

How I make a Closed End Pen On a Regular Mandrel

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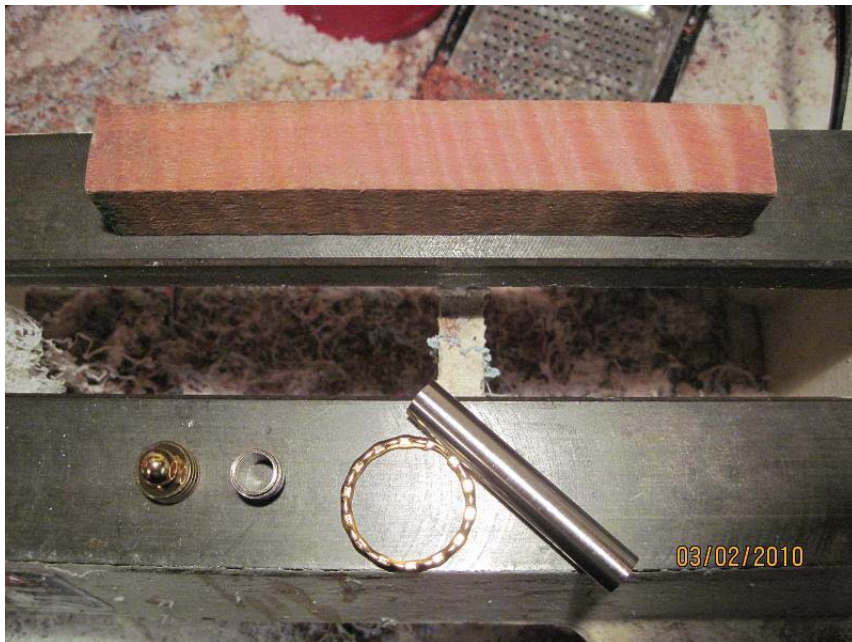
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How I make a closed end pen with a regular mandrel.

My main objectives with this walk through are to show how I make completely closed end pens without special mandrels. I also wanted to show how I tackle some of the other points of pen making without other specialty tools. I think most turners already own the tools I will be using in this tutorial. Nothing is worse than reading a tutorial on how to do something to avoid needing some special tool and realizing you don't even own what the writer deemed as "regular" tools.

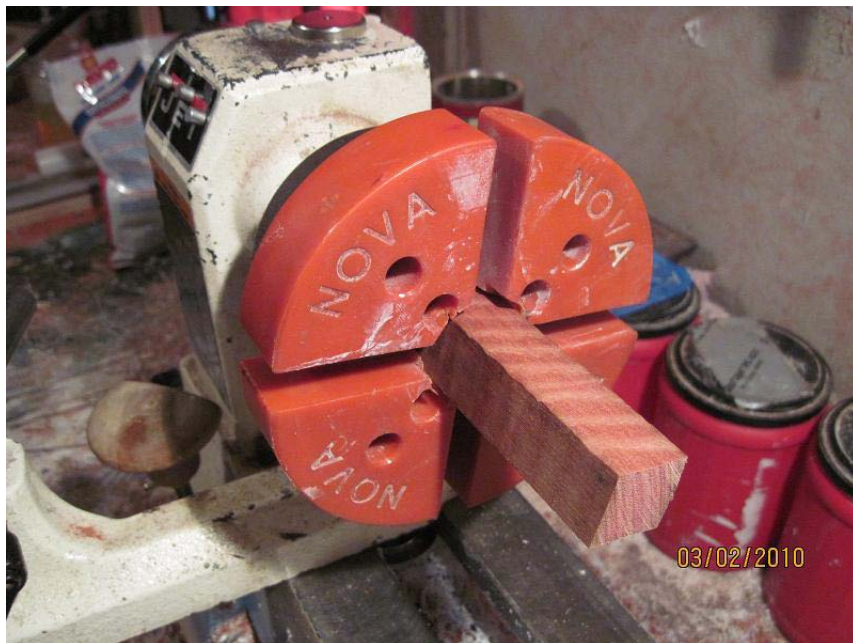
I also wanted to point out that pretty much ZERO of this information is mine. It is all information that I have gathered from reading the boards, and tutorials. I have adapted different things from these sources and figured some stuff out on my own. I hope this helps someone!



First, I find a suitable blank for the kit I am doing. This technique has worked for every kit I have tried, slims, euro's, Jr. Gents, and even a toothpick keychain which will be the star of the day!



The blank needs to be plenty long for the tube you are using. If you are doing a pen, you need a 6 inch blank give or take.



I mark and cut my blank to length and then mount it in my scroll chuck with soft jaws. These jaws can be made from wood, or delrin, or whatever other materials. They can also be purchased for most chucks. (I think I paid \$15 for my soft jaws.) This is a prime example of drilling on the lathe without the need for a collet system which, in my eyes, is a specialty tool. A scroll chuck is vital in lots of woodturning projects so to me, it should be a common tool. Whatever technique works for you! This is a closed end tutorial, not a drilling walkthru!!!



To prep for drilling, I use a spindle gouge to true up the face of the blank, and a diamond tip cheapo tool from HF to make my starter spot. I don't use any special drill bits or hole starters or anything. Why waste money on weird drill bits when I have a whole shelf of hand tools that will produce the same results?!



To drill the blank, you will go through two processes. First, I use a 15/64 bit. I think most people use a 1/4" bit for this part, but I like to take advantage of the threads on the end of the mandrel. I drill the blank with the 15/64 bit to about 3/8" to 1/2" deeper than the tube will sit. I then drill with the appropriate bit for the tube to about 1/8 to 1/4" deeper than the tube will sit to give me some material to true up.





Once the tube has been glued and dried, and the blank is true with the tube, you are ready to mount it on the lathe!

To mount the blank, I first make sure that I have plenty of mandrel rod sticking out of the mandrel and the collet on the mandrel is loose. I put the appropriate bushing on the mandrel and the blank next. When I mount the blank, I thread the mandrel into the 15/64 hole, cutting threads with the mandrel itself. These threads are temporary so they don't have to be perfect.



Then I collapse the mandrel shaft until the bushing is just touching the mandrel collet.



Bring up the tailstock to just tight enough to keep the blank from stopping when you cut it.



Turn the body of the pen, and start to shape the bottom, leaving just enough material to support the tailstock. Once you are happy with the main area of the project, sand and finish it.



Finally, I use blue painters tape to tape the blank to the mandrel so you can finish the bottom. With the internal threads, this step is probably a big waste of time and tape, but I like to do it.



Pull the tailstock away, and turn, sand, and finish the bottom of the piece. You will want to do this step at VERY LOW SPEEDS. There is nothing supporting the end of the mandrel now, so any high speeds at all will cause centrifugal force to bend your mandrel and possibly cause serious damage or injury to your equipment or you.



Once the bottom is finished, remove the tape and unthread the blank. If you want to get rid of the threads, then mount a 1/4" bit in a hand held drill or a drill press or whatever and hit the little hole right quick. I usually remove the threads at this point if it is a pen that the threads might interact with the action of the refill. On a toothpick holder, the threads will never be an issue so I don't waste my time with it. If you turn a pointy end on the closed end, you may need to make some sort of jig to hold it when pressing to avoid damage, but that is a different tutorial altogether!