



Three Wing Box

By: Jeff Burklow

Tools needed:

3/8" Detail gouge or bowl gouge
Hollowing Tool of your choice
(For the demo I am using an Easy wood
tools finisher)
Skew Chisel or square scraper
Spigot jaw chuck
Jamb chuck
FACE SHIELD!!!!!!
Live center with point removed
Jacobs chuck with a Morse taper to fit your
tail stock with a 1" Forstner bit

Material:

A dry straight close grained piece of
wood that measures 3-1/4" cubed. For
the demo I am using Maple.

BE SAFE!

If you are uncomfortable completing any of the steps outlined in this demo STOP. Contact someone in the club and ask for some pointers. One thing about wood turners they are always ready to help out.

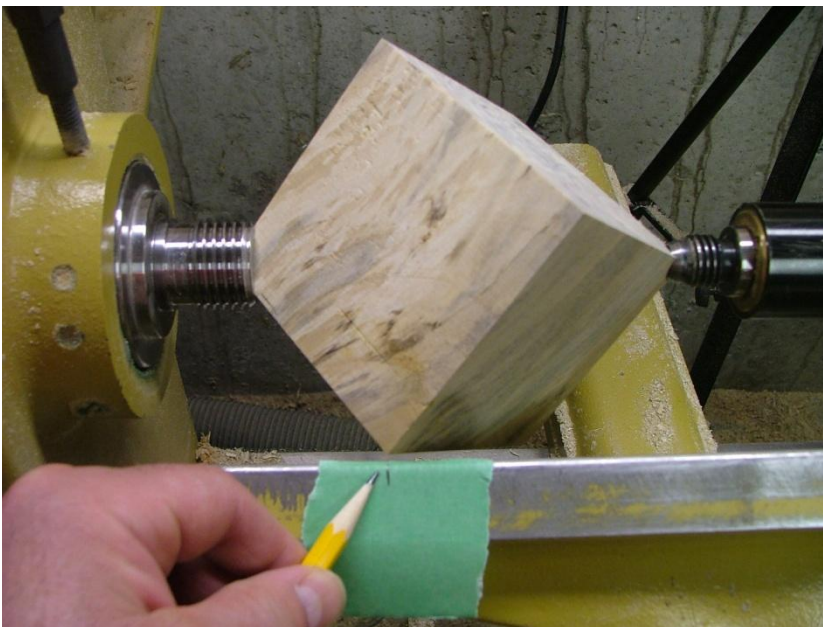
Because of its odd shape, stop the lathe when moving the tool rest. The wings are like a little chainsaw and the last time I looked, Saw Stop doesn't make lathes!

Procedure:

1. The piece starts out being held between centers using the head stock and revolving center as a friction drive.



2. Before tightening the piece all the way verify the blank is being held squarely between centers. Place a piece of tape on the tool rest and use a pencil line aligned with one of the points (on the headstock side) and slowly rotate the piece using the hand wheel, check each corner and align as needed then tighten the piece down COMPLETELY and lock the tailstock in place.



3. Now at the tail stock end using either a skew laying flat or a square scraper turn a tenon. Leave sufficient mass to be able to be held by the spigot jaws making certain to leave a square shoulder. The tenon should be about an inch around and 1-1/2" long. Now is also a good time to start shaping the bottom and removing the bulk of the material and the extra corners at the bottom.



4. Once you have completed the initial shaping, turn the piece around and mount it in the spigot jaws using the previously marked centers to center the piece. Begin turning the top of the piece.



5. Taking light cuts, begin turning down the top. Once the center point has been turned down you will start shaping the “wings”. One thing to note speed is critical here in order to keep from getting too much banging while turning the piece; you should be turning at above 2000 RPM’S. This will also help in getting a cleaner cut. Lighting is also a key component in this project since you will be turning the “ghost” for much of the time meaning wood,air,wood.air,wood,air (I think you get the point) it is very important to be able to see the outside shadow (or ghost) of the wings.



6. Turn the center down to match the shape of the bottom half of the box leaving an indent in the center to allow the Forstner bit to start.



7. Drill a hole to a depth that suits the piece you are creating. For the pieces that I have created a depth of 1-1/2" is about right. Watch the tip of the bit and err on the side of caution, you can always hollow it out but you can't add.



8. Hollowing is the next step. Using your favorite hollowing tool open the inside to about a 1/8" or even a little thicker. Due to its odd shape it is not a bad idea to leave the bottom a little thicker to allow it to sit and not wobble. Watch those wings while hollowing! Once hollowing is complete, use a pad sander to clean up the wings



9. Now it's time to finish the bottom of the piece. Using a jamb chuck, reverse the piece and bring up the tailstock for support. Leave the tailstock in place for as long as possible to maintain support of the piece, finish shaping the outside. Sand and finish with you favorite sealer and finish.

