



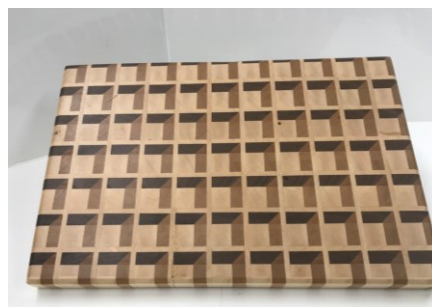
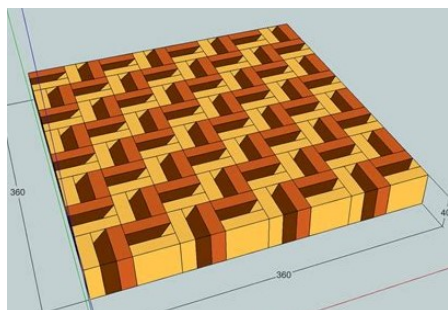
International Association of Penturners

## Creating an Optical illusion Segmented Pen Blank

Author: Steve Johnson aka: SteveJ May 2023

Downloaded from [www.penturners.org](http://www.penturners.org)

Determine what illusion you are seeking to create. There are many illusion cutting board designs which can be modified for a pen. Look for optical illusions which are created in “rows.” Here are a couple of examples:



Some will work well with staves to wrap around the blank as outlined in the first example below. Others will work better separated by an accent strip as shown in the second example.

Once you’ve chosen your design, break it down into individual squares which you will glue together to form the illusion.

### A zig-zag illusion method is developed first.

For the first example you will need three contrasting woods. I used maple, padauk and wenge. First cut a 45-degree angle on the wenge and a piece of maple to form the center strip. (I chose to do it in end grain, but it would provide better contrast when finished if done inside grain.)



Arrange the pieces to reveal your illusion.  
Flip and twist to get the desired effect if flat.



Stack the pieces and glue the “columns.”

I used CA glue and a simple clamp to hold the pieces together while the glue dried.







The next step is to saw these glued up pieces into staves. I used double sided tape on a 22.5-degree “fence” to cut the first side, then flipped the pieces over and repeated the process on a 45-degree fence.







Then assemble and glue the staves into your barrel shape. Now remember to orient them correctly to carry the illusion around the blank.

I used rubber bands to hold the staves in place while the CA dried. I may have used an accelerator to speed up the process.

The hole is for a skewer to help in centering the blank when gluing sacrificial end pieces.

Although I didn't need to, I chose to use some sacrificial maple before drilling the blank using a collet chuck.

Below is the blank as I'm turning it.



After replacing the maple end pieces with padauk, this is the final resulting pen. Note that on the unfinished piece above, the contrast is greater than on the finished pen. This is the result of using end grain instead of side grain.



By using staves, the optical illusion runs all the way around the pen!

---

### **A shadow box is the second illusion blank and is developed using similar methods.**

Since I wanted greater contrast, I altered my methods to enable me to use side grain instead of end grain. I used rosewood, maple and an unknown “yellow” wood to create the box, with white accents to divide the boxes. (The white is actually from some vertical blinds we removed – it has a slight bend to it but once cut, sanded, and glued, it worked like a charm.)

I simply cut a square off a maple blank and cut thin strips of the rosewood and the yellow stuff. I then sanded one edge of both the rosewood and yellow to create a square.



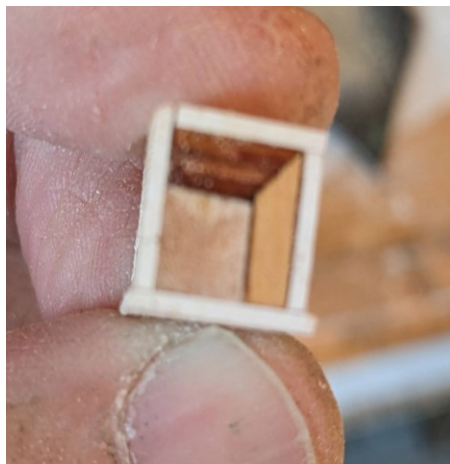
I glued the white accent on the side of two of the squares and then glued the pieces together.

Each piece is about  $\frac{3}{4}$  x  $\frac{3}{8}$  x  $\frac{3}{8}$  of an inch. I glued the pieces together to create a strip as below. (with white accent in the middle)





I forgot to take pictures of the last few steps, cluing the accent to the sides along with more rosewood. Then I drilled the appropriate hole and put endcaps of the white accent and maple. For a little more fun I created a box to use for the finial!



This is the result of the finished box illusion pen:

