

Pepper Mills – Revised January, 2011

Nick Cook

Tools & Materials

Materials

- 10" pepper mill mechanism
- 3" x 3" x 12" hardwood turning blank
- 2" x 2" x 4" poplar blank for mandrel

Lathe equipment

- Drive center
- Scroll chuck
- Live center with cone
- Jacobs chuck with #2 Morse taper
- 1-5/8" Forstner bit
- 1-1/16" Forstner bit
- 7/8" Forstner bit
- 17/64" twist drill bit

Lathe tools

- Large spindle roughing gouge
- 3/8" bedan tool
- 1/2" spindle gouge with fingernail grind
- 1/16" parting tool
- Sandpaper and finish

Sources:

- Craft Supply USA
- Packard Woodworks
- Woodcraft Supply

Preparation:

1. Cut 3" x 3" x 12" blank from most any hardwood. I like cherry, Hard maple, walnut and ash.
2. Locate centers on each end and mark with awl or center punch.
3. Mount blank between centers. Rough turn blank to cylinder using spindle roughing gouge.
4. Use 3/8" bedan tool to turn tenon (to fit chuck) on each end of blank.
5. Measure 8" from tenon on one end and mark.
6. Cut third tenon at mark leaving 8" between tenons.
7. Use 1/16" parting tool to cut most of the way through blank leaving 3/8" tenon on both ends of 8" portion of blank.
8. Remove from lathe and separate using either handsaw or bandsaw.

Base of peppermill:

1. Remove drive center and live center from lathe and attach scroll chuck and jacobs chuck in tailstock.
2. Mount and center 8" blank in the chuck with bottom end facing tailstock.
3. Use 1-5/8" forstner bit to drill hole 3/8" beyond tenon.

4. Use 1-1/16" forstner bit to drill hole more than 1/2 way through blank (you may need an extension for the bit). Remove Jacobs chuck.
5. Remove the blank from the chuck and remount in the opposite direction. Center in the chuck and bring up live center for support.
6. Use 1/16" parting tool to remove tenon from top end of blank.
7. Use 1/2" spindle gouge to make a finishing cut across end of blank.
8. Finish drilling 1-1/16" hole through blank.
9. Remove 8" blank from chuck

Top of peppermill:

1. Mount top portion in the chuck.
2. Use 1/2" spindle gouge to make finishing cut across surface.
3. Use 3/8" bedan tool to make 1/8" long x 1-1/16" diameter tenon to fit snugly into hole in the top end of the larger blank.
4. Make a finishing cut from outside edge to tenon (it should be either flat or slightly concave).
5. Drill 7/8" diameter hole 1/8" deep in center. Use parting tool to expand opening to fit turnplate of the peppermill mechanism..
6. Drill 17/64" hole through top.
7. Remove from chuck and partially assemble to determine overall length.
8. Mark the cap, remount in chuck and cut to length.

Drive Mandrel:

1. Mount the 2" x 2" poplar blank in the chuck, and turn a tenon on mandrel to fit the 1-5/8" hole in bottom of the base. (should fit snugly into bottom of blank)
2. True up the end, and extend the 1-5/8" tenon by 1-1/4" long.

Shaping the peppermill:

1. Join the two parts together and mount between mandrel and live center with cone.
2. Start by removing tenon from of blank at mandrel.
3. Make a finishing cut across bottom of mill with spindle gouge.
4. Use the spindle gouge to shape the interception between the two parts of the mill (make sure the line is clean between the two parts).
5. Finishing shaping the top.
6. Shape the bottom of the mill.
7. Sand and finish.

