Turning a Crush Grinder

Supplies Needed

- Blank
- 15/16" Forstner Drill Bit
- 1 1/16" Forstner Drill Bit
- 1 9/16" Forstner Drill Bit
- 1 3/4" Forstner Drill Bit
- Sandpaper/Finish
- Drill or Drill Press
- Eye and Ear Protection

Selecting the Blank

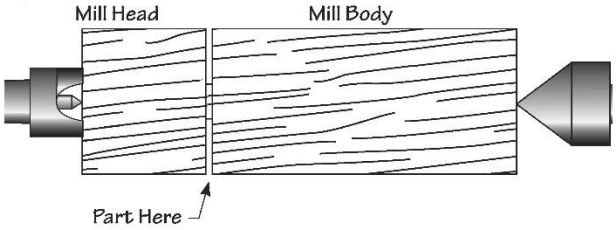
1. Select a 2-3/4" square blank that is 1" longer than the mechanism you have selected.

Mounting the Blank

1. Mount the blank between center and rough turn to about 2-1/2" in diameter (see figure 1). Layout the mill top and head on the blank and part them.

Drilling the Blank

Figure 1



1. Drill holes for the peppermill (see drawing).
2. Drill a 1-3/4" diameter hole 1" deep into the base of the mill body.
3. Use the center mark from the previous hole and bore a 1-9/16" hole 1-1/2" further into the blank (2-1/2" overall).
4. Drill a 1-1/16" hole using the center mark from the previous hole and drill completely through the mill body.

Drilling the Mill Head

1. Drill a 15/16" hole 1-1/4" deep into the bottom of the mill head.

Finish Turning the Blank

1. Mount the body between centers using a drive tenon andcone center as shown in Figure 2 (on back). To make a drive tenon, mount a 2" to 3" diameter by 2" thick waste block on the lathe with a chuck or faceplate. Turn a 1/4" long tenon to fit snugly into the 1-3/4" hole. Leave a small shoulder around the tenon.
2. Turn, sand and finish the body according to your sketch. Remember the internal holes in order to maintain sufficient wall thickness.

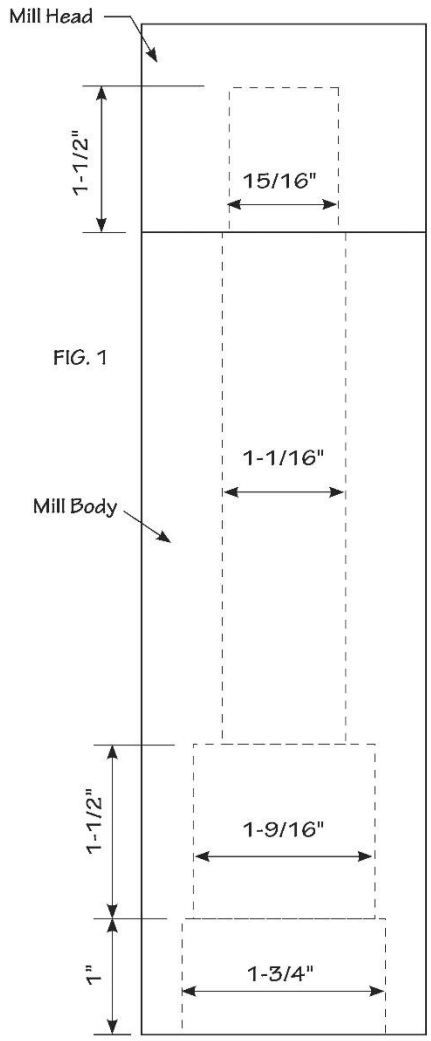
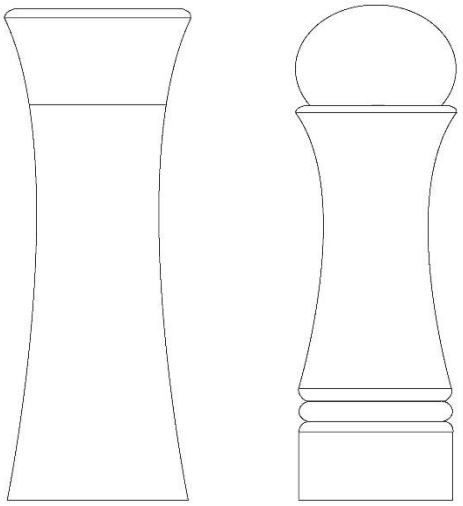


FIG. 1

Sample Shapes



Turning The Mill Head

1. Mount the head between a drive tenon and cone center as shown in Figure 3.
2. To make a drive tenon, mount a 2" to 3" diameter by 2" thick waste block on the lathe with a chuck or faceplate.
3. Turn a 3/4" long tenon to fit very snugly into the 15/16" hole in the mill head. Leave a small shoulder around the tenon. Test the fit of the tenon to the hole until you have the right fit.
4. Mount the head onto the drive tenon and bring the revolving center up against the blank for support.
5. Turn, sand and finish the head according to your sketch. Remember the intenal hole diameter in order to maintain sufficient wall thickness.

Assembly

1. In order to ensure a good fit we recommend that the mechanism be glued in place.
2. Lightly coat the inside wall of the hole in the mill head with epoxy. Press the stopper into the hole and set it aside until it is dry.
3. Cut off the two clip-in clips on the top of the mill mechanism (Fig. 4).
4. Lightly coat the inside wall of the 1-9/16" hole in the mill body base with epoxy. Press the mechanism into the hole and set it aside until it is dry. Make sure that the epoxy does not interfere with any moving parts. Using a hacksaw, cut the hex shaft off leaving 1-1/8" extending out of the mill body.
5. Press the stopper and head onto the hex shaft until the head and body are touching.The shoulder of the stopper will center the head with the body of the mill.

FIG. 2

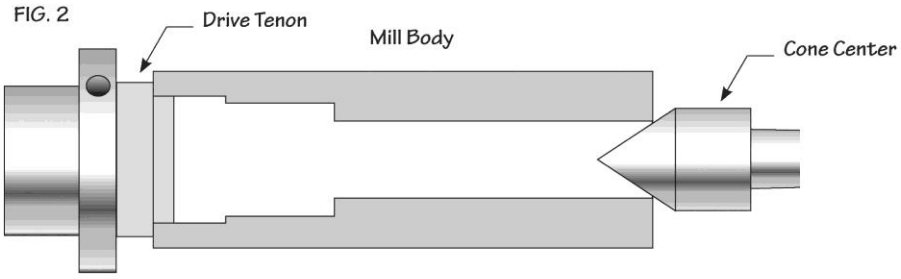
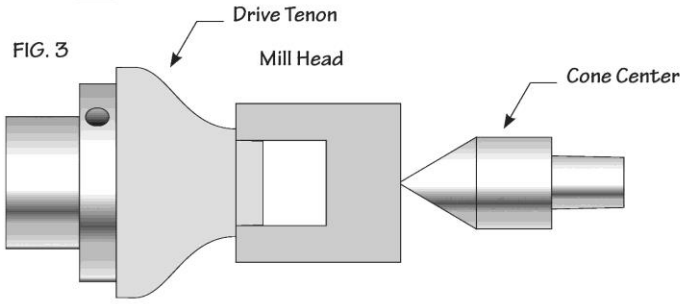


FIG. 3



How the Mill Works

1. The mill coarseness is adjusted by turning the small wheel on the bottom of the mechanism. To fill the mill with pepper or salt, pull the mill top off and fill from the top.

FIG. 4