

10" Peppermill

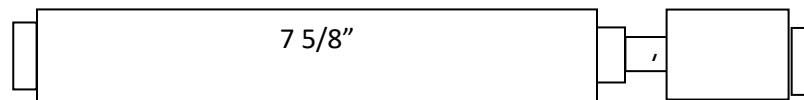
Peppermills and salt mills can be made in a variety of sizes and out of many kinds of wood both solid and laminated. The construction of a peppermill is a straightforward process using the steps described below.

1. Start with a 3" x 12" blank of your choice. Beware of using toxic woods for this project. To deal with the toxic issue some use a piece of PVC while others use a good sealer for the inside.
2. Round the piece and put tenons on each end to fit your chuck of choice. Depending on the grain and features of the piece (knots etc.) decide on which will be the top and base of the mill.
3. This process will make it easy to construct the mill without adjusting the length of the rod.
4. See the measurements below for setting up the blank for turning.

3" x 12" blank



3/8" tenon on each end no smaller than 2".



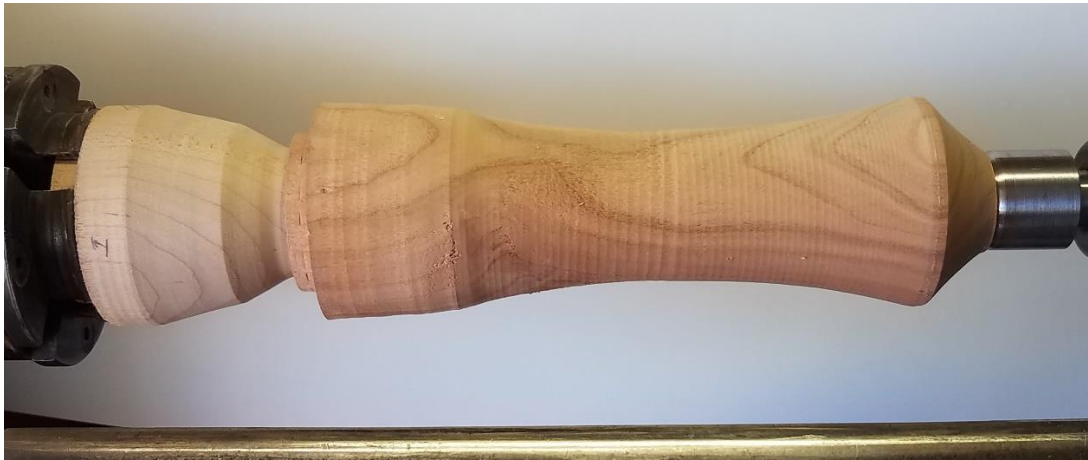
5. Separate the base and top (chop saw). Insert the top of the base in the chuck and drill a 1 5/8" hole 5/8" below the base of the mill. That will be 7/8" including the tenon.
6. Next drill a 1 1/16" hole through the base. Suggest using two drills, one without the extension to endure a more accurate hole. Using an extension continue the 1 1/16" hole. Drill about 3/4 of the way through the blank. Maxi-cut bit is the best.



7. Reverse the piece and finish the hole with the short drill shank.
8. With the base still in the chuck, bring the tail stock up to the piece using a 60° live center.
9. Rough out the desired shape of the base. Do not make the finish cuts at this time.
10. Prepare a jam chuck as show below that will fit the 1 1/16" hole. This will hold the base and permit removal of the bottom tenon. Use the jam chuck on the headstock. Allow some size to the chuck for truing in the future.



11. Insert the base in the jam chuck and finish the profile



Preparing the top

12. Clamp the top using the tenon that was done in step 2.
13. Drill a shallow hole to hold the insert, about $\frac{1}{4}$ " deep using a 23mm bit. Be sure it fits.
14. Next drill a $\frac{5}{16}$ " hole through the top for the shaft.
15. Preliminary shaping of the top can be done at this point as shown below.



16. Reverse the top into a smaller chuck.
17. Insert the hardware in the base and measure the length of the rod that protrudes from the top. Allow about $\frac{3}{8}$ " for the screw. Mark the length on the top and begin the final shape.



18. Prepare another jam chuck like the one show below. Use the special jam chuck to finish the top. Use a hardwood to ensure a good quality jam chuck. Number 2 morse taper on one end and $\frac{5}{8}$ " stem for the top to slide on and off.



19. Switch from the metal chuck to the new jam chuck for the final work.



20. Turn the 5/8" stub to 1 1/16" diameter (pencil pointed there). The 1 1/16" dimension is to the left of the pencil on the new jam chuck. Test the fit of the top into the base.
21. Test the length of the mill with the rod in the base and extending from the top. Resize the top for at least 3/8" extending through the top to permit the attachment of the screw top.
22. Once it is sized correctly you are ready for the finish.
23. Wipe-On Poly is a good finish. It is water proof, easy to apply and stands up to constant use. Apply at least three coats or two coats if you use a sealer first. Beal buff the finished mill to make it appealing for hand use.
24. Final assembly of the parts and ready for the pepper.
25. NOTE: The same procedure can be used for a salt mill except that you use a ceramic mechanism.