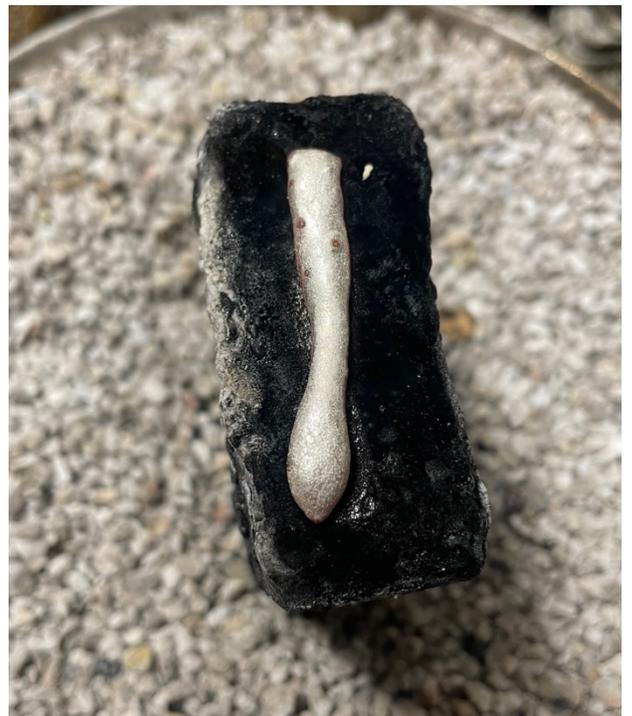


Here is a visual show and tell of one method I use to make clips. It works well for any metals that can be melted/soldered. I am starting with an argentium silver clip I cast, but messed up. Here is the clip on a charcoal block in my soldering pan.



I begin by bringing the clip to its melting point, where the metal starts to ball up and flow together. Left pic is the cooled clip. I don't worry about it being wonky at this point.



I run the clip through the square grooves in my rolling mill to even the width of the clip out. I then switch to the flat section of the rollers to start bringing the clip to its final thickness.



I realized the clip didn't have as much mass in the center as I wanted, so I put it back on the block and added a bit of argentium scrap to the middle to melt in.



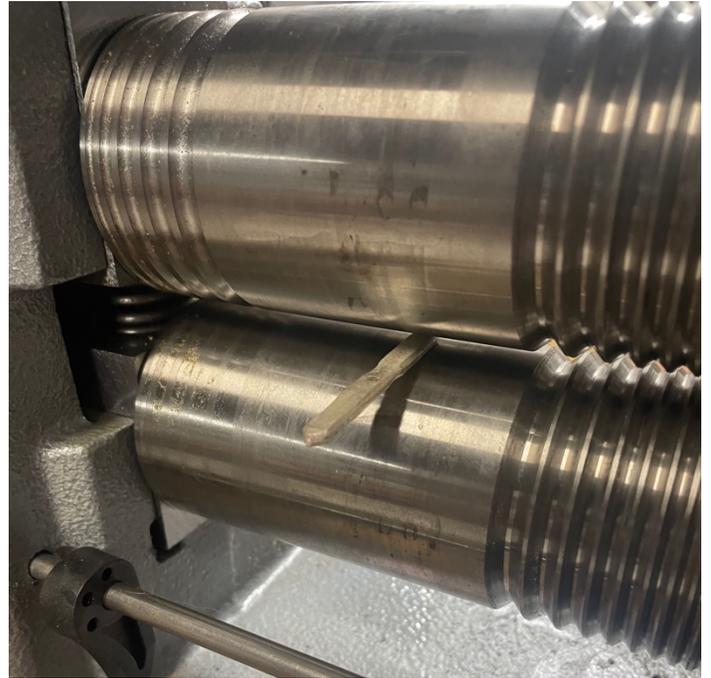
Melting...



I then roll the clip through the mill again to get the width more uniform. Perfect.



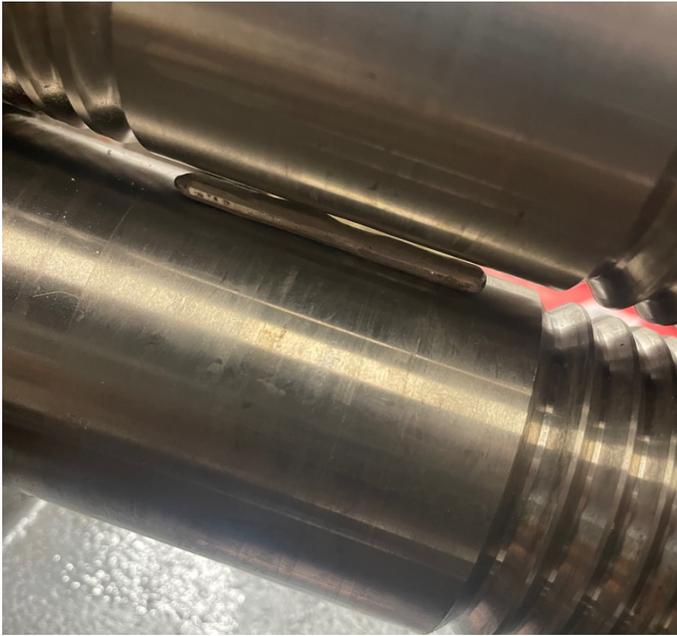
It's a bit thick at 2.65mm, so I am going to bring it down to about 1.8mm or so. Back to the rolling mill.



Success. It's a little narrow at 6.15mm, so I am going to roll it out a bit wider, to about 7mm.



Back to the mill... Now we are at the width we want



Now it's time to put the bend in the clip where it will be soldered to the clip ring. I begin by trimming the end off, and then scoring a line mostly through the clip with a jeweler's saw.



I then use a triangular file to hog the metal out down to where the cut stops, then switch to a square file to finish.



I then bend the clip at the score line, and solder.



Now I want to taper the clip out. You could just saw/grind the taper, but since this is silver, I am trying to save as much waste as possible. I do this by rolling only a portion of the clip through at different roller settings. As you can see, the clip is way too long, which is good.



All this extra clip length will be turned into the fat part of the clip end. I put it on the soldering table and focus my heat on the end until it starts to melt, drawing the heat up the clip so the metal flows.



Now I use a hammer and bench block to shape the end of the clip so it tapers with the rest of the clip. The clip is still wonky, so it needs to be refined with files and some hammering.



I like to use a rotary sanding drum in my freedom to blend the curve where the clip transitions into the end.



Here is the clip with the bottom filed and ready for sanding, and the top filed and sanded to about 400 grit.



One last thing I do is take my sanding drum and form a radius on the back of the bent over part of the clip, so it conforms with the clip ring when I solder. On the block and ready to solder. I'm using a third hand and tweezers to hold the clip body in place.



Soldered! It's important not to melt the clip ring, since it's much less mass than the clip body. I focus my torch on the body, then switch to the ring right before the solder starts to melt.



Now time to sand and buff. I use a ring clamp to hold the clip, because my Baldor buffer likes to eat anything that it touches. Nice and polished.



Time to put it on the pen. Not too shabby.

