

Making a Scalloped Segmented Pen Blank

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Originally Published for the South Puget Sound Woodturners

This tutorial was downloaded from

<http://www.penturners.org>

The International Association of Penturners - 2016

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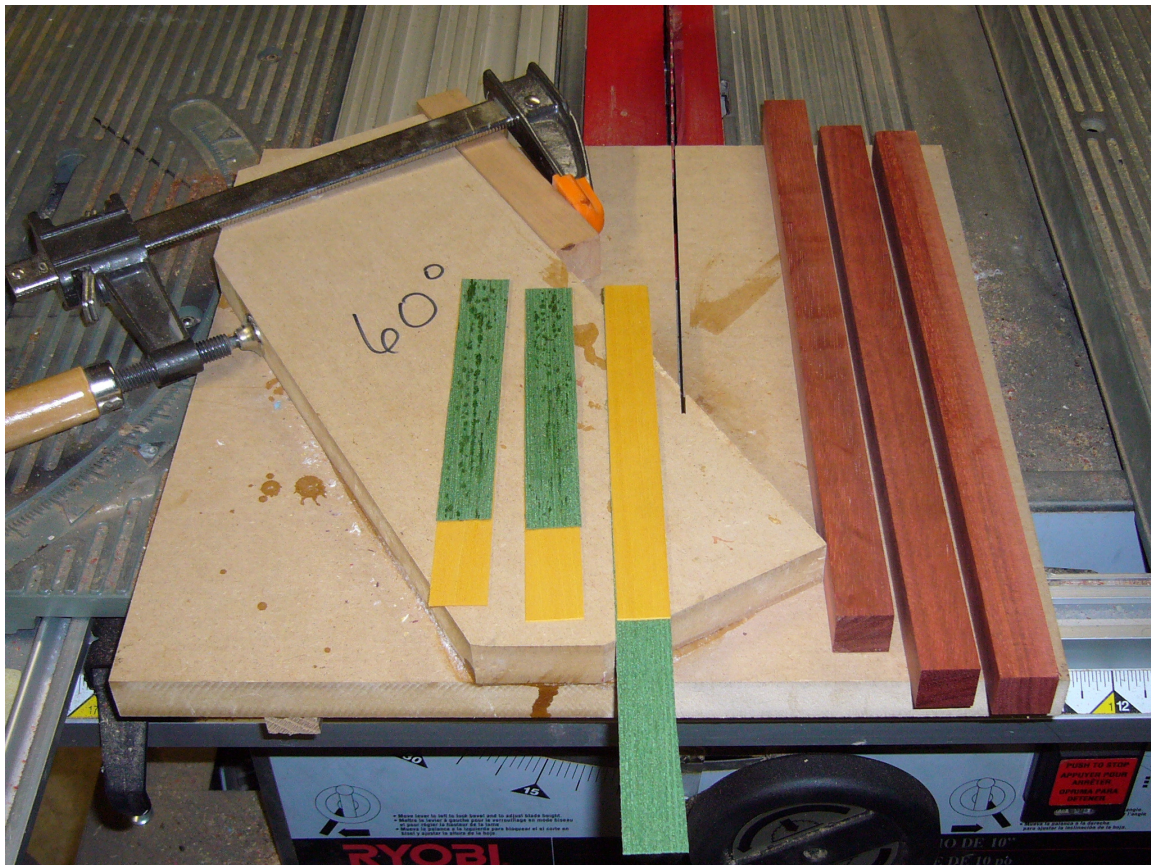
By Tim Spaulding

While looking at a pen turning manual I saw a pen by Brian Gisi that had scalloped tru-stone. It was quite awesome and so I thought I would try to figure out how he did it. If you have built a Celtic Knot, you will see the similarities right away. This is how I created my version of the scalloped pen. You may come up with a different, and even better way.

Some of this may be obvious to you so please bear with me. The first thing is to make sure that your stock material for the blank is equally dimensioned on all sides. This is extremely important. This blank is quite material intensive, as you will see, so make sure you have enough. It is best if all of the material is dimensioned before you start so you don't have to try to duplicate the exact dimensions later.

You will need to determine the design of your blank. You can use the same material for the entire blank, with contrasting veneers in the scallops, or you can use contrasting materials for each of the scallops. As with all segmented blanks, let your imagination go wild.

For this tutorial, I am using bloodwood with a green and gold veneer. I will use the term "blank" for the section that will end up as the blank, and "stock" for the material that we glue to the blank. In the picture below, the sections of bloodwood are stock.



Here I have my dimensioned stock and some of the veneer. I did glue up more veneer to complete this blank. I am planning on making a Wall Street II, which is similar to a Sierra. You'll notice that I am using a homemade sled built at 60°. I experimented with 45 ° but was not satisfied with the result. You may want to experiment with different angles.

You'll also notice that I have removed the blade guard. Per the usual disclaimer, do not use your table saw without the blade guard before reading the safety precautions in your saw manufacturer's manual.

It helps to number all 4 sides of the blank to make sure you cut in the right order. Mark the first side with a "1". Next, mark the opposite side with a "2". This will be 180° from side "1". Next, turn the blank 90° and mark this side with a "3". Finally, turn the blank 180° and mark the final side with a "4". This is the order in which you will cut.

We are now ready to start cutting. Set your stop block for the first cut. We will use this position for the first two cuts. Put the side marked "1" up and make the first cut.



Next we will glue in our veneer. Since I like to anchor my blank for gluing, and since my sled has a straight edge I can clamp to, I use my sled. I am using medium CA and I put

waxed paper under it to keep it from gluing to the sled. I clamp the stock, angled into the straight edge. Apply glue to the bottom side of the veneer and press it to the stock. Then apply glue to the bottom of the blank and place it against the veneer/stock. I apply pressure on the blank into the clamped stock to get a tight fit.



With our multi-color veneer, we need to make sure that the colors face the same direction for each cut. Although alternating this could create another unique pattern.

So far this is very similar to making a Celtic Knot. The only difference is that the segment in the cut for a Celtic Knot must be the exact width of the saw blade. For a scalloped blank this is not necessary, and probably would detract from the end result. But then again, I have not tried a thicker veneer and it may be quite interesting.

So we have made our first cut and glued in the veneer. We need to flip the blank 180° so that the side marked “2” is face up. Place the blank against the stop and make the second cut.



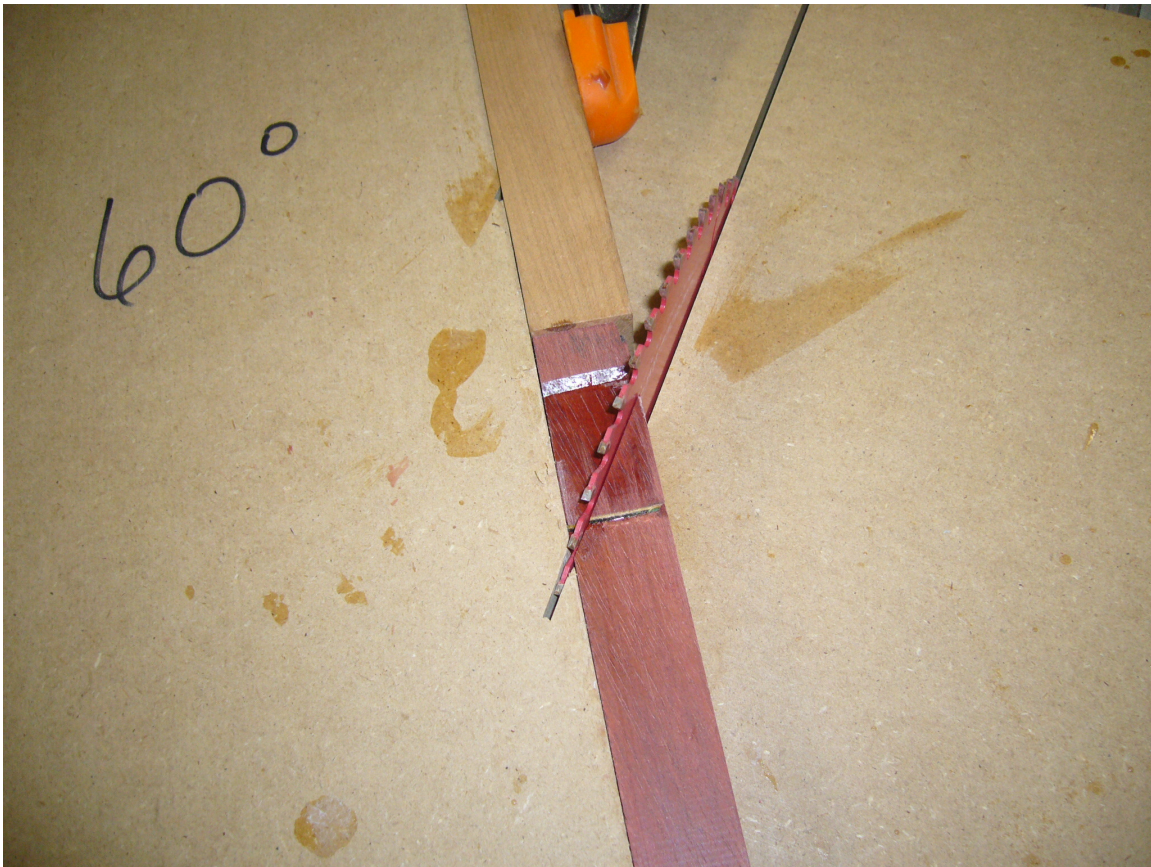
So you're thinking we now glue the veneer and the blank to the stock. If it were a Celtic Knot, you would be correct. But this is where we deviate from that design. In order to get the scalloped design, we need to remove the stock with the veneer in it. So the veneer from the first cut only goes half way through the blank. After the veneer and the trimmed stock are glued to the blank it will look like a "Y".

The red smudges on the waxed paper are a result of the bloodwood leeching color in the CA accelerator.



We are ready to move on to the third cut. But before we can do that, we need to reposition our stop. For my blank I have moved the stop $3/16"$. This results in the next cut being further down the blank from the first two.

Now we put the blank with side "3" up against the stop and make our next cut.



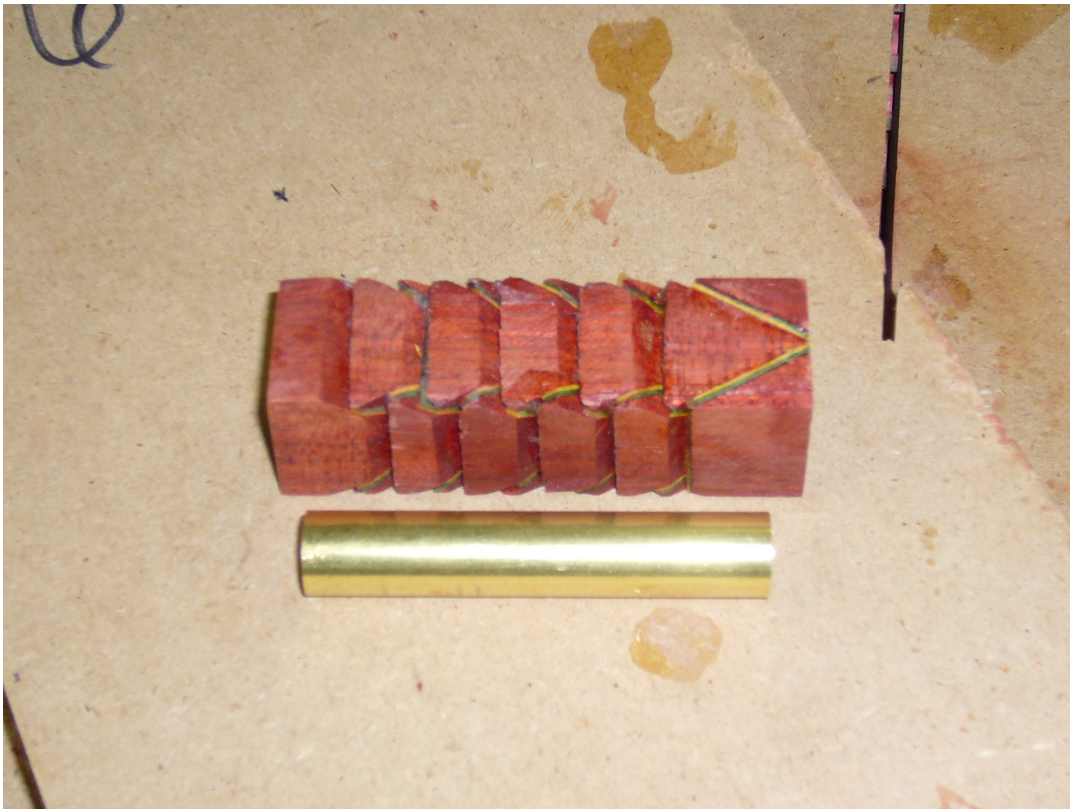
Again, we will trim off the stock with the veneer in it, and then clamp the stock, glue the veneer and blank using pressure to get a tight fit.

Flip the blank 180° so that side “4” is up, position against the stop and make the next cut. Trim off the stock with veneer in it, clamp the stock, glue the veneer and blank to the stock with pressure.

We have now made cuts on all 4 sides. Time to reposition the stop, in my case, 3/16”, turn the blank so that side “1” is up, and make the next cut. Lather, rinse, repeat.

Remember, the stock needs to be trimmed to remove the part with the veneer before gluing to the blank and after every two cuts the stop needs to be repositioned.

Use your pen tube to measure the appropriate number of scallops. Here is my Wall Street II tube with my completed blank:



Now we can drill the blank and glue in the tube. It is critical that the hole be aligned straight through the blank or the scallops will not be symmetrical. Use a barrel trimmer to square the ends.

At this point there are a couple things that I do, especially when turning a heavily segmented blank like this one.

First, I use my belt sander and round off the corners. This reduces the possibility of getting a catch while turning. Here is a picture of our blank after the tube has been installed and squared and the corners rounded:



Now turn the blank on your lathe. This is the pen I turned from the blank in this tutorial.



Here is another using purpleheart and yellowheart on a rhodium Americana Classic:



I hope this tutorial has been helpful and good luck with turning your own scalloped pen.