

## Saturday Program Meeting

Lyman Frugia hosted our Saturday Program Meeting on May 24<sup>th</sup>. He covered the use of a boring bar to turn deep vessels, like vases and bowls.

### Making a Boring Bar

There are a lot of different types of boring bars available, but Lyman built his own boring bar out of 1" square tubing, a piece of round stock and a piece of 1/8" by 3/4" tool steel.



He ground the tool steel cutter into the shape of a scraper lathe tool. He cut a 1/8" slot in the round stock and drilled a hole in it so he could use an Allen head screw to secure the cutter. Mounting it this way allows him to change the angle of the cutter in the holder and remove the cutter when it needs sharpening.

Lyman welded the 1" square tubing into a rectangular shape with one long leg. He filled the tubing with metal for added weight and rigidity. Then he mounted the round tool holder in the end of the long leg and secured it with a bolt so it could be changed if needed. He modified an old tool rest by adding a bar on top that would capture the rectangular box. The modified tool rest is clamped to his work bench and adjusted so that the boring bar is level with the bed of the lathe and the other tool rest when the cutting edge of the cutter is exactly in the center of the turning. The sizes of the parts are dependent on the size of the lathe and the available work area. He's seen



some that fit mini-lathes as well as really large ones for floor model lathes.

### Boring a Deep Vessel

Select your blank to suit your project and mount it on a faceplate. There are several ways to accomplish this, but Lyman prefers to mount a waste block on a faceplate with woodscrews and then glue his project blank to the waste block. Lyman claims you can't have too many faceplates - he leaves his project mounted on the faceplate until it's finished and he always has a lot of projects going.

If the project is really deep, like a vase, Lyman uses a 'steady rest' to help keep the blank attached to the faceplate. He puts the blank and faceplate on the lathe, brings the tailstock up to the blank and smooths out a band around



the blank for the wheels to ride on. Again, Lyman made his own 'steady rest' out pieces of scrap steel and skateboard wheels.

Now you're ready to start hollowing out of the center of the blank. Some people like to drill



out the center as much as they can; others like to turn all of it. There are advantages to both methods and Lyman uses

both depending on the project. If you're hollowing by turning, it's especially critical that the cutting tool be exactly centered. Start cutting at the center and work your way to the outside. Be careful not to cut through the bottom of the blank. Stop frequently to remove

the accumulated wood chips. Refine the interior to match the planned shape of the exterior.



Remove the 'steady rest' and replace it with a 'cone shaped' center mounted on the tailstock. This will support the blank while you turn the exterior.

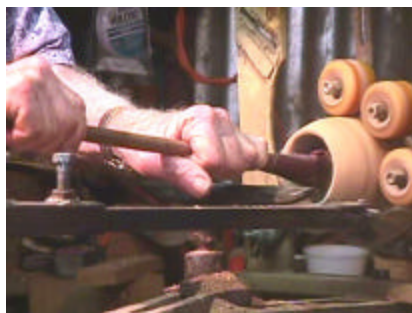
When you've finished the turning, it's time to sand and apply a finish. For the outside, one of the best methods is with a sanding disk mounted



on a foam pad that's chucked in an electric drill. With the sanding disk spinning across the grain while the vase or bowl

is turning on the lathe, almost all of the scratch marks disappear. Sand to at least 220 grit - finer if you plan to use a lacquer finish.

For the inside, make a 'mop stick' by stapling or



gluing one end of several abrasive strips to a strong dowel or stick. Leave the other ends loose, like a mop. Make

several with different grits; they really work well inside deep vessels.

There are a lot of finishes available for you vessel. The end use of the vessel may determine the type of finish you use. If it will have food items or liquids in it, be sure to use one of the finishes with FDA approval for food contact. Otherwise, you can use one of a number of available waxes, oils, polyurethanes or lacquers.

Most finishes are applied while the turning is still mounted on the lathe. Oil and wax finishes give the turning a soft sheen, but they don't last very long. Polyurethanes are hard to apply, but they last a long time. Lyman has started using new rubbing polyurethane that creates a very high gloss finish, but it takes 10-12 coats with a light sanding between coats. Lacquers are usually sprayed on; either from spray cans or a conventional spray gun. Be careful - lacquer will show every imperfection in your turning, especially sanding scratches. Lacquer is also very flammable and toxic, so be sure to take the proper fire precautions and wear a respirator.

After finishing the inside and the outside of the vessel, part it off the waste block. Then you can make a jam chuck to reverse mount the vessel in order to sand and finish the bottom. When you're finished, be sure to sign and date your vessel.

As always, Lyman did an excellent job with his presentation on vessel turning. Thanks Lyman, for taking the time to host this meeting.