

## Constructing a Floating Base – Table Saw Technique #1 by Kevin Neelley

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Photo 1 – Segmented base ring with floating disc. The slot for the floating disc was made using a table saw. Base ring and floating disc were finished with lacquer prior to assembly. The desired final segmented ring was 4" OD and 1-1/2" ID. Calculated dimensions including oversize board due to outside slot: Segment Edge Length 1.072", Board Width 1-3/4", Board Length 13".

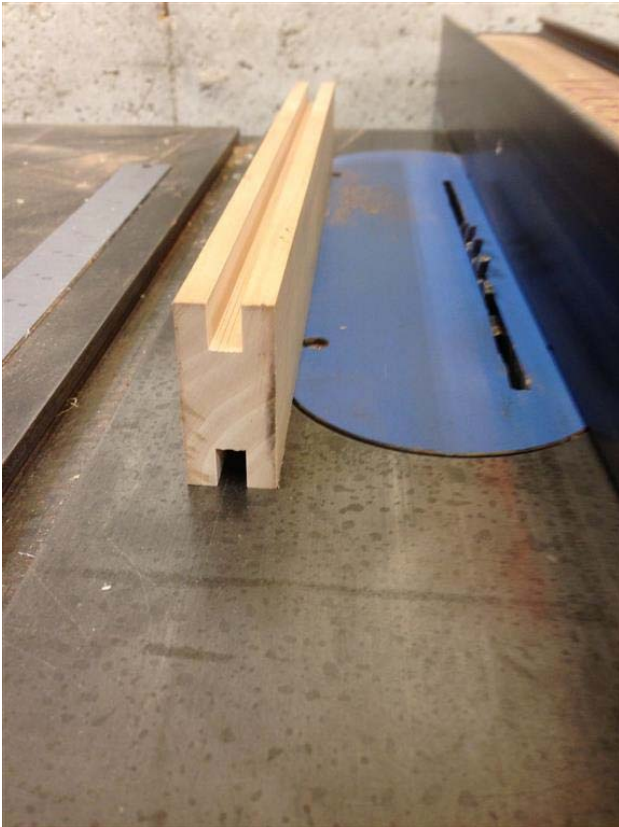


Photo 2 – I cut 3/8" deep slots centered in each side of the board. The slots were about 1/4" wide. I was still able to measure and cut the Segment Edge Length of 1.072" at the bottom of the outside slot.

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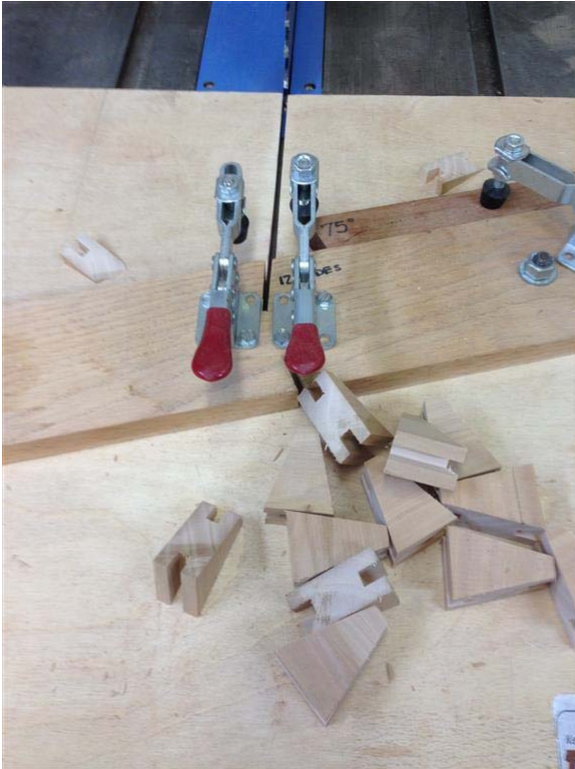


Photo 3 – The twelve segments were cut on my sled. (For a future project, I am planning to make and test a jig that would cut the inner slots into the segments after regular segments are cut, saving the waste and allowing standard segment size calculations.)

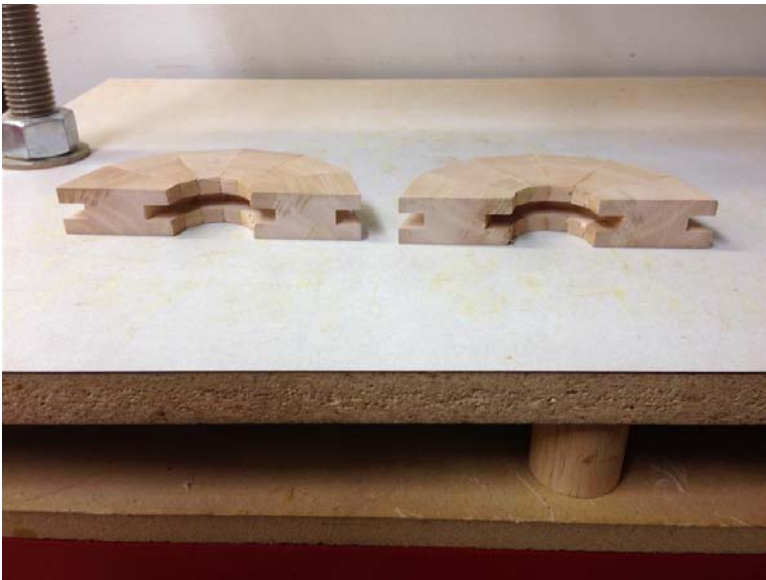


Photo 4 – The segments were glued together into two half rings. Top and bottom were chosen and marked on the half rings. I sanded the half-ring butts to make the ring halves fit together perfectly.

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Photo 5 – The half rings were rubber banded together using the outer slots and clamped into a Cole jaw chuck. The top inner side of the ring has been turned round.

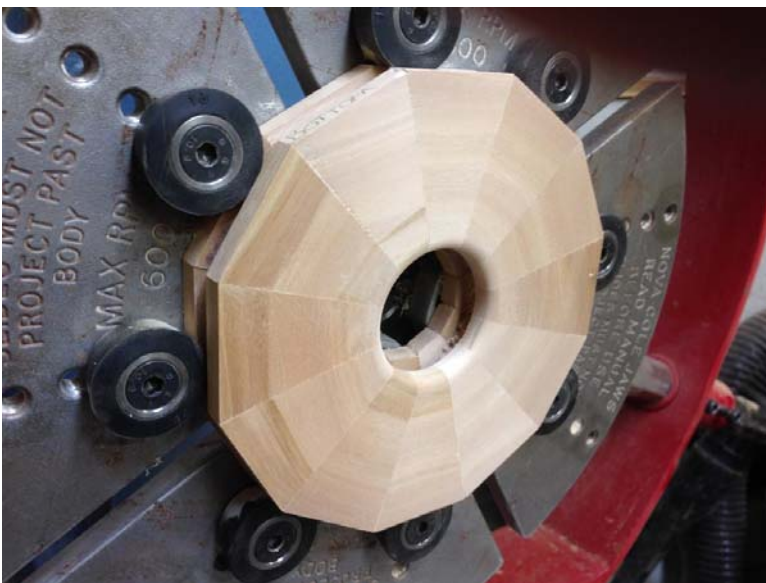


Photo 6 – The bottom inner side of the ring has been turned round and faced off.

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Photo 7 – The two rings halves have been separated to show the different curves of the inner side of the ring. Top ring side is facing up.



Photo 8 – The disk was made and fitted. The disk is about 1/16" loose on the OD and about .010" loose on the top/bottom in the slot. Top ring side is facing down.

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Photo 9 – The fit and disk looseness was tested with the ring halves rubber-banded together.



Photo 10 – All parts were separated and finished using lacquer. The disk was test fit again for looseness.

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Photo 11 – The two ring halves were glued together, making sure the disk remained loose in the slot. A tenon was cut in the faceplate waste block to the exact ID of the floating disk recess. The tenon height has about 1/32" clearance to the floating disk (does not touch) to hold the faceplate end of the bowl in place as it is parted off the faceplate.



Photo 12 – The lacquer on the bottom side of the ring was sanded off and the ring was glued to the faceplate waste block.

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Photo 13 – The top side of the segment ring was faced off and flattened and the OD was rounded, removing the outer slot. The final ring dimensions are 4" OD by 1-1/2" ID.



Photo 14 – After the bowl is completed and parted off the faceplate waste block, the floating disk recess can be used for exact centering of the bowl for reverse turning the base.