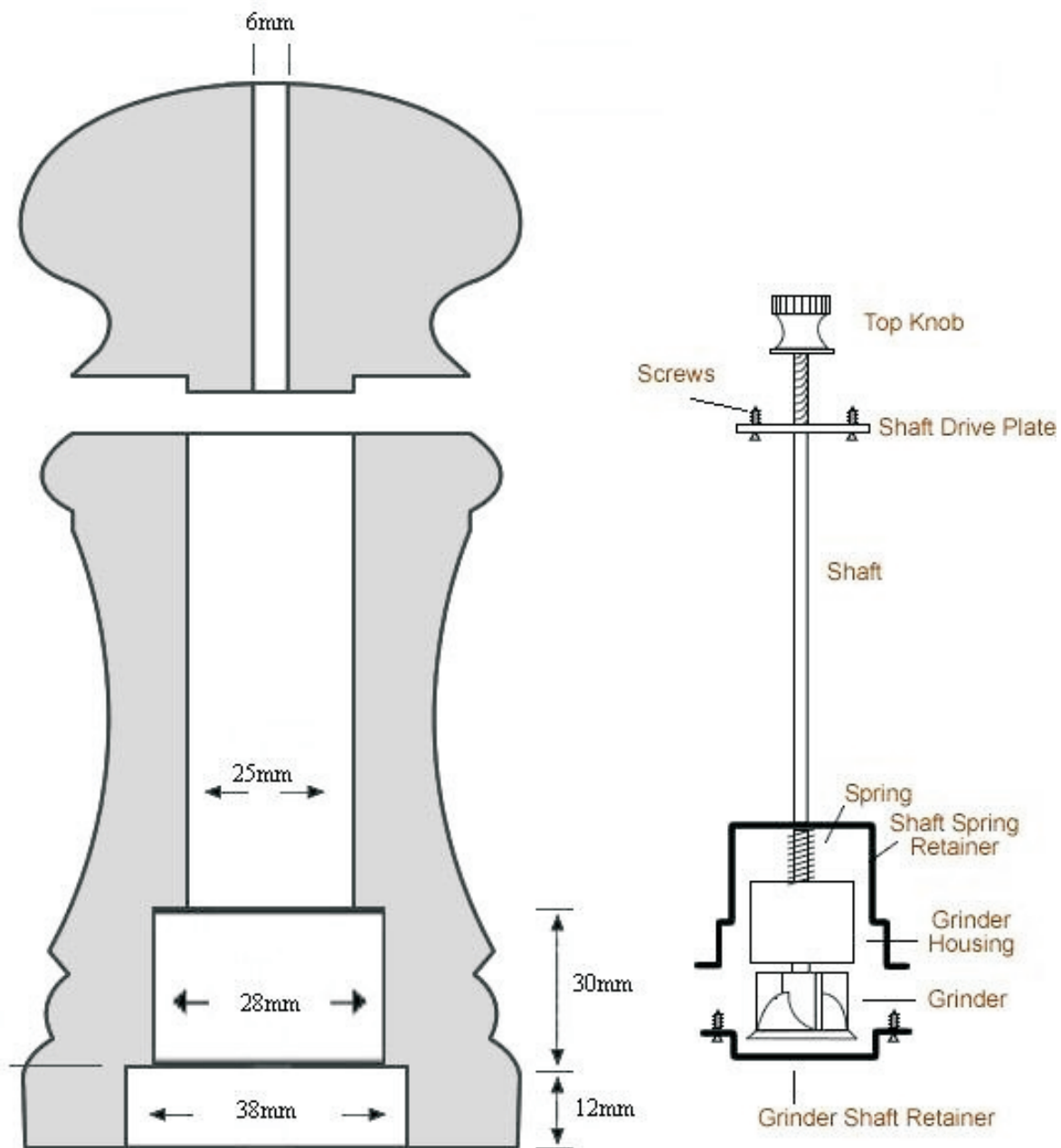


# Turning a Pepper Mill



## Plan your Turning

Draw out the design of your Pepper mill. Determine how tall the Pepper mill Body will be, and how tall the Pepper mill Top will be.

## Turn the Body

Select a square blank that is 20mm longer than the Pepper mill Body and 10mm wider than the diameter of your Pepper mill Body. Mount the blank on your lathe and rough turn to a



cylinder. Remove the blank from the lathe and drill the 38mm diameter hole 12mm deep in the bottom of the Pepper mill, then change drills and drill a 28mm hole 30mm deep. Without moving the Pepper mill from your drill press drill the 25mm hole halfway through the body. Flip the Pepper mill over and continue drilling the 25mm hole from the other side until both holes meet.

### **Turn the Top**

Select a square blank that is 20mm longer than the Pepper mill Top and 10mm wider than the diameter of your Pepper mill Top. Mount your blank on the lathe and rough turn to cylinder. Turn a tenon on the bottom that is 6 long and just shy of 25mm in diameter. To size it properly, it should fit snugly in the 25mm hole in the Pepper mill Body. Also turn a tenon on the top of the Pepper mill Top that is 25mm in diameter. Remove the Pepper mill Top from the lathe and drill the 6mm hole through the center.

### **Finish the Pepper mill**

Press fit the Pepper mill Top into the Pepper mill Body and remount the whole Pepper mill on the lathe using jam chucks or a 3 or 4 jaw chuck. Turn the Pepper mill to final shape and sand. The 25mm tenon should still be on the top of the Pepper mill Top. Remove the Pepper mill Body from the Top. Turn the 25mm tenon down slightly so that it still fits snugly into the 25mm hole in the Pepper mill Body but is not sloppy. It shouldn't be smaller than 25mm in diameter. The Pepper mill Body should be able to rotate freely on the tenon. Remove the Pepper mill Top from the lathe and remount so that you can finish the top of it. Finish turning and final sand. Remove the top from the lathe and apply your finish to the Pepper mill.

### **Installing the mechanism**

Slide the Grinder, Grinder Housing, Spring, and Shaft Spring Retainer over the Shaft. Slide this up through the bottom of the body of the Pepper mill so that the flanges of the Shaft Spring Retainer catch the lip of the 38mm hole. The Grinder should be fitting inside the Grinder Housing and the Grinder Housing should fit snugly in the 38mm hole.

Mark with an awl the location of the screw holes in the bottom of the Shaft Spring Retainer. Slide the retainer out of the way and drill the holes for the screws. Line up the holes of the Shaft Spring Retainer and the Grinder Shaft Retainer with the screw holes and use 2 screws to secure the grinder body.

Next, prepare the Pepper mill Top by centering the Shaft Drive Plate over the tenon and the 6mm hole. Mark the screw holes, drill the holes, and screw the Shaft Drive Plate onto the bottom of the Pepper mill Top.

Slide the Pepper mill Top over the Shaft. The tenon should fit into the 38mm hole. It shouldn't fit so tightly that the Pepper mill Top can't be turned, but it also should fit so loose that the Pepper mill Top can wobble. Screw the Top Knob onto the shaft. You should be able to tighten and loosen the Top Knob to adjust the spring tension on the Grinder. That regulates the size of the Pepper grinds.

