choose a plywood disk with a countersunk center hole that is the intended size of the finished bowl's rim.

Position the disk on the natural side of the burl (the "bottom" side of the Waterfall), with the circumference of the disk where the intended rim will be. Screw the disk onto the blank with a flat head screw making sure that the screw head is flush with the surface of the disk. Be careful not to drill the hole too deeply or your bowl will be shallow. I drill in about 1/4" is all. Choose a screw length appropriately.

Measure down to the burl's surface from the edge of the disk all around. If the dimensions suggest a good balance of the rim, you are ready to cut. If it is not balanced to your satisfaction, use wedges under the disk to achieve a balance that you like.

With the plywood disk down on the bandsaw table, make a straight cut on one side of the blank (try not to cut into the plywood). If the blank's surface is not level, choose to make this cut on the thicker side of the blank so you have a supported cut for the next step. This surface that you just cut is perpendicular to the rim of the bowl.

Put the side that you just cut on the bandsaw table, and make a straight cut on the bottom side of the bowl, parallel to the plywood disk. The bottom of the blank is now parallel to the intended rim. Be careful here! Don't have any body parts in the line of cut. This tall and narrow blank can be tippy. That's why I suggested making that last cut on the thickest side of the blank.

With the bottom side of the blank on the bandsaw table, you can saw around the plywood disk (again, trying not to cut the disk), and you will have a round blank to take to the lathe.

Use the disk's center hole to find the center of the bottom of the blank.

Put the blank between centers on the lathe, with the drive center on the natural edge side (the rim of the bowl), and the live center in the center mark that you made on the bottom side of the bowl.

If the natural burl surface is too lumpy to get the drive center where you want it, either use a drive center that can accommodate that, or make a flat for the drive center. Be careful when drilling a natural top burl on the drill press. The piece should be clamped to the table for safety.

Take a cut to true up the blank to round. If the rim looks balanced to your satisfaction, you're ready to cut a chuck tenon. If the rim is not quite right, reposition the live center to "rock" the blank and find a good balance to the rim. Make very small adjustments, and take a cut every time you move the live center. Every time you reposition the tailstock, you are going to make the bowl smaller.

When you have the rim balanced to your satisfaction, cut a chuck tenon on the tailstock side of the blank (not the natural edge side). This will be the top (lid side) of the bowl. Make the tenon relatively shallow, and smaller than your intended lid size.

Mount that tenon in the chuck, and you are ready to turn your Waterfall Bowl!

Part 2: The bottom side of the bowl

I like to develop the rim thickness (inside and outside) in the interrupted area first, starting with the outside, and keeping the wall thickness consistent in that area of the bowl.

Use of Negative Rake Scrapers can produce a smooth finish in the interrupted edge area that needs very little sanding. I do not sand the interrupted area while the lathe is spinning. In an effort to keep the edges crisp, I like to use a random orbit sander with a 2" or smaller pad to sand the natural edge area, with the lathe turned off, starting with 240 or 400 grit.

Keep in mind that a spinning natural edge is like a saw blade! It is a good idea to keep your body parts well away from that edge! I use the tool rest as a barrier, and make sure to keep my hands on the side away from the bowl at all times.

Though it may seem "safer" to turn at a slow lathe speed, you will have better results on a live edge with as much spindle speed **as you are comfortable with**. An interrupted cut, such as natural edge, acts more like a solid piece of wood the faster it spins. At really slow lathe speeds, the tool feels like it is getting "sucked in" to the cut, and it is difficult to get a smooth surface.

Another word on spindle speed: If it's scary, the lathe is going too fast. If the lathe is moving around the room, it's too fast. **Use your own judgment, and do what feels safe to you!!**

Leaving the tailstock up until it's actually in the way is a good idea, for safety.

Create a shallow tenon on the bottom. This should be fairly small in diameter as well, to allow you access to more of the bottom shape in this step. Remember that the hole you drilled to mount the plywood disk needs to be turned away in the finished piece. I think it's a good idea to do that now, so I don't get confused later and hollow the top side of the bowl too deep.

Part 3: Reverse the bowl to finish the top:

Mount the piece in the chuck using the tenon that you turned on the lid side.

Work the rim area to final thickness before removing more of the bulk. It should be completely tooled, but the sanding can wait until all of the turning is done on the top side.

I like to use a negative rake scraper to do the final smoothing of the surface before sanding.

Part off the material that will be the lid. I like to reduce the diameter of that piece to just bigger than my lid, so the parting tool is not making a deeper cut than I have to. Use a double parting tool wide cut, and be careful to keep the parting tool vertical in the cut.

Keep the tailstock up for safety, as long as it's not in the way. For the very last of the parting cut, either take away the tailstock and part through or, a much safer way to do it (and how I choose to) is to leave about 1/4" of material at the bottom of the parting cut, stop the lathe, and break or saw the piece off.

Complete the shaping and sanding of the top of the piece

Cut a recess for the lid, being careful not to make it so deep that it goes through the wall.

Part 4: Reverse the bowl again to finish off the bottom:

Mount the piece on a jam chuck using the lid recess. I sometimes will use the lid blank for this. If the wood is very hard, it will not jam well onto a piece of the same very hard wood. A softer jam chuck, like soft maple or cherry, gives a better jam fit. It needs to be a good tight jam fit for best results. Finish off the center bottom. Use the tailstock as long as possible, until there is a minimum diameter left to work on.

Tape the piece onto the jam chuck for extra insurance, and remove the tailstock to finish the center bottom. Create a small shallow tenon. This tenon is for mounting a base on the bowl, so make it small enough not to interfere with the footprint or design of your intended base. The bottom should be completely sanded at this point.

Part 5: Turn a finial.

Create a shallow tenon on the bottom of the finial before parting it off. Remember that you will be recessing the finial's tenon in the top of the lid, so if your lid is thin, there's not much thickness for a tenon. It's easier to make the tenon short now than to sand it down later. I like a 1/16" long tenon.

The finial should be completely sanded and finished at this point.

Part 6: Turn a base:

You can turn the base now, or after the lid is all done. The base should have a recess to fit over the tenon on the bottom of the bowl. I like to start with the bottom of the base, and then jam fit the base into a waste block with a hole in it to do the rest of the turning. After fitting the top of the base to the bottom of the bowl, I bring the tailstock up to turn the base shape.

The base should be completely sanded and finished at this point.

If the jam fit was tight (and you do want it to be), it is better to push the base out of the jam chuck than to risk breaking it.

Part 7: Turn the lid:

Mount the lid blank in the chuck (or leave it there if you used it as the jam chuck), and fit the lid to the bowl with your desired fit. I recommend not making a tight fitting lid on a delicate piece like this one.

Complete and sand the inside of the lid.

Mount a waste block with a hole in it in the chuck. Jam fit the lid into a recess. This fit doesn't need to be super tight because I will either have the tailstock up or the piece will be taped in for the whole process. A really tight fit will require pushing the lid out through the hole in the waste block.

Finish the top of the lid.

Tape the lid in after it's sanded, and take away the tailstock. Create a recess for your (already turned) finial. A flat next to the tenon makes a good joint between the finial and the lid.

Part 7: Finishing:

Completely finish the bowl and lid with your desired finishing material before glueing on the finial and base. I like to use slow epoxy for this. Titebond is a good choice, also.

Part 8: Please Turn Safely:

Keep the tailstock up to the work whenever possible. This is always a good idea. For the safety of your work piece and your self!

Be sure the tool rest and tailstock are tightened down and don't have a tendency to move. This is especially important when turning a natural edge blank between centers. Keep checking the tailstock pressure as you turn, as the wood can compress from the turning force.

Be sure the chuck is tightly fastened to the lathe spindle, and that the jaws are tight. If you leave for awhile, re-check the jaw tightness before turning on the lathe.

Keep all body parts away from the spinning natural edge rim

Always stop the lathe before repositioning the tool rest. This is good practice all the time, but even more so with a natural edge piece.

Wear eye and/or full face protection at ALL TIMES

Use your own good judgment, and only do what feels safe to YOU

A disclaimer: What I have written here, and what you see in my demos and workshops, is merely my way of doing woodturning. There are as many different methods as there are woodturners, and if it gets the job done safely, we are all "doing it right". If you do things differently, and it works for you, I am not arguing or telling you to change. I am just offering another possibility. It is my hope that you will learn something useful from what I share. Please accept this information only for what it is: my way, my opinion, not the only way to do things.

Oh, and above all, be sure to HAVE FUN !!