

## The Perfect Mold

While finishing some cast pens I played around with a few different styles of molds, and I made one that I think is just about perfect. It is made from copper pipe, copper end caps, a bolt, and a nut. The specifications are: 1 - 6" x 1/4" Bolt, 1 - 1/4" Nut, 1 - 5" x (1/2" for small pens and 3/4" for large pens) copper pipe, 2 - (1/2" or 3/4") copper end caps (with 1/4" holes in the center for embedding casts and no holes for basic blank casting). You can use two sizes, 1/2" and 3/4". Why even use the smaller size? Because you don't want to waste the resin if you don't have to.

To make embedded 7mm tubes:

- 1) Coat the inside of the first cap with Petroleum Jelly/Vaseline.
- 2) Coat the bolt shaft with Petroleum Jelly and slide it through the cap with the end of the cap butted to the top of the bolt.
- 3) Slide your first tube down the shaft to the cap.
- 4) Slide your second tube down the shaft leaving about 1/8" between the tubes for separating. If the tube scraped off the Petroleum Jelly on the bolt shaft apply more or the resin will stick to the shaft.
- 5) Coat the inside of the copper pipe with Petroleum Jelly and slide it into the copper cap on the bolt.
- 6) Stand it up (I put it in a wood block so I can use both hands) pour in your mixed resin. It takes about 20ml for the 1/2" pipe.
- 7) Coat the inside of the second cap with Petroleum Jelly and slide it onto the copper pipe.
- 8) Turn nut onto bolt until tight. This prevents leaks and keeps the caps tight to the pipe.
- 9) Wait 24 hours, remove cast from mold and bolt, separate tubes, square ends, and turn.

To make larger than 7mm embedded tubes, perform all of the above steps except for the following:

- 3) Coat your bushings with Petroleum Jelly and place them on the shaft along with the tubes in order as you would when putting them on a mandrel.
- 4) If your scrape off some Petroleum Jelly off the bolt shaft apply more.
- 9) Wait 24 hours, remove cast from mold and bolt, remove excess resin from the ends of the bushings, place on mandrel and turn. The resin will turn off of the bushings easily if you coated them.

To make non-embedded blanks:

- 1) Use non-drilled caps or duct tape over the hole of your drilled ones.
- 2) Coat the inside of the first cap with Petroleum Jelly/Vaseline
- 3) Coat the inside of the copper pipe with Petroleum Jelly and slide it into the copper cap.
- 4) Stand it up (I put it in a wood block so I can use both hands) pour in your mixed resin.
- 5) Coat the inside of the second cap with Petroleum Jelly and slide it onto the copper pipe.
- 6) Wait 24 hours, remove cast from mold, cut, drill, insert tubes, turn...

I know it looks like a lot but it is very easy and makes excellent casts. The caps hold the tubes perfectly centered, depending on the hole you drilled in them. Each mold costs about \$0.50 and is reusable. The only thing I would change is that I would like it to be transparent, but I don't know how well clear tubing would hold up.

BTW: Don't skimp on the Petroleum Jelly or the mold will be stuck together.

You can see the pen, the mold, and the specs, at my Pen Maker's Guild gallery page: <http://www.turtlewoodworks.com/pmggallery/osbornekgall.htm>

Any and all feedback welcome :)

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