

## Turning a Decorative Foot on a Wooden Platter By: Don Geiger



### **Supplies and Tools:**

**Wood:** Select a round blank (minimum 2" thick) of dry or green wood that has a diameter that is at least 1" smaller than the maximum diameter of your lathe. This is important because the blank will be turned  $\frac{3}{4}$ " off center.

Both of the large flat sides of the blank need to be parallel to each other. If necessary, run the blank through a thickness planer to true up both sides.

**Lathe:** The blank will be turned off-center so the lathe needs to be stable and operated at a safe slow speed.

**Marking tools:** One or more compasses (one is OK, two are better- I use four so I don't have to keep changing them) and a protractor and a pencil are necessary.

**Screw Center Drive:** The blank will need to be secured to a faceplate or a chuck using a wormwood screw. The drive used in the demo has a 3" diameter faceplate with a wormwood screw in the center that requires a  $\frac{5}{16}$ " diameter hole to secure it. A chuck with a wormwood screws can also be used. A brad point drill bit appropriately sized for the wormwood screw is necessary. A stop collar, set at the depth necessary to accommodate the wormwood screw, is very helpful. I usually drill the holes using a drill press, but a hand held drill could be used.

**Scroll Chuck:** A scroll chuck with either compression or dovetail jaws is necessary.

### **Gouges:**

- $\frac{5}{8}$ " o.d. deep-fluted bowl gouge with a side-grind
- $\frac{1}{2}$ " o.d. deep-fluted bowl gouge with a side-grind
- Parting tool (s)

### **Procedure:**

- 1) Using a pencil, mark the dead center of what you have chosen as the TOP side of your blank. See: "Finding the Center of a Circle" at: [www.geigersolutions.com](http://www.geigersolutions.com).
- 2) Set a compass to a  $\frac{3}{4}$ " radius and draw a 1-1/2" diameter circle, around the center mark.
- 3) Using the center as one point, mark a radial line from the center outward about 3" long
- 4) Using a protractor, mark a similar line 120° from the first line.

- 5) Using a protractor: mark a second line line 120° from each of the other two lines.
- 6) Drill 4 holes of appropriate diameter and depth to accommodate your screw center. One hole will be at the dead center. The other three will be located where each of the three radial lines cross the 1-1/2" diameter circle.
- 7) Number the three outer holes: 1, 2 and 3.
- 8) Securely mount the screw center faceplate or chuck with a wormwood screw onto the spindle of your lathe. 9) Check to ensure the lathe is at a slow speed!!!
- 9) Lock the spindle and place the screw into the center hole and rotate the wood clockwise until the screw is all the way in. The wood should now be register firmly against the faceplate or chuck.

Put on a face shield. Get out of the line of fire and start the lathe. Be ready to turn the lathe off if the vibration is excessive.

- 10) Using a pencil, mark the dead center on the surface of the wood and turn the lathe off.
- 11) Reposition the wormwood screw into hole #1 and rotate the wood until the screw is all the way in. The wood should now be registered firmly against the faceplate or chuck.
- 12) Using a pencil, mark the current center on the surface of the wood and turn the lathe off.
- 13) Repeat for positions #2 and #3.
- 14) Set a compass at a radius of 1-1/4" and draw a circle around the centers of each of the three radial positions.
- 15) Set a compass at a radius of 15/16" and draw a circle around the centers of each of the three radial positions.

You should now have three sets of two concentric circles drawn on what will be the foot of the piece.

- 16) Reposition the blank so the wormwood screw is in the center hole.
- 17) Set a compass to the radius necessary to clear the outside diameter of your chuck jaws. Place the pivot point at the dead center mark on your blank. Draw a circle.
- 18) Set a compass to the radius necessary to clear the inside diameter of your chuck jaws. Place the pivot point at the dead center mark on your blank. Draw a circle.

Put on a face shield. Get out of the line of fire and start the lathe. Be ready to turn the lathe off if the vibration is excessive.

- 19) Using a parting tool, turn a groove necessary to allow your chuck to clamp onto the remaining tenon or expand into the dovetail- whatever is necessary for your chuck.
- 20) Reposition the blank so the wormwood screw is in hole #1. Start the lathe and using a bowl gouge, cut a groove between the two lines you drew earlier about 3/8" deep. Be careful not to exceed the boundaries provided by the lines.
- 21) Repeat step 21 for holes #2 and #3.

- 22) You should now have three circular grooves that intertwine with each other and a fourth groove that your chuck jaws will fit into.
- 23) Remove and remount the blank with the wormwood screw placed into the center hole.
- 24) Turn the bottom surface of the blank outside the foot. Adjust the diameter of the foot to obtain the appearance you desire.
- 26) Remove the blank from the wormwood screw and install your chuck onto the lathe spindle.
- 25) Attached the foot of the blank to the chuck.
- 26) Turn the face side of the platter and remove enough material in the center to obliterate the four mounting holes.
- 27) Remove the platter and the chuck as an integral unit. Mark the center of the blank as it was mounted in the chuck. I use Geiger's Re-Centering Solution (see at: [www.geigersolutions.com](http://www.geigersolutions.com)) to do this.
- 28) Remove the blank from the chuck.
- 29) Install a jamb chuck or vacuum chuck on the spindle of the lathe.
- 30) Position the blank against a jamb chuck or vacuum chuck. Use a live center to center it.
- 31) Using a bowl gouge, remove the center portion of the foot leaving only decorative sections located near the rim of the foot.

I hope you enjoy this project. Feel free to contact me if you have any questions or suggestions. Please email me photos of your finished project to: [dongeiger@cox.net](mailto:dongeiger@cox.net).



#### About the Author:

Don Geiger started woodturning in 1999. He quickly developed an overwhelming passion for the craft. He has taken lessons from some of the world masters and has assisted many of them with classes. He performs many demos and workshops. He has six inventions in the field of woodturning. He also enjoys working with glass, pottery and fiber.