

Building a spider segmented pen

By: Jim Boyd

This is an easy project that uses minimal jigs and has a fair to good WOW factor. The materials needed are 1 piece of maple 3/4"x3/4"x20-24" in length. Either length will be enough to make the pen but I added extra for spare segments and as a safety factor when cutting the miters. A few rubber bands for glue ups. You will also need a dyed black veneer strip approximately 1"x48". I used Titebond II glue for all of the glue ups. The only jig used in the entire process is a standard 45-degree miter sled. If you do not have a sled a good miter gage and stop block will do. For the spider I used a scroll saw and epoxy dyed with lampblack artist pigment. The pen kit is a Baron from Arizona Silhouette.

Start by ripping the maple board in half with the blade tilted at 45 degrees. I used some scrap for this project hence the picture shows four mitered pieces.



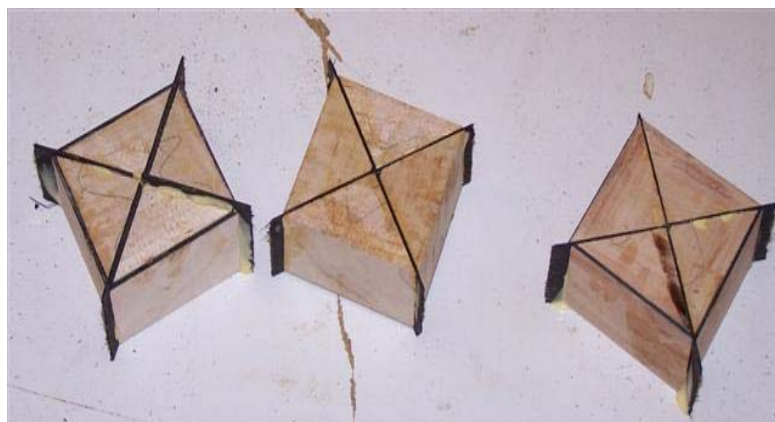
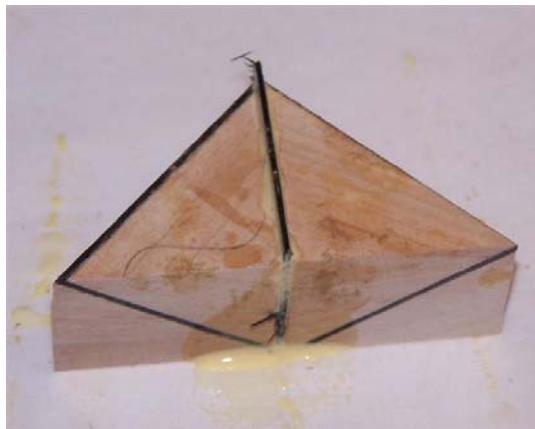
Next glue the mitered pieces together with a strip of black veneer sandwiched in the middle. Rubber bands make good clamps here and this is the only time they are used. A card scraper does a good job cleaning up the squeeze out after the glue dries.



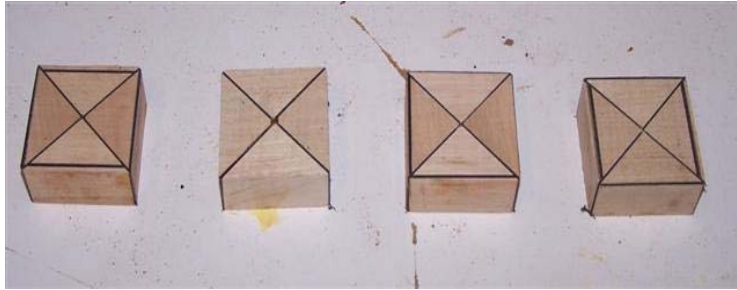
After the pieces are cleaned up the next step is cutting them to make squares. Make the first cut by trimming off one end at 45 degrees. Roll the piece 180 degrees and set to make a cut where the blade makes a point at the intersection of the last cut. I used double sided tape to attach a stop block so all of the pieces are the same. You will need to cut at least 12 pieces for a standard pen or 16 for a closed end pen.



Next glue-up these segments together and sandwich a piece of black veneer between each segment. Make sure all of the veneer is matching on each miter before gluing. After these half layers dry hand sand the long edge flat on a piece of sandpaper laid on a flat surface. Next glue to halves together with another piece of black veneer sandwiched in the middle.



Now you need to make the layers flat. Hand sand with a piece of sandpaper on a flat surface. Do this to the top and bottom of each layer. After the faces are flat you can glue them together making sure the veneer all goes the same direction from the top to the bottom. The finished pictures at the end show 2 ways to orient the corners, either aligning the corners or turning the 45 degrees. Drill and turn. There is a fair amount of waste involved in this part of the pen.



Now to make the spider cap. The spider is made by drilling two holes and scrolling the legs. Start with the smaller head hole first. I used a 5/32 drill. The body hole intersects with the head and if you drill it first the smaller drill will always walk into the larger hole leading to frustration. For the body hole I used a 9/32 drill and drilled it so it overlapped the head hole just a tad. Next pencil in some legs. Threading the scroll saw blade through the body cut on the leg marks. The completed spider looks like this.



Mix up some epoxy with the black artist pigment and fill in the spider. Be sure to put some tape

on the bottom to hold in the epoxy. To get the air bubbles out and to aid in making sure the legs get filled this is what I did. I taped the blank to my scroll saw and turned it on. The vibrations helped force the bubbles to the top.



To connect the spider to his web I made a scroll cut from the end of the blank to tail end of his body and filled with a piece of black veneer. All that is left is drill and turn. The finished pens will look like this.

