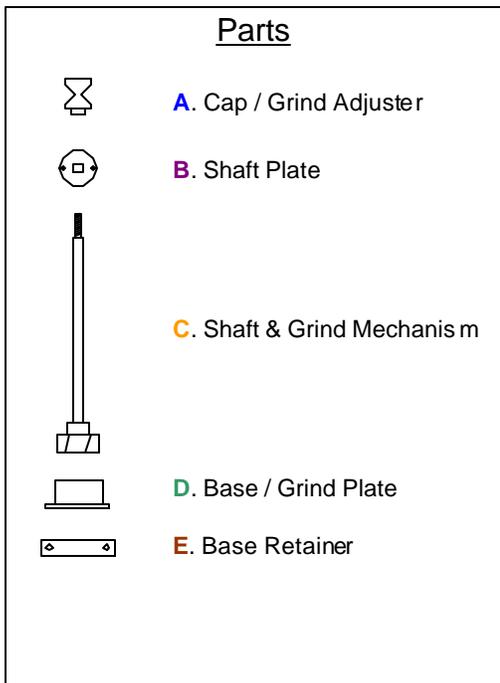


# The Basic Peppermill

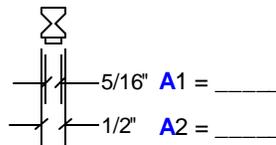
Method # 3F  
Peppermill Kit Style # 7 (Mr Dudley ... Craft Supply)

by Andrew Hilton / Hilton Handcraft of the Ozarks / www.HiltonHandcraft.com

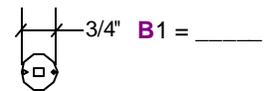


## Step 1 - Measuring

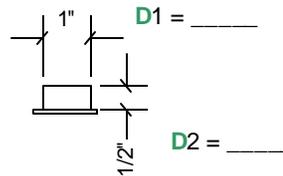
**A.** Cap / Grind Adjuster



**B.** Shaft Plate



**D.** Base / Grind Plate



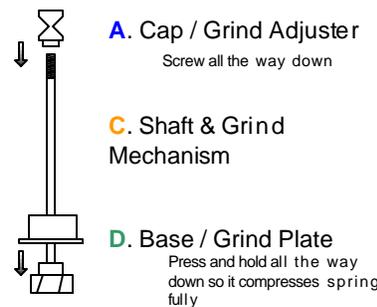
**E.** Base Retainer



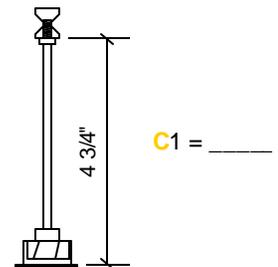
Example measurements are for the 5" mill kit. For every size of kit, there are variations between each one. So, use these measurements only as a guide and don't rely on them being perfectly accurate even for the size and style of kit being displayed.

Measure each kit individually!

Combine these three parts like this...



... to get this and measure



## Step 2 - Tools & Equipment

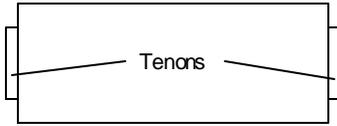
You will need ...

- A Lathe (well, it does help) with scroll chuck (optional but highly recommended)
- Roughing gouge, spindle gouges, skew, parting tool, and other tools as desired.
- A way to bore straight, long holes ... either a drill-press or on the lathe with a Jacobs' chuck in the tailstock.
- Drill bit the size of **A1** or slightly larger but not equal to the size of **A2**. It must be between size **A1** and **A2**.
- Forstner bit the size of **B1** or slightly larger. Will only be drilling about 1/8" deep with it.
- Forstner bit the size of **D1** or slightly larger.
  - Will be drilling at least the length of **D2**.
  - Will be drilling 3/4 of the length of **C1**, at most, depending on style.
  - May need a Forstner bit extension (or several of them) to drill this deep
- Forstner bit the size of **E1**. Will be drilling only about 1/2" to 1" deep depending on style.
- Outside Calipers & Ruler would be good too.
- Small screwdriver for screws in **B** and **E**. May need epoxy if screws strip out of the wood.
- Durable finish such as a lacquer or polyurethane

Next Page:  
Drilling & Turning

## Step 3 - Drilling

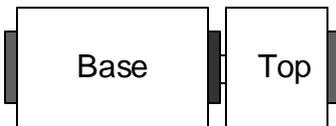
1. Start with a blank no less than 2.5" in diameter and a length 2" longer than the size of mill you are making (5" mill + 2" = 7" blank) in order to give you plenty of room to work and hold in your scroll chuck. You could use waste blocks on the ends.
2. Turn it round and form tenons on each end to fit your scroll chuck



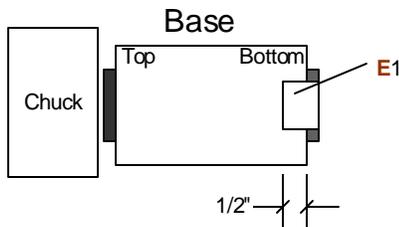
**DESIGN:** Decide what the basic proportions are going to be right now. While you can make the Base as small as **D2** + about 1" or the Top as small as about 1/2", a generally pleasing proportion is to make the Top 2/5ths and the Base 3/5ths of the total length of the blank. We will continue with that here...



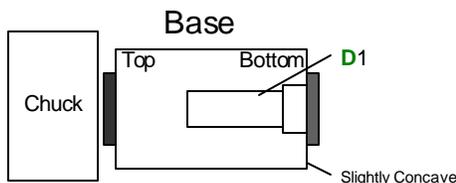
3. Create a tenon on the top of the Base just to the left of the location where you wish to separate the Top from the Bottom. Part off to the right side of that tenon.



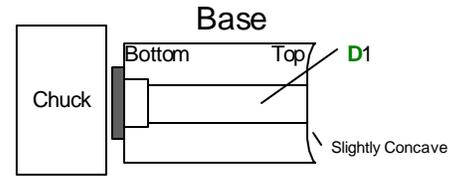
4. Mount the top of the Base into the chuck and face off the bottom of the Base flat/straight. Drill a hole with a Forstner bit the size of **E1** or slightly larger 3/8" to 1/2" deeper than the tenon you are drilling through.



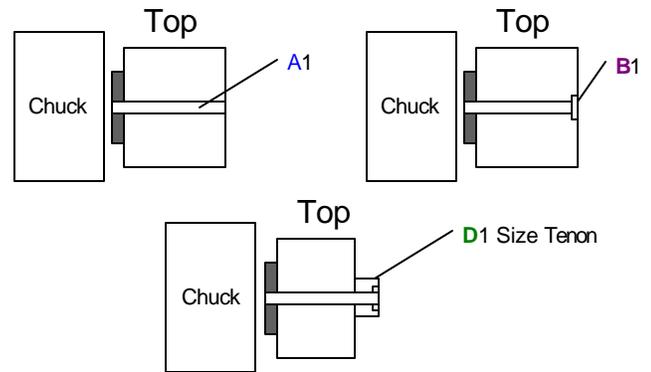
5. Drill a hole with a Forstner bit the size of **D1** or slightly larger to a depth of at least **D2** beyond the depth of the hole you drilled above (**E1**). It's best to go ahead and drill this hole as deep as you can now or at least half way through so that you can drill from the other end to match this hole. After drilling, finish up the bottom (concave & sand)



6. Remount the Base so that the bottom of it is mounted in the chuck instead of the top. Remove the exposed tenon and make that end slightly concave. Drill a hole with a Forstner bit the size of **D1** through the blank until you reach the corresponding hole drilled above. Don't worry if they don't perfectly match in the center. Sand the end.

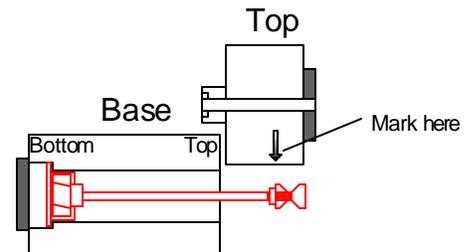


7. Mount the Top into the chuck and face-off the bottom of the Top straight. Drill a hole in the center no smaller than **A1** and no larger than **A2** all the way through the Top. Then drill a hole with a Forstner bit the same size as **B1** about 1/8" deep. This hole will hold **B** later. Lastly, turn a tenon about 1/2" long the size of **D1** or slightly smaller. This will fit into the hole made in the top of the Base. Use that hole as a guide so the tenon will turn freely in it but not loosely.



## Step 4 - Turning

1. Take Top out of chuck. Put the mill mechanism into the base and push it up all the way. Put the top up to the side of **C** and make a mark onto the Top blank where the bottom of **A** reaches. This is the top of the Top and should be turned to that point. Take the mill mechanism out.



2. Mount the Base tenon into the chuck and insert the Top into the Base. Bring the tailstock up to the Top (a small cone helps center in the hole) and tighten so that the Base and Top are friction fit. Turn the peppermill to shape as desired.

