

The Regency Pen

By

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Having turned pens since the mid nineties, there's not much that surprises me in pen kits any more, and it's not often that I run across a kit that has me temporarily stunned. But so it was with this Regency kit a few years ago. I had ordered several kits not commonly seen in the US from Woodchuckers, a Canadian importer for Crafts Supplies UK. I opened the usual plastic baggie and had what seemed like a million pieces tumble out. Instead of the instruction sheet found with most other kits distributed in the US, I found only a small drawing showing the parts assembled. I didn't have time to delve into this at the time, so I put it aside... and it stayed out of sight for a long time. Recently, in one of my futile efforts to get organized and clean up my shop I came across the kit, and decided to tackle it. I am sorry I waited so long! I absolutely love the style of the finished pen. Major part of the attraction is the turned grip barrel, and the turned finials. No other kit displays as much wood!



Picture 1: The items that come in the kit are labeled 1-18. Also shown are the 'instruction sheet', the shim tubes made from Corian, the sizing disks made from brass, an unturned sizing disk 'A', and the blanks used for this pen.

The kit presents a number of challenges. None of them are too much for an intermediate pen turner, but I would not recommend this kit to a rank beginner. I already mentioned the drawing you get instead of instructions. In the US, we are spoiled by the fairly instructions that generally come with the kits. But, truth be told, it's been a long time since I've read a complete set of instructions. But this kit did take some figuring out. I started by lining up parts that should go together. It's easy to figure what major parts go into or onto the brass tubes. Some of the trim pieces required careful study of the drawings. It wasn't so tough. In the fountain pen version, the section goes together differently from the rollerball version. **Picture 1** shows the lined-up parts for both versions. In fact, there are only 18 parts. The picture also has the wood we'll be using, and some shim tubes made from corian.

Next challenge is the lack of bushings. There are several ways to deal with that. Dick Sing, in his book 'Unique and Unusual Pens' shows one method, turning a dowel to fit the inside of the brass tube, using a revolving center in the tail stock, and using dial calipers. First you need to take the measurements off the laid-out pen parts using a micrometer or calipers, of course. A second method is to use a dead center in the headstock to provide the drive, and a revolving center in the tailstock for support. Again, calipers are used to arrive at the desired diameter. Another method would be to make your own bushings on a metal lathe. This is actually what I did. It takes a little more time, but if making several kits it's worthwhile. But few people have access to a metal lathe, and a one-off order from a machine shop would be very costly. The method I will use for the purposes of this article is one I occasionally use and can be used by everyone. It uses turned shim cylinders and sizing disks, all of which can be made on the wood lathe.

Another challenge for someone that has never turned finials is the need to turn 2 finials which is different from turning other pen parts because they are not turned on a mandrel.

And lastly, with 2 main barrels, the section, and 2 finials, you need a lot of wood. A typical 5 ½” pen blank will not suffice. It’s best to allocate 2 full blanks, allowing for more than one attempt at the finials. Here I am using some wonderful spalted beech blanks that I obtained from arizonasihouette.com.

Before we get started, I want to mention my pen turning setup that you see in the pictures. I use a Beall collet chuck as a convenient adjustable-length mandrel. But of course a standard fixed length or other commercial mandrel works just as well. My mandrel preference is the Berea B mandrel because of the extra rigidity that comes with the larger diameter. For the grip barrel I need to use a smaller mandrel because of the tube diameter.

First we need to make some shim barrels. Any stable hardwood or plastic material is suitable. I like using corian or plastic because there are no concerns with dimensional stability. Drill with either L drill (for Berea B mandrel) or D drill (for 7mm mandrel). I keep a loose tube on one end of the mandrel, over a spacer made from an 8mm or 7mm tube depending on the mandrel used. When I get close to the desired diameter, I simply slide-fit the tube. I do this with the lathe running. You can clearly see where the tube rubs and sticks, so you can sneak up on a well-fitting shim-barrel. This is done for all 3 tubes. The length of a shim barrel needs to be a little shorter than the brass tube so that the sizing disks can drive the barrel.

Next we want to make sizing disks, to the measurements taken off the parts earlier. Here we use brass disks, available from Woodchuckers for a moderate cost. Because they are used on



Picture 2: Brass can easily be turned with regular lathe chisels

a B mandrel, the center holes were opened up with a size K drill bit followed by an L reamer. Brass is a soft material, and easily turned with woodturning tools. You can also use some other material, of course, e.g. in the past I have used corian at times. You just have to be more careful not to turn it/sand into it. I made shims .407" and .455" for the section, .550" and .460" for the main body, and .608" and .600" for the cap. (Be sure to measure your hardware parts before trusting my measurements!)

That's it for basic setup, so now we can go ahead and glue up, turn, sand and polish the 3 barrels, to the sizing disks. Nothing special. If you're careful, you can use the brass sizing disks for several pens. To find the right drill size, measure the tubes, and use a drill chart, like the one in the HUT catalog. For the Regency, I found 13 mm, 27/64" and 23/64" to be the right size for the cap tube, main body tube and section, respectively. You can also use 33/64" instead of 13 mm, I happen to have a 13 mm bullet bit, and I favor that type of bit. Drilling successfully without blowout is assured by cutting the blanks 1/4" longer than needed, drilling just shy of breaking through, then cutting to final length.



Picture 3: I turned all 3 barrels on a long mandrel

I turned all 3 barrels at the same time, using an extra-long mandrel I made from L drill rod. The blanks are arranged such that the most critical fits are near the ends. That is the centerband fitting for the cap barrel, and the center fitting for the main barrel.

The Regency pen also needs to have a tenon turned in the wood, which is done after sanding. If you cut the tenon too early, it is all too easy to sand over the edge and lose the sharp corner. I use calipers to cut the tenon to the right diameter. You want to leave enough of the centerband protruding to cover the threaded fitting in the lower main body, so I made the width of the tenon .280”.



Picture 5: The nib ring is glued and pressed onto the plastic tube, the turned barrel is glued on, and the threads are glued and pressed on to complete the section



Picture 4: The centerband is glued in place, and the clip fittings are preassembled and glued and pressed on

So now we can assemble everything but the finials. We just press together and glue the parts as we laid them out.

The caps carrying the finials

(9 and 15 in Picture 1) need to be pressed in before the finials are mounted, it's too easy to damage them otherwise. I glued all fittings since they were slightly loose. The plastic bung is screwed into the cap threaded insert using a flat-blade screwdriver. A drop of epoxy on the male thread locks it in place and prevents unwanted adjustments later.



Picture 6: The threaded bushing and end bushing are glued and pressed into the main tube



Picture 7: The plastic bung is screwed in using a fitting flat blade screw driver, with a dab of epoxy on the plastic threads.

All other kits I know of come with a pre-assembled section. This one does not. You have to line up feed (the feather plastic part) and nib and push them into the section. It is not hard. The relation between feed and nib can be seen in picture 8.



Picture 8 shows the feed and nib pressed in place

So now all that's left is turning the finials. Find the right drill size by measuring the fitting studs. It's better to have the hole a little too large rather than too small, the small pieces split quite easily if you have to force them on. Epoxy will hold slightly loose finials on with no problems. Be careful not to drill too deep, and don't use a bullet bit. Or be very aware of the shape you drill, and lay out the finial in a way to keep the cuts clear of the drilled holes. The blanks can be mounted on small jam chucks. The idea is to shape the finial leaving a small cone in place and part that of in the end before sanding. Anyone that has made a tool handle, e.g., is familiar with the technique.



Here I show a different method that works quite well for me. I mount the blank by screwing it on an appropriately sized bolt which is then mounted in the Beall chuck for turning. Of course I need a bottom tap for the size bolt I use. A suitable tap can easily be made by grinding some flutes into a standard bolt using a Dremel tool. For the cap finial, I drilled letter C (.242"). Then I

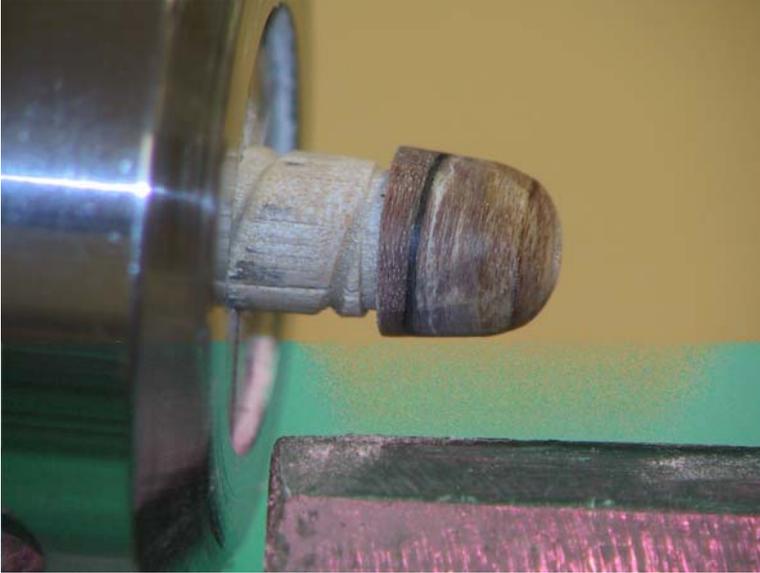
countersunk the hole slightly. Leaving the blank in the drill jig, I put the home-made 5/16x18 (5/16 NC) tap into the drill chuck, and spun the chuck by hand to cut the thread. The tap is then removed, with the blank on it, and transferred to the lathe into the Beall chuck. I use a spindle gouge to rough-turn, then I



Picture 8: Turning the cap finial

scrape with a pyramid point tool. I find that tool perfect for this job, because I can swing it in an arc to get the full shape I want. Of course, more cylindrical finials are also possible. The blank can be unscrewed from the mandrel to test the fit if need be, it remounts in the exact same position. After finishing, it is epoxied onto the cap.

For the main body finial I tried the same method, using a 5/16" drill bit, and 3/8"-16 (3/8 NC) bolt. Unfortunately, with the cross-cut blank, and the deep thread, I could not get it to work – the blank kept breaking out, there is just too little wood over the thread. So I used a jam chuck made from a 3/8" dowel.



Picture 9: The body finial is turned on a small jam chuck

The finials are glued in place, and after a final coat with Renaissance wax the pen is ready to go! I think it is a very good-looking pen, but the kit has a slight Achilles heel: It is only available in a 24k plating... That's a real shame, because there is more work involved in making this pen (without adding any fancy decorative techniques) than in most other kits that I know, and one would wish for a more durable plating to make it worth the extra effort. That notwithstanding, here is a great-looking pen that is sure to be picked out of a bunch by almost anybody looking at it. It is large, and at 45g what I would call fairly light to medium weight for its size. The cap posts, but this makes the pen a little top-heavy in my hand. It feels very good without the cap, and the nib writes very smoothly. A conversion pump is included with the kit, as well as a cartridge for those who prefer that.

I should have made this pen earlier!

Some additional notes:

The more you make of any pen kit, the better you understand it, and the more fine points you discover. No kit is this more true for than this one! Here are some things that I found or have been pointed out to me.

1. There may be bushings you have that you can adapt, rather than make your own. I have heard that the 'standard Euro bushings' fit the section tube. I'm not quite sure that these are, but check your supply – you may have something. I save worn bushings in a ziplock bag, if you do the same, check if you have something.
2. Do measure your parts with YOUR calipers before trusting printed measurements!
3. You can vary the amount of overhang for the centerband by changing the length of the tenon it sits on. If you want to make a fat pen, don't use a large overhang!
4. Be very careful around the finial. If you have the wood too fat, it will be a problem when posting the cap. Similarly, pay particular attention to deburring the inner edge of the cap brass tube to reduce the chance of scratching