Random Irregularly Segmented Blank

Contributed by: John Muncie

A.K.A "BURLMAN"

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The International Association of Penturners - 2016

MAKING A RANDOM, IRREGULARLY SEGMENTED BLANK

By John Muncie AKA BURLMAN

If you are like me, you have “tons” of blank cut-offs that you just can’t bring yourself to throw away. Here are some of mine. If you are adverse (like me) to using small pieces close to motorized saw blades, here is one way to get around that issue.

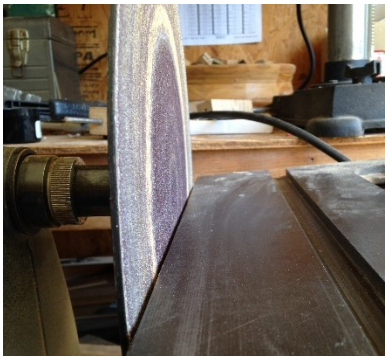
In this tutorial I’m going to show how to transform your cut-offs into an irregularly segmented blank, which, when turned will make a one of a kind, eye catching pen. It will WOW your customers on your craftsmanship, but in fact, it is extremely simple to make.

For this project I have selected 16 cut-offs from varying colors and species. Here I have some Spanish Cedar, Purple heart, Mesquite, Koa, Irish Bog Oak, Norfolk Island Pine, two pieces of spalted whatever, Redwood Burl, Ziricote, Bocote, Cocobolo, and three pieces of dyed Box Elder Burl (different colors).

Your next step is to sort the sixteen into groups of four. Be sure to vary the colors. It helps if the four pieces are all of the same size, however, it is not necessary.

Now, to the shop.

We now have to mate the four pieces in each section together. Part of the charm of this pen is the lack of 90, 45, and 30 degree angles. To get this effect, I use my disc sander, and set the table at no more than 2 degrees off of square. Here I have set the table one degree off square. I am using an 80 grit disc which I have found to be of ideal to rapidly take off stock as needed and yet smooth enough to provide for a secure bond when gluing.



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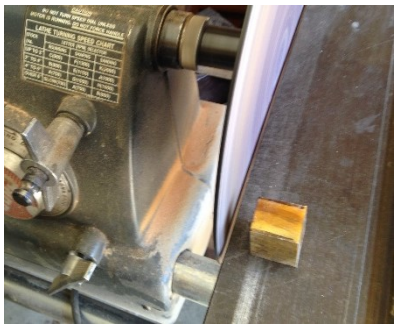
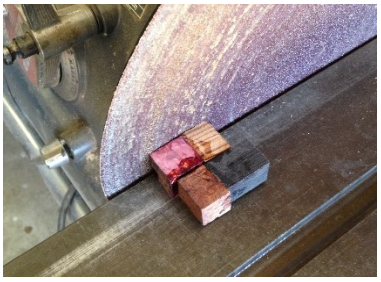
Now start sanding each piece smooth on one side and set aside. Do not worry about grain orientation. Again, that is part of the charm of this blank. Be sure to keep your groups of four intact. After all are sanded, dry fit the pieces, two by two, sanded sides together to ensure a flush fit. When satisfied, glue the pieces together with thick CA and clamp for a minute or two. Wipe off any excess CA with a paper towel or rag.

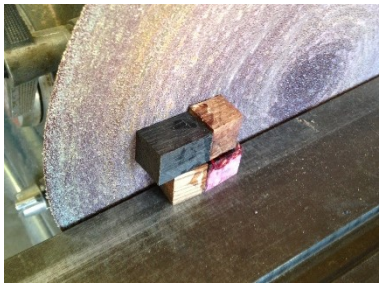
Here's a picture of my eight two piece sections.



Next, sand the concave side of the glued up doublets. You may have to sand one end of the doublet so that you have a stable base when you are sanding the concave side. Again, dry fit both halves of your four piece sections to ensure they are flush, and when satisfied, glue together and clamp. Here's a pic of my four piece sections.

When these are dry, you are going to have to sand one side of each four-piece section flat. To do that, determine the most stable of your four edges on each section and lightly sand it so that is somewhat flat and stable. Now place that edge on the table surface and sand either face of each section so that it is flat. I find that I can get more accurate results if I sand the concave surface (if there is one). Now sand the opposite side flat. NOTE: the two sides DO NOT have to be parallel to each other. It is preferable if they are not, as it adds to the randomness effect.





Here's a picture of my four glued up sections.

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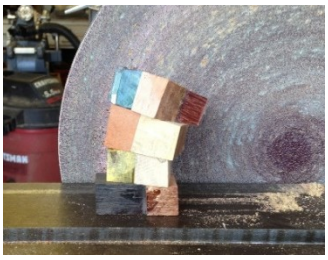
Next, dry fit in a stack, taking care to offset each section so as not to align the glue joints in adjacent sections. Turn the sections as necessary so that you end up with a somewhat vertical stack.

This:

Not this:



When satisfied, glue up the four sections, two by two and clamp. Using your eyeball, try to get the intersection of the four pieces of each section to line up vertically with each other, but be sure to rotate adjacent sections so that the glue joints are not lined up. Makes for a stronger blank.

Here are my four sections glued up two by two.

After these have set, glue the two 8 piece sections together and clamp. Let them sit for about thirty minutes.

Now set your disc sander table back to square. Set your blank on end and sand the corners off your blank to get it somewhat cylindrical. This step is not absolutely necessary, as you can turn the corners off on your lathe.

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Your next step is to mount your drill chuck in your lathe with and drill at least a ¼" hole ½ inch deep in each end of your blank at the intersection.

Mount the blank between centers, and turn it round into a cylinder. Take your time and go lightly.

Here's a picture of the rough turned blank. Dimensions are 2.75 inches long and roughly 1.125 inches in diameter.

This blank is now ready to be drilled and turned. While this blank has four four piece sections, I have made these up to seven sections.

Here are some pictures of pens that I have made (and sold) over the past several years.

As with any segmented blank a blowout is a definite possibility. I have had several, all directly attributable to "operator error", due to a faulty joint, poor tube glue adhesion, or just plain carelessness when turning. Be patient, and be willing to try again.

If you choose to try this method out, I would love to hear about (and see) your results. Also, if you have a method that is an improvement on mine, I would love to hear about it. Good gluing and good turning. John

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