



# Making a Twisted Urn

A slotted, segmented  
wood turning project  
by Brian Horais

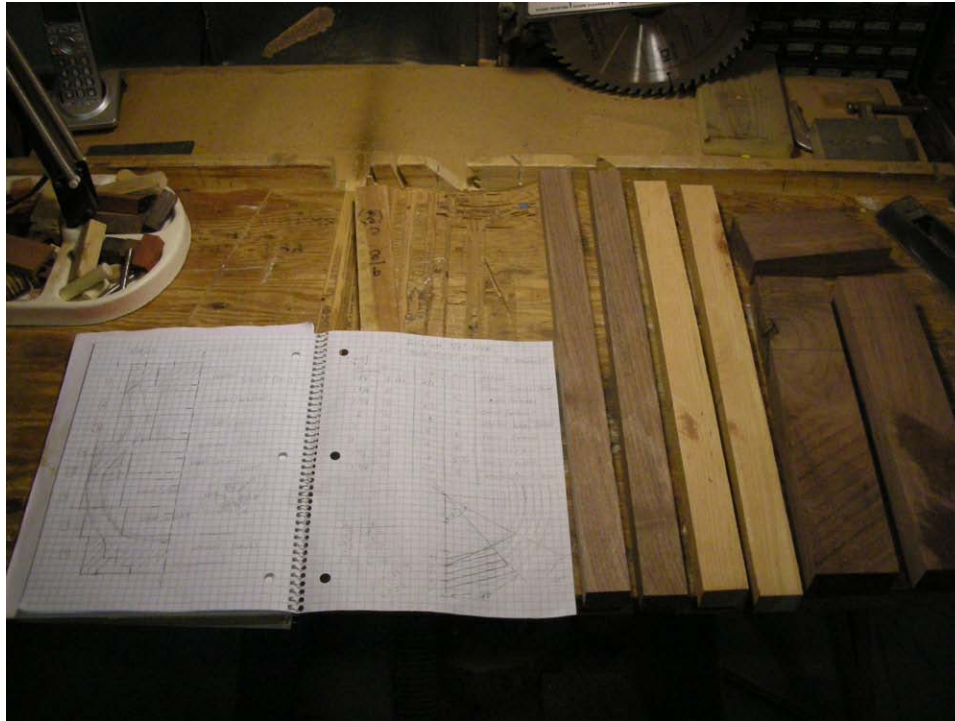
# Background

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- I developed this wood turning project to incorporate a number of diverse techniques:
  - Segmented turning
  - Slotted turning
  - Off-axis turning
- My approach was to develop a design for a shape that followed the lines of a Grecian Urn
  - The base of the urn would be a cylindrical shape
  - The top of the urn would be a twisted, off-axis triangular shape
  - The segmentation and slots would integrate with the design in a Southwestern motif

# Planning

- As with any segmented wood turning project, good planning is essential to prepare the segments of the various wood-types along with their layout in the overall design



Shown here are the notebook layout details  
And the slats of walnut  
and maple used for the  
base and interior  
segments

# Making the Parts

- Segmented turning requires precise cutting of the wood segments in pattern determined by your overall design.
  - Other resources are available on line to discuss segmented turning, such as: ‘Segmented Turning’ handout from Malcolm Tibbetts on his website at [www.tahoeturner.com](http://www.tahoeturner.com)



Shown here are the segmented pieces for the base and top (large walnut triangles) and the interior segments (walnut and cherry). I chose a 6-sector approach for the top and base and a 9 sector approach for the interior segments to complement the three-sided twisted top of the turning

# Gluing the 'stack'

- Once the parts have been cut, edges sanded and dry fitted, it is time to glue up the stack, layer by layer



Bottom half



Top half



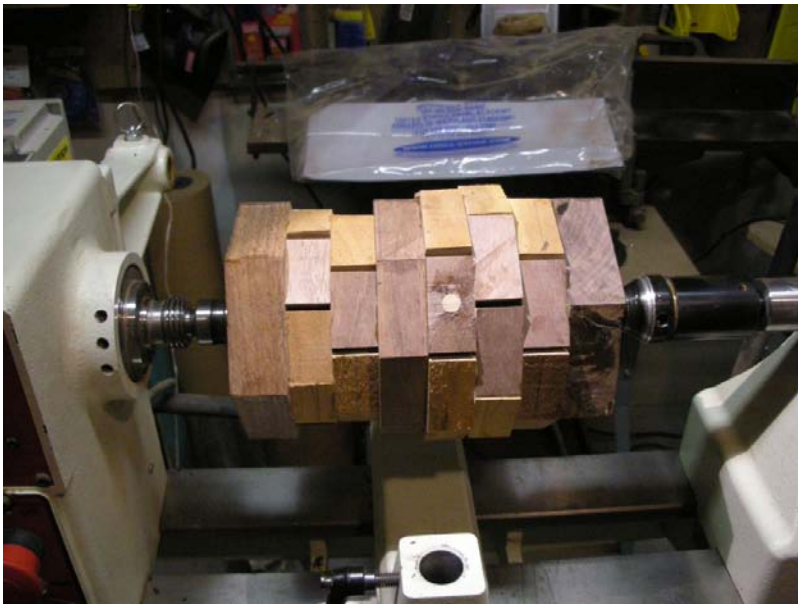
The gluing 'press'

The top and bottom were glued with slots added between selected segments as part of the design. Notice the small round cherry inserts in the three walnut segments on the bottom half. These were added to the segments before gluing. The sophisticated gluing press is a nearly full gallon paint can. It works!



# Rough shaping on the lathe

- Once the stack is completely glued and dry, the stack is mounted on-center on the lathe and the basic shape is cut using a large (very sharp) roughing gouge



Stack before shaping



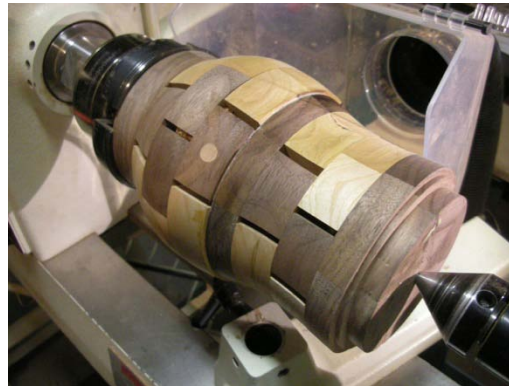
Stack after 'rough' shaping

# Working the inside first

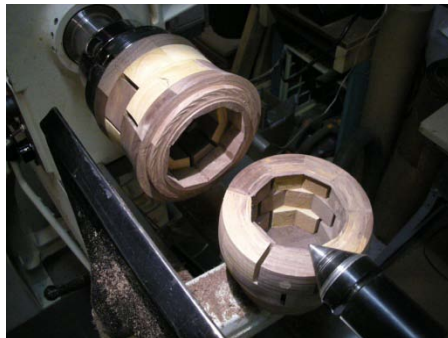
- Because this shape would have a large base and a smaller, twisted upper portion, I decided to part the top and bottom, finish the insides (fully turn and sand the lower half) and rejoin the top and bottom before doing the off-axis turning of the top



Parting the top and bottom



Parts rejoined

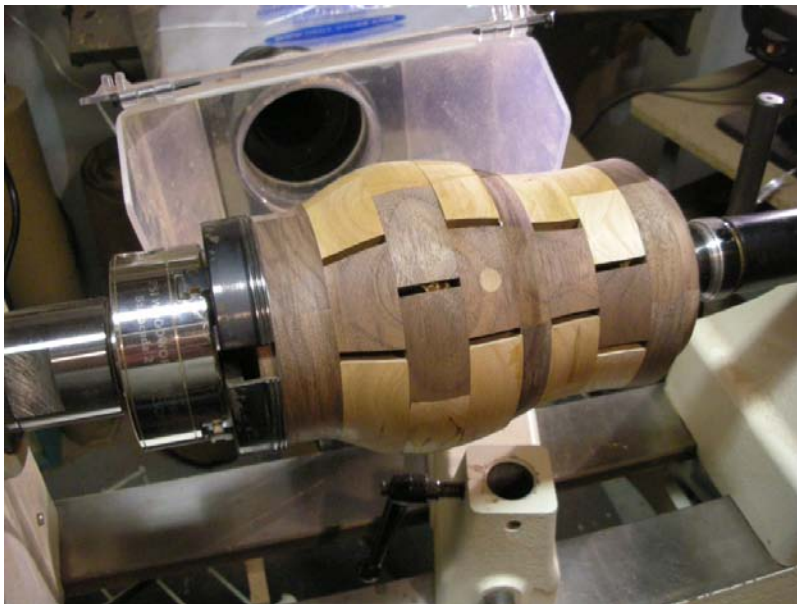


Separated parts

A small tenon was cut into the base and the lip of the top half was closely matched and then aligned and glued

# Finish turning on the bottom half

- After turning the inside surfaces and rejoining/gluing the top and bottom together, the outer shape was completed, with close attention to the final shape of the bottom half. The upper half was turned to an approximate shape on center.



The bottom half of the urn is now in its final shape. Note that there is a tenon cut on the top and bottom walnut pieces to allow clamping with a 4-jaw clamp. This is a very important clamping surface for final finishing



# Turning the top off-axis

- A three point, twisted off-axis method was used to turn the triangular-shaped upper half of the urn. The slots in the segments provided a guide for wall thickness



Off-axis mounting for turning



The part 'wobbles' during off-axis turning

You can learn more about off-axis turning on Barbara Dill's website: [www.barbaradill.com/paper.html](http://www.barbaradill.com/paper.html)

# The 'twisted' top

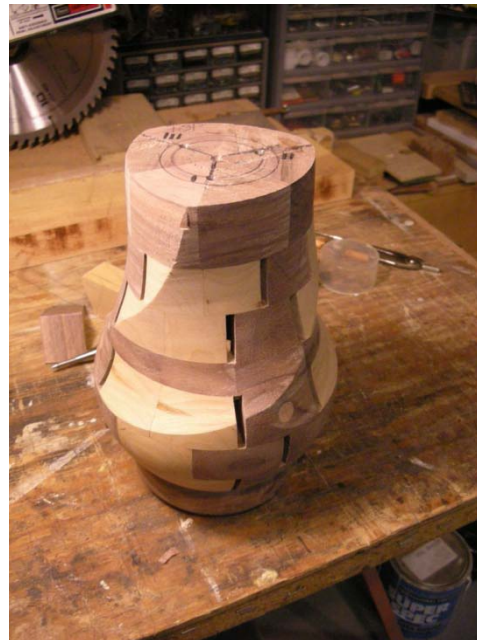
- Using a 3-axis (120 degree separation) off-axis turning method, the twisted top was turned to the desired shape



Top view showing offset points



The twist is turned

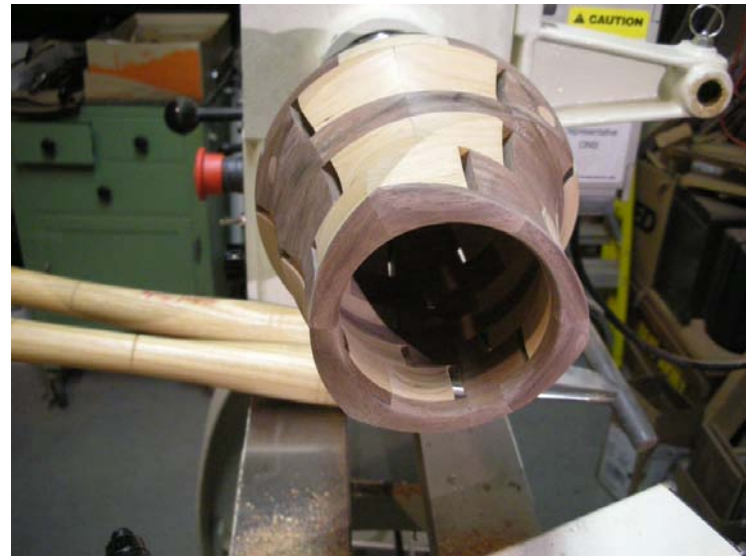


Top view before opening it up

These views show the off-center points on the top of the urn. Numbering the points is critical to keeping track of the offset turning steps. The completed offset twists were finish sanded before parting the top to open up the urn

# Opening the top

- With the twisted turning completed, the base tenon was mounted on the 4-jaw clamp and the top was removed to expose the urn's interior



With the end of the top removed, the upper interior of the urn was finished. Note the triangular outer shape of the urn's top. This is created by the three-axis off center turning.

# Finishing the top

- Using files and sandpaper, the top opening was carved to make the triangular interior opening match the outside contour, giving it a 'how did he do that on lathe?' look





# Finishing the bottom

- Now the only surface remaining for final finishing was the bottom. Interior expanding clamps were used to hold the top and the bottom was initially centered on the tail stock



Live center on tailstock for initial turning



Live center removed for final base turning

# Putting on the finish

- Multiple coats of Watco natural oil finish were used to bring out the beauty of the wood and provide a satin hand-rubbed final finish



Final turning prior to finishing.  
Note the details of the carved  
lines and the circular insert



This was after multiple coats of finish  
were applied. The inverted drying  
was done for the outer surface

# The final product

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- A twisted, segmented, slotted urn in walnut and cherry



The slots were used to highlight the design and the twist. Notice that the slots are symmetrical on the base but follow the twist on the top section. The carved lines were added to balance the upper cherry twisted section and to bring out the Southwestern motif.

Size is approximately 8 inches tall and 6 inches in diameter