

# OFF-CENTER TOOL HANDLE

## Tool handle that resists rolling



This tool handle differs from the usual cylindrical shape in that it resists rolling off the workbench, is very comfortable to hold, and sometimes attracts rude comments, as in “What went wrong there?” I first made one of these by mistake. I was doing an exercise in turning a spiral when I confused the off-center marks. The result, with modifications, wound up as my favored type of tool handle. Most of the shaping can be done with just a roughing gouge.



**Photo 1**

1. Select a piece of hardwood of a size appropriate to the tool to be handled. (I use 2" x 2" x 13".) Maple and ash are good hardwoods, unlikely to split when being used.
2. Center-punch the ends. Mark the punch marks with a pencil so you can easily tell them from other punch marks you will use later. Round the piece between centers and take it down to 1-5/8" to 1-7/8". Use the larger size if you are going to mount something fairly robust, like a 1/2" gouge.



**Photo 2**

3. With the lathe stopped, draw a line the length of the cylinder, using the toolrest as a guide (photo 1).

**Photo 3**

Next, mark off 2" to 2-1/2" on each end of the spinning cylinder with a pencil. Then take the cylinder off the lathe (photo 2).

**Photo 4**

- Decide which end you want as the "tool end" and which will be the "handle end." From here on I keep the tool end on the right. On the tool end, center-punch a point half-way between the center and the end of the line along the cylinder (photo 3).

On the handle end, mark the place at the end of the line along the cylinder, and then mark two points, each 1/3 of the way around from the first mark.

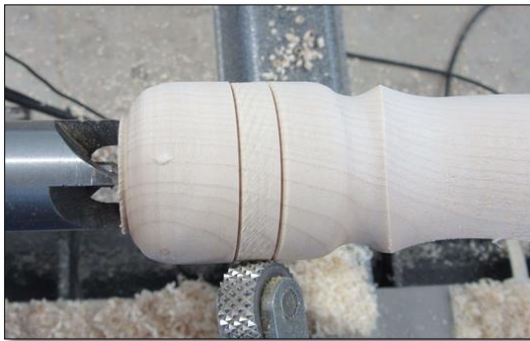
The end of the cylinder will now have three equally spaced marks around the rim. Center-punch points halfway between the middle point and the two rim marks which do not line up with the horizontal line along the cylinder. Mark numbers "1" and "2" on these two center-punched holes. It doesn't matter which is which, so long as you can tell them apart when you are doing the turning (photo 4).

- Put the cylinder back on the lathe with the spur drive in the number 1 off-center punch hole on the handle end, and the live center tailstock tip in the off-center punch in the tool end. The cylinder is now off-center.

**Photo 5**

Be careful! You can't see the edges of the wood while it spins off-center and it is easy to have the toolrest closer than you think it is. Hand turn the piece before you turn on the power!

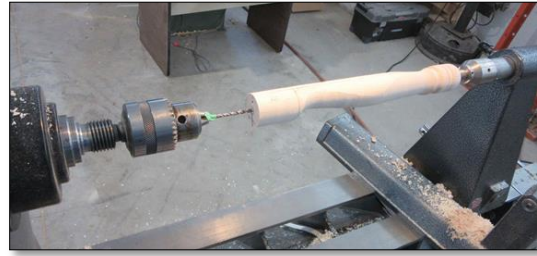
6. Turn the off-center cylinder, removing wood between the pencil lines, leaving 2" to 2-1/2" on the ends. Cut away material, alternating between punch points "1" and "2" on the handle end, leaving the turning piece somewhat fatter in the middle, until a fit pleasing to the hand and appropriate to the tool you want to mount, is achieved. I use a roughing gouge for this, but many tools will do just as good a job (photo 5).



**Photo 6**

It is hard to tell how much wood you are removing from the spinning, off-center piece. To keep the cuts equally deep in the two off-center positions, you can stop and see how close you are cutting to the horizontal line you made in Step 3. Even up the handle by cutting each side about the same distance from that line (photo 6).

Clean up with a scraper.



**Photo 7**

7. Using the center marks, reposition the handle on the lathe. Round the handle end; decorate if you wish (photo 8). Rounding and finishing the tool end can wait until the tool hole is drilled.
8. To drill a straight hole down the center to accept the turning tool, remove the spur drive and put in a drill chuck having a Morse taper. Seat the drill chuck well! I give it a couple of whacks on the end with a wooden mallet to ensure it won't come out while drilling. Use a small drill bit to make the pilot hole. Bring up the tailstock until the off-center handle is only just supported in the center punches, between the end of the drill bit and the live center on the tailstock (photo 7).

Mark the drill bit with tape for depth control and remove the toolrest so you have plenty of room.

Turn on the lathe at **low rpm**. While holding the wood with your hand to prevent it from turning, advance the quill, forcing the bit into the wood. Back out frequently to get rid of the shavings in the hole.



**Photo 8**

Repeat with a larger drill bit to make the hole the right size to take the tool or to accommodate a tool-holding insert.

Remove the handle and take out the drill chuck.

9. Reverse the handle and reposition between centers. Use a cone-shaped live center in the tailstock to fit into the tool hole. Trim the tool end to fit a ferrule if you want to use one. Round off the shoulder.

Clean up the handle with a gouge or scraper to get rid of the pencil lines and refine the thickness as you wish.

10. Sand; a drum sander works well. I use aniline dyes to give the handles a distinctive appearance and I finish with sprayed-on lacquer, usually three coats with a bit of sanding between. Mount your turning tool in epoxy, pound on the ferrule.



After I sold my land, I replaced my farm equipment with woodworking machines. In 2010 I bought a lathe, joined the local woodturning club, and never looked back. Today I am vice-president of the Chinook Woodturning Guild. Visit our website at <http://www.chinookwoodturning.org/cwg/>.

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