

Fabulous Finishes

w/Chuck Biggs

By Bob Roehrig

Saturday's garage workshop demonstration was put on by Chuck Biggs at his home shop. Those that were in attendance were treated to a informative demonstration on how to apply a gloss polyurethane "Slow" finish. The second half of the demonstration was how to use a "D" Bar Trap hollowing system.

Chuck began the demonstration by telling everyone that, "Your finish is only as good as your preparation". Make sure your wood is sanded properly with all flaws removed. Gloss Polyurethane will magnify any problem areas. It was also suggested to clean your work well with compressed air and a tack rag to remove any traces of dust, chips and other debris.



The heart of the slow turn finish system is the gear driven motor that should be turning between 15 and 20 rpm's. This is very critical. If your lathe speed can be reduced to this, you may use your lathe for the process instead of obtaining another motor to do the job. Chucks motor is a Dayton Motor, model 6781 which turns at 17.5 rpm's. If you use this type of motor you will also have to make a spindle adaptor in which to mount your chuck onto. This you can have machined at any local machine shop or if you have access to a metal lathe.

The polyurethane finish will be applied with a foam brush. Checking the sales at Michaels will allow you to purchase 1" wide brushes for around 5 cents each. The brand of polyurethane finish that Chuck prefers is Minwax "Clear Gloss" finish. Chuck suggests buying the small cans because once they are opened the finish thickens up in viscosity which makes application very difficult.

Four to six coats of finish will be applied to your project. Wrap the foam brush with clear plastic wrap after each coat. This will keep your brush from hardening up. If by the 4 or 5 th coat, the polyurethane begins to thicken in the can, add a little Mineral Spirits to thin it out to its original consistency.



Dayton 6781 motor

Start the motor on your lathe or slow turning machine. Dip your brush into the polyurethane and apply evenly as the work spins. **DO NOT** go over a section twice. Keep the brush moving. It should be like you are following threads. Also do the inside if accessible. Let this dry while the motor is still turning. Do not shut off your lathe or motor. This needs to spin constantly to allow the finish to dry to an even coat.



Chucks Dayton 6781 motor

After your first coat is dry to the touch, sand lightly while turning. Use a 300 grit sandpaper. Polyurethane will not adhere to itself if you do not sand between each finish. After sanding, use your tack rag again to remove any dust and to prepare for the next coat of finish.

Repeat this process until the desired finish is obtained and remember to sand between each coat.

This finish will reminisce the nice hand rubbed finishes you have seen without all the hours of tedious work. You will be very pleased with your results as will others.



Applying the Polyurethane as the machine revolves.

Deep Hollow Turning

(end grain)

Part two of Chucks home shop demonstration was how to set up a deep hollowing system for hollowing a vase.

Chuck began by securing a 8 inch diameter piece of Florida Mahogany branch stock to a face plate. Chuck mentioned to always use plenty of screws to secure the face plate to the wood. Face plates are a very secure method of mounting your wood to your lathe.

Securing faceplate to wood ▶



Mount the faceplate onto the lathe and bring up your tailstock for added support. Bring the tailstock up (especially on long pieces) will give you great support in the next process which is roughing out.

Using a Roughing gouge or tool of choice you are now ready to remove the outer bark and form the log into a smooth cylinder. Make sure your lathe is set at a very LOW rpm. Turn the lathe on and then bring your rpm up slowly until you just feel a little vibration in the lathe. Back off the rpm a little till the vibration disappears.

You should be wearing a face shield for this process because there will be a lot of bark and chips coming back at you. Safety glasses are not enough to fully protect your face. Always think **SAFETY when using your lathe.**

After the log is round and free of bark you need to cut a tenon on the tailstock end. Your wood will be then mounted back onto the lathe with your chuck. You may make a tenon for an external compression grip or an internal expansion grip. The choice is up to the turner.

Your next step will be to determine the shape of the project you want to turn. In this case, Chuck choose to make a vase. He then proceeded to turn the outside of the vase to it's finished shape.

After the finished shape is turned, one needs to prepare the project for hollowing out. You need to first drill a hole using a bit from 3/8" up to 1 1/2" in diameter. This hole should go down through the middle to about 1/2" of your bottom. Mark the depth on the drill bit with a piece of masking tape.

Proceed to drill your hole and remember, the larger the diameter drill bit, the slower the rpm must be on your lathe. When using Forestner type bits this is very important.



Roughing out log with a roughing gouge.



Getting outside shape

You are now ready to setup your deep hollowing system. In Chucks case, he will be using a Jamison hollowing system. These are also called "Trap" or "D-Bar" systems.

These systems are very advantageous in that prevent most catches if set up properly. They also allow the turner to turn without the stress of possible catches. These systems are also advantageous for the beginning turner for the above reasons.

If your work is of any length, you may want to use some type of Steady Rest system as pictured on the following page. Steady rest are designed to support the work securely while turning.



Steady rest in use

Steady rest plans for construction can be found on most turning web sites. If you are having trouble finding a suitable plan for your particular lathe, please check with one of the members.

After setting up your Deep Hollowing System, you are now ready to hollow out the inside of your project. Hollowing with this system is done in stages. Take the wall thickness down gradually starting at the front part of the project. This will always leave enough wood for support at the rear of the project.

If you are using wet or "green" wood, try and finish all your hollowing the same day. The wood will be drying as you turn and become very unstable. This will cause cracking and warping in the wood. If you must finish at a later date, there are several things you can do to prevent cracking.

One, is to fill the void with the wet chips from the floor. Then place the project in a paper sack . This allows very slow drying and will minimize warping and cracking. Secondly, you can wrap the project in plastic wrap to seal in the woods moisture. This will also allow the wood to dry very slowly till you resume your turning at a later date.

When you are finished with the hollowing procedure, you can take some final finish cuts using a tear-drop scraper blade. This blade is also used with the trap system to give a final smooth finish.

Sand the interior if possible. Let dry and then apply your finish of choice.

Remove project from chuck and remove tenon from bottom.

If you desire further information on this subject, please check out the DVD from the club library on Deep Hollowing Systems by Lyle Jamison. This is an excellent video to get you headed in the right direction.



Trap system w/laser fully setup