



International Association of Penturners

Simple Silver, Opal and PR Pen

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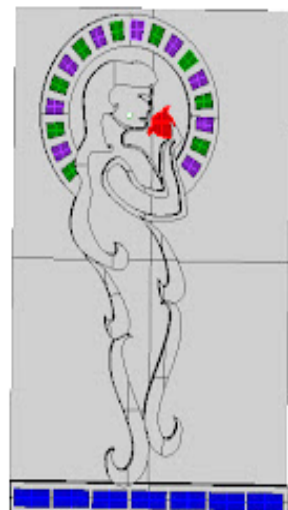
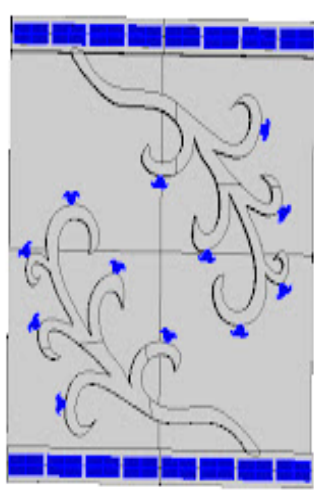
I thought I would share with all of you the making of the pen.



Like most of my pens it starts as a doodle. I draw it a couple or more times tweaking it, changing it back, redrawing it, until I have the concept down to where I want it. I then take and draw it in my cad program. I draw it flat and then have the program wrap it around the diameter tube I want to make.

Cap

Body



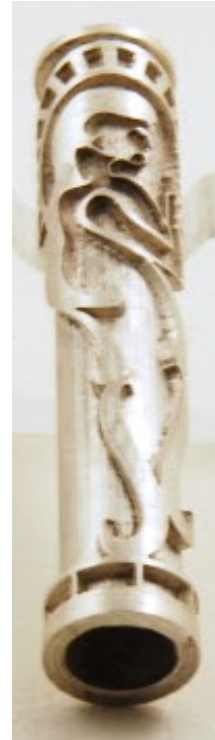
I have to pre drill the wax and put a brass tube in it to support the wax before I cut the pattern onto it with the mill. I thought I had taken a picture of the completed waxes but if I did I cant find them. I then remove the brass tube and cast the waxes into silver.

If the casting fails, I must start all over and the waxes take a full day to cut. Fortunately, I have a bit of practice casting and we have no problems with the casting.

Here is the Cap cast in silver.



Here is the Body in silver.



Next, I make the cap Finials and front section and make sure everything fits.



I then start cutting the red flowers on the cnc mill out of synthetic opal. I must cut the chunks of material into the proper thickness slabs about 1.5mm (.060) thick.

I took the first one and with a jeweler's saw and cut the slit to fit into her hand. The one that she is holding. I was originally going to use a blue opal for the flowers on the rest of the pen, but they were designed to small and didn't tie in to the one she is holding. So, I made them all red flowers.

As I cut them, I started epoxying them in place. I made the blue end pieces and glued them in. While I'm cutting the small squares for the halo and the rest of the pieces, I mix up some resin and apply it with toothpick to the body of the girl. I used antique white rather than a pure white and let it cure.



Next, I started the meticulous job of fitting all the small pieces into the halo. They all need just a little trimming to fit. I made and fit all the blue opal into the rings at the center band and ends of the silver tubes.

I owe the next step to Ed (Parkland Turner and BradG) their discussion on applying the resin while rotating allowed me to figure out how to get the resin on.

However, I ran into a problem. I intended to have a dark green base at the bottom and have it transform into blue as it went up the pen and then finally to a lighter blue at the cap top.

Well, this was my first attempt ever at rotary applications of PR. The rotary apparatus I built evidently wasn't quite level. All the green ran from the bottom to the other end mixing in with the blue and making it the ugliest combo of almost black-blue-green you have ever seen.

Pictures of the disaster.



So, I had to take a ball burr and cut all the resin back off the pen. Sorry for the blurred picture of the blank after I removed all the resin.



I then re-applied the resin using dark blue. There is a technique to the application that helps if you can vary the rotational speed of the piece.

I globbed the resin on let it dry and then mounted them and turned them down to size. The opal matrix will dull a HSS cutter in nothing flat. I used a carbide cutter to trim it to size.

It was then sanded and polished along normal lines using MM and Novus scratch polish. I made a delrin Insert for the cap that you can't see and threaded it M10 x .75.

I finished the pen up in record time for me and actually had 3 hours left before the entry time would expire. The red opal shows red or gold depending on the angle you look at it.

Here are some finished pictures of the pen.

