

Quick and Easy Lathe Jaw Spacers

by John M. Herrmann

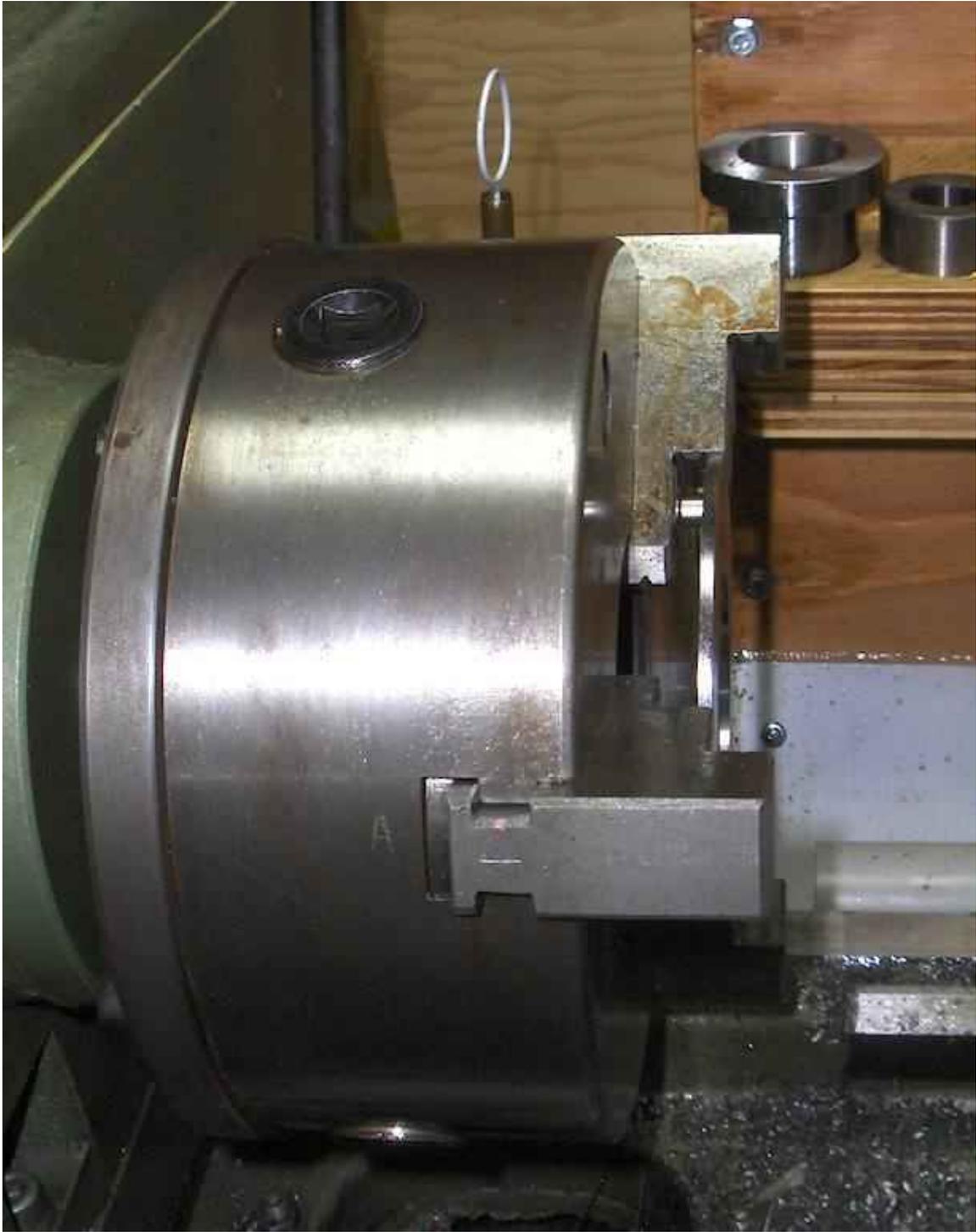
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Today I needed a steel “washer” of about 4” OD and 2.03” ID. I used a 4 1/4” hole saw to cut a round slug from a sheet of 11 gauge (1/8” steel), then a 2” hole saw to make a slightly undersized ID.

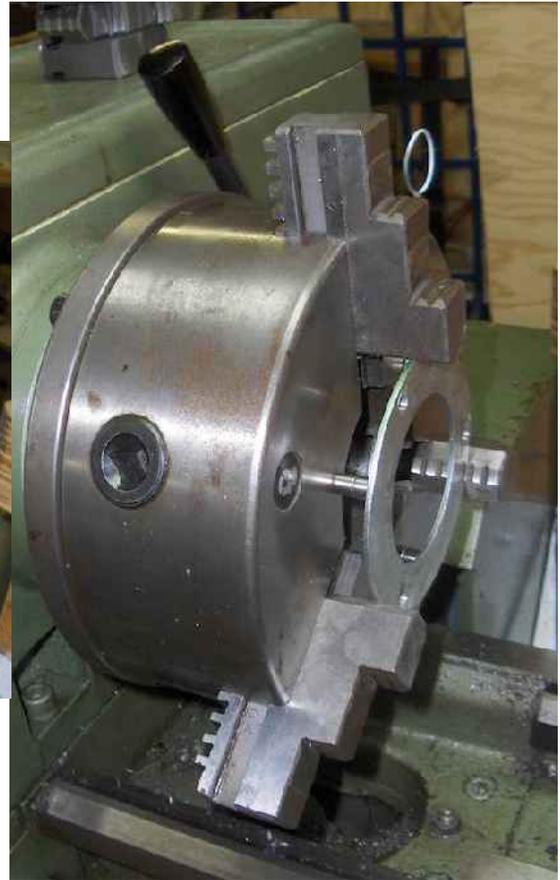
The problem then was how to bore the ID to size on the lathe without running the tool into the jaws. The inner ends of the jaws were just inside the 2” circle. What to use for spacers? AHA! I have a bunch of 8mm tall, 8mm diameter rare earth magnets. Stuck them on the jaw flats, then stuck the part on. The magnets even held the part in position while I tightened the jaws - without having to hold the part in place by hand!



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Of course, the same technique can be used to space a workpiece away from the chuck face itself:



And as always, there are trade-offs. Two things are especially important here. First off, the magnets aren't all exactly the same height. I miked a few of the ones I have. Though not perfect, they all seemed to fall within a 0.002" range in height.

Secondly, these magnets absolutely LOVE to attract swarf! And fine steel swarf is sometimes very difficult to remove completely. This can be especially bad if you plan to cut more than one part on the same setup. But because the magnets are pretty cheap on eBay (recent price \$16 for 50 pieces, 8mm x 8mm, free shipping), it might be worthwhile to simply buy a bunch and use each one just one time. Afterward, you can use them for other fun things, like dedicated swarf collectors.

– John Herrmann

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