

Brief Overview of Segmented Woodturning

By: Pete Marken



First Step Board Preparation



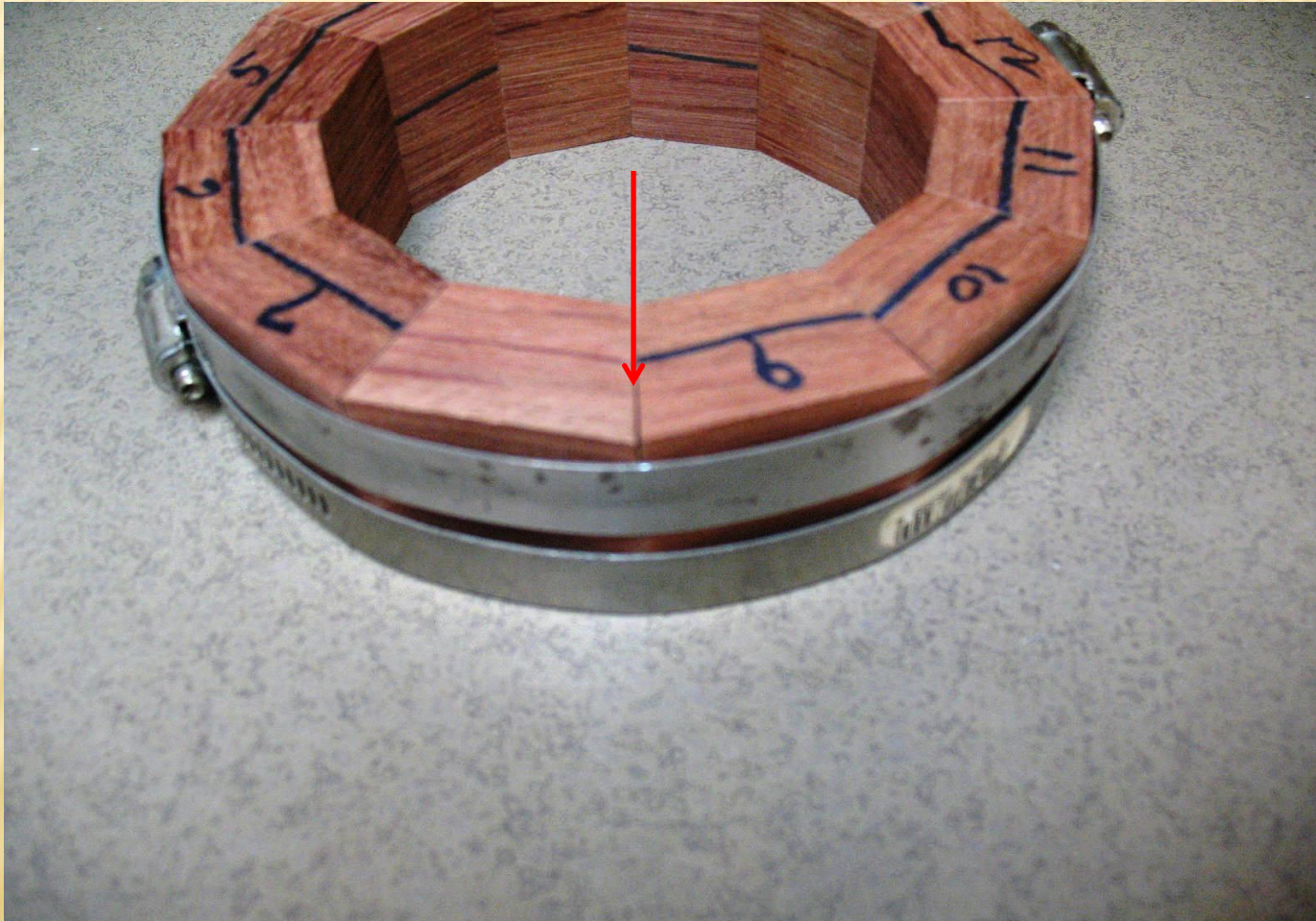
1. Cut board to desired thickness on the band saw.
2. Surface sand board to remove saw marks
3. Allow enough thickness for additional sanding later.
4. Cut to proper width on the table saw. Width of the board determines wall thickness.

Cutting The Segments



- Segments can be cut on the table saw or miter saw.
- Miter angles must be precise in order for the segments to create an exact polygon.
- Edge length of the segments determines the OD of the ring
- Miter angle is determined by the number of segments.
 - 12 segments = 15 deg.
 - 18 segments = 10 deg.
 - 24 segments = 7.5 deg.

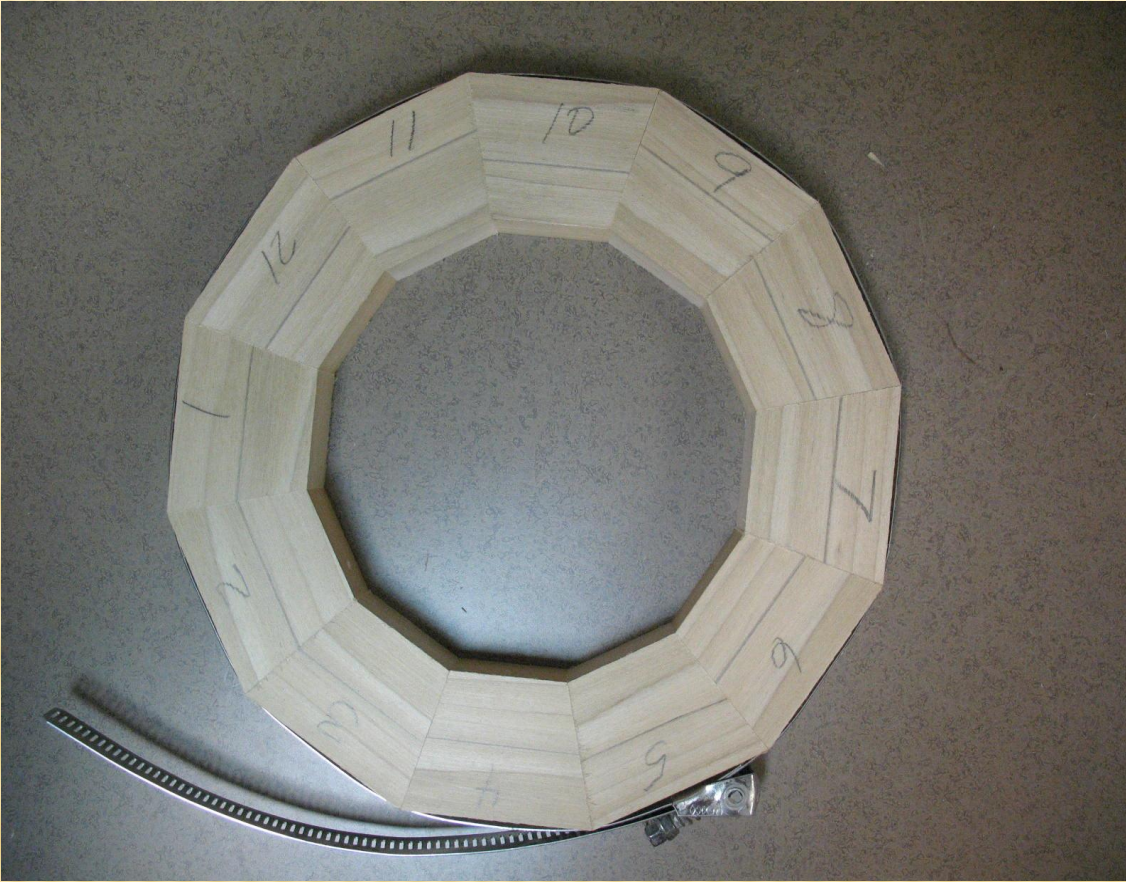
Miter Angle Off



12 Segments Ready For Gluing

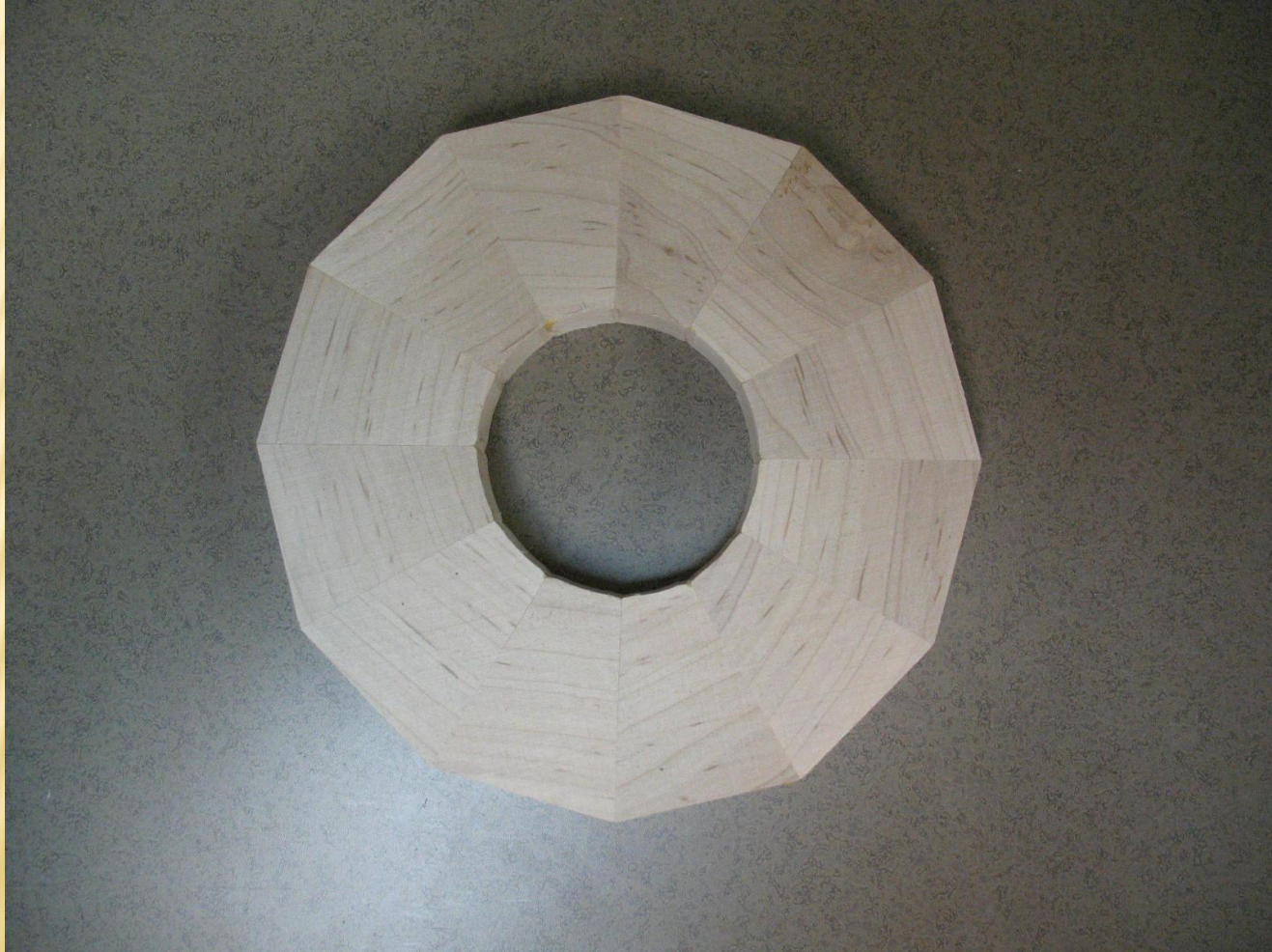


Glue Segments To Form Ring

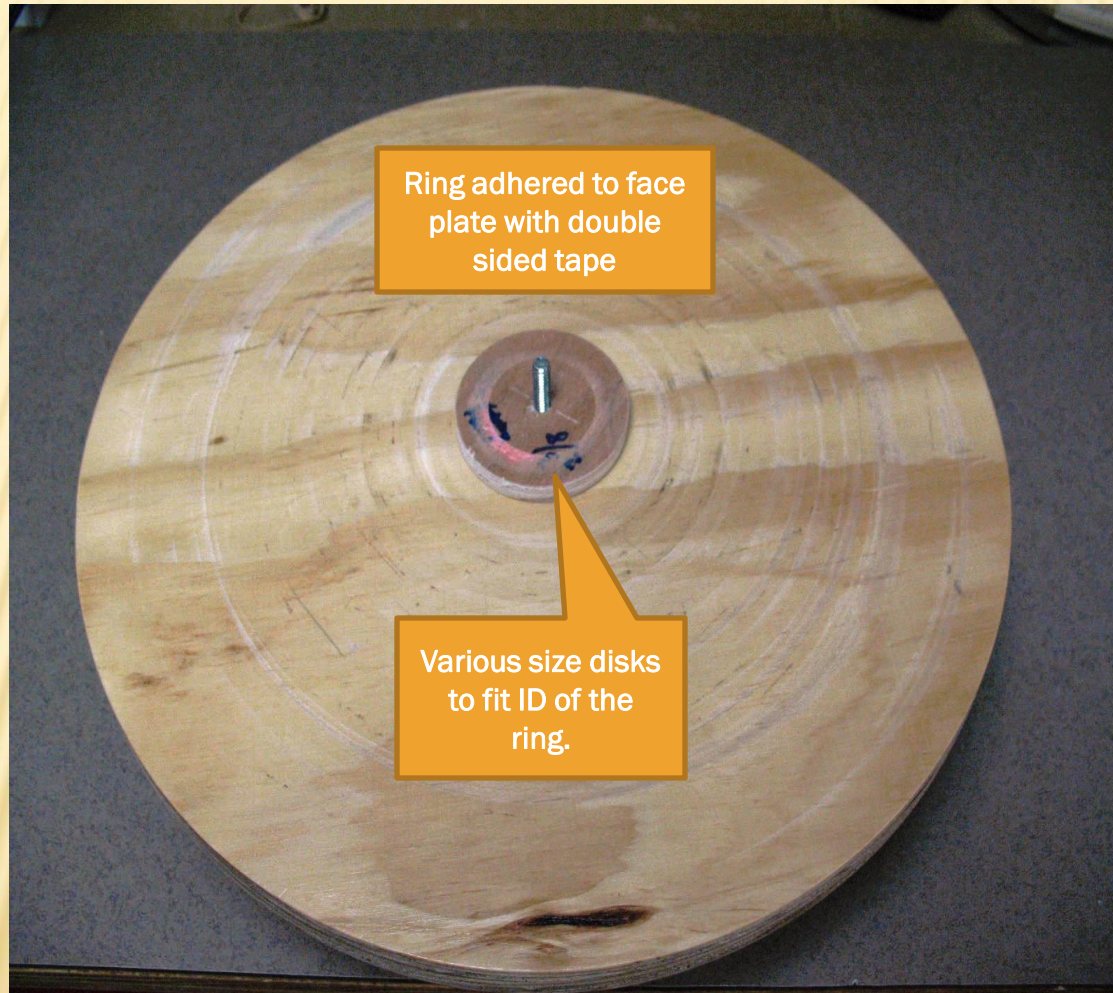


- Lightly sand any fuzz remaining from sawing.
- Thoroughly apply glue to both edges of segment.
- I prefer TiteBond wood glue.
- Use hose clamp to draw all edges together.

Example Of Glued Up Ring



Centering Faceplate To Turn Rings Round



Turn Ring Round



After Turning

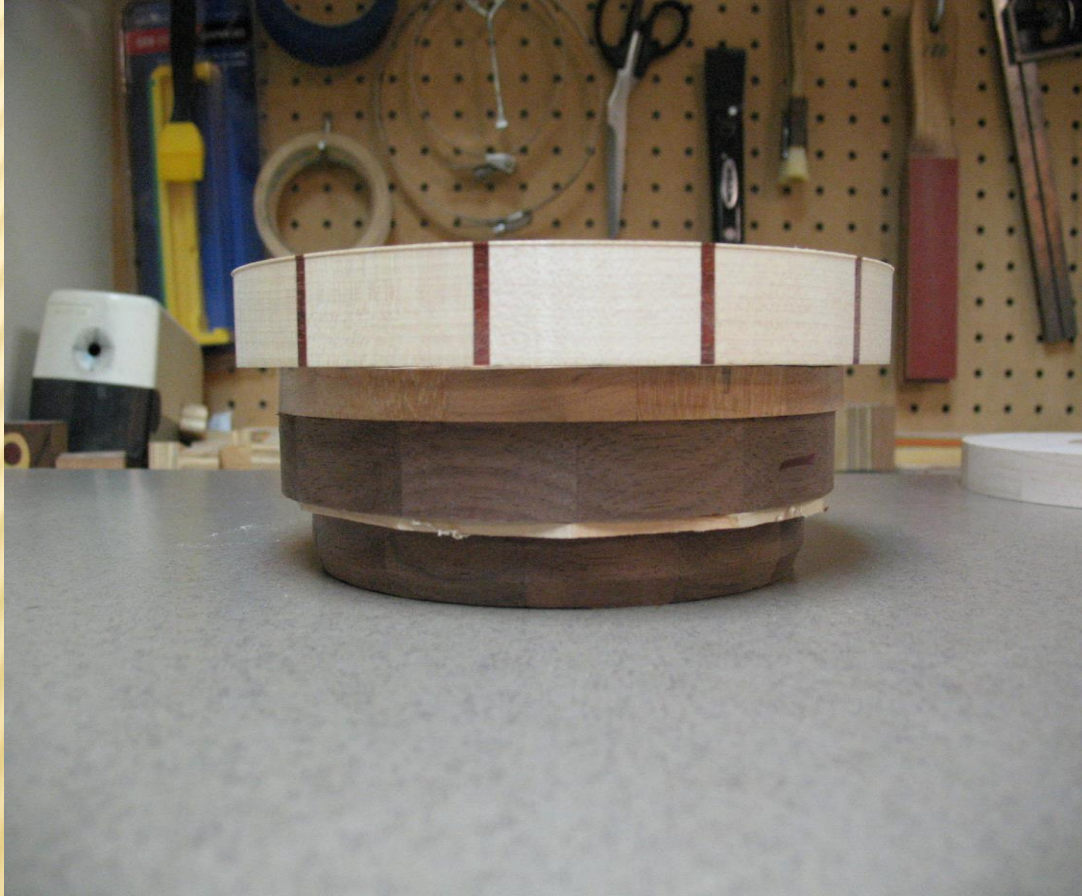


Flatten Ring



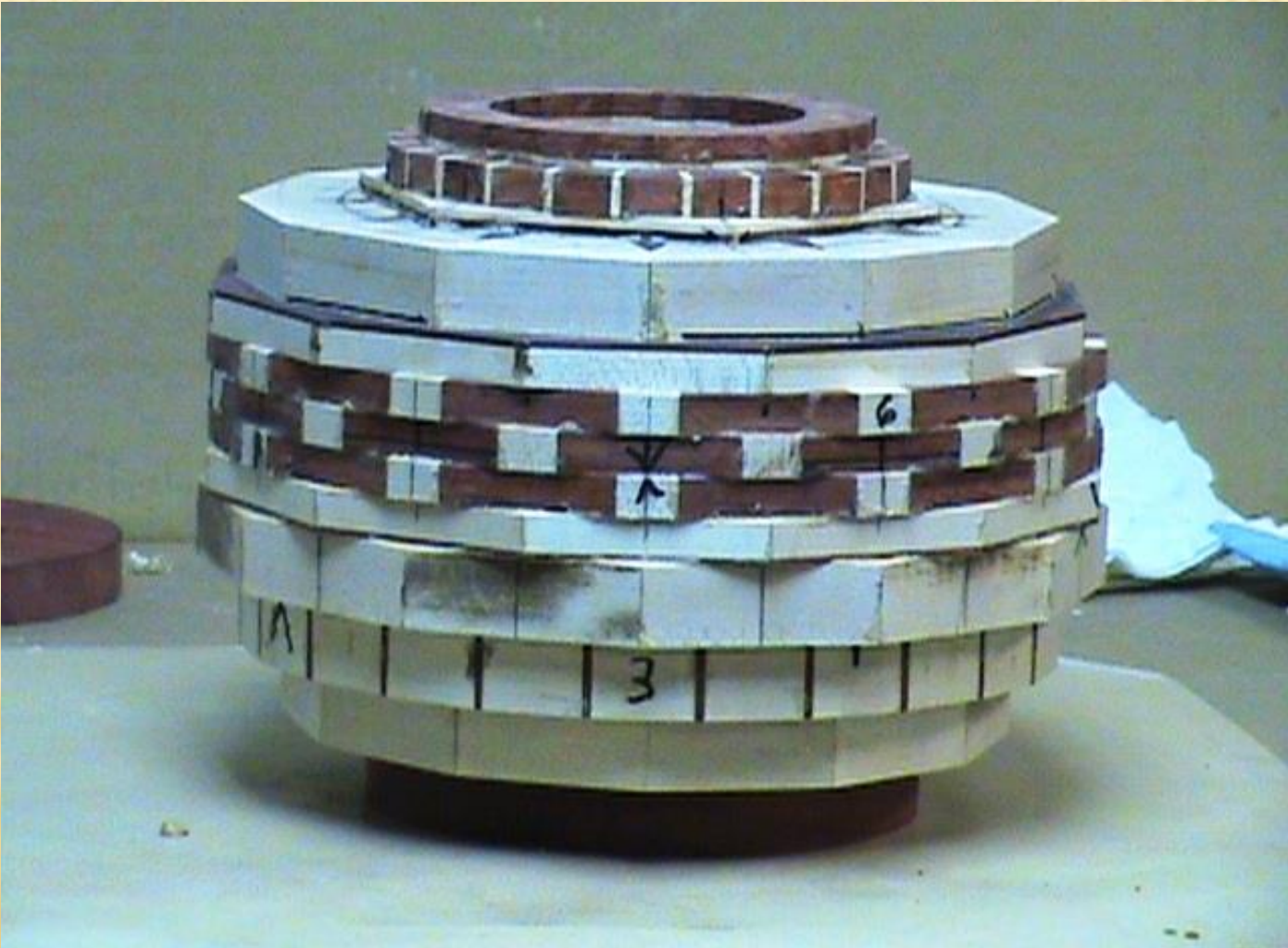
- Flatten ring on the drum sander.
- Take four light passes with the same setting on drum sander.
- Rotate ring 90 deg. After each pass to insure flatness.
- Repeat until final thickness is reached.

Stack And Glue Rings

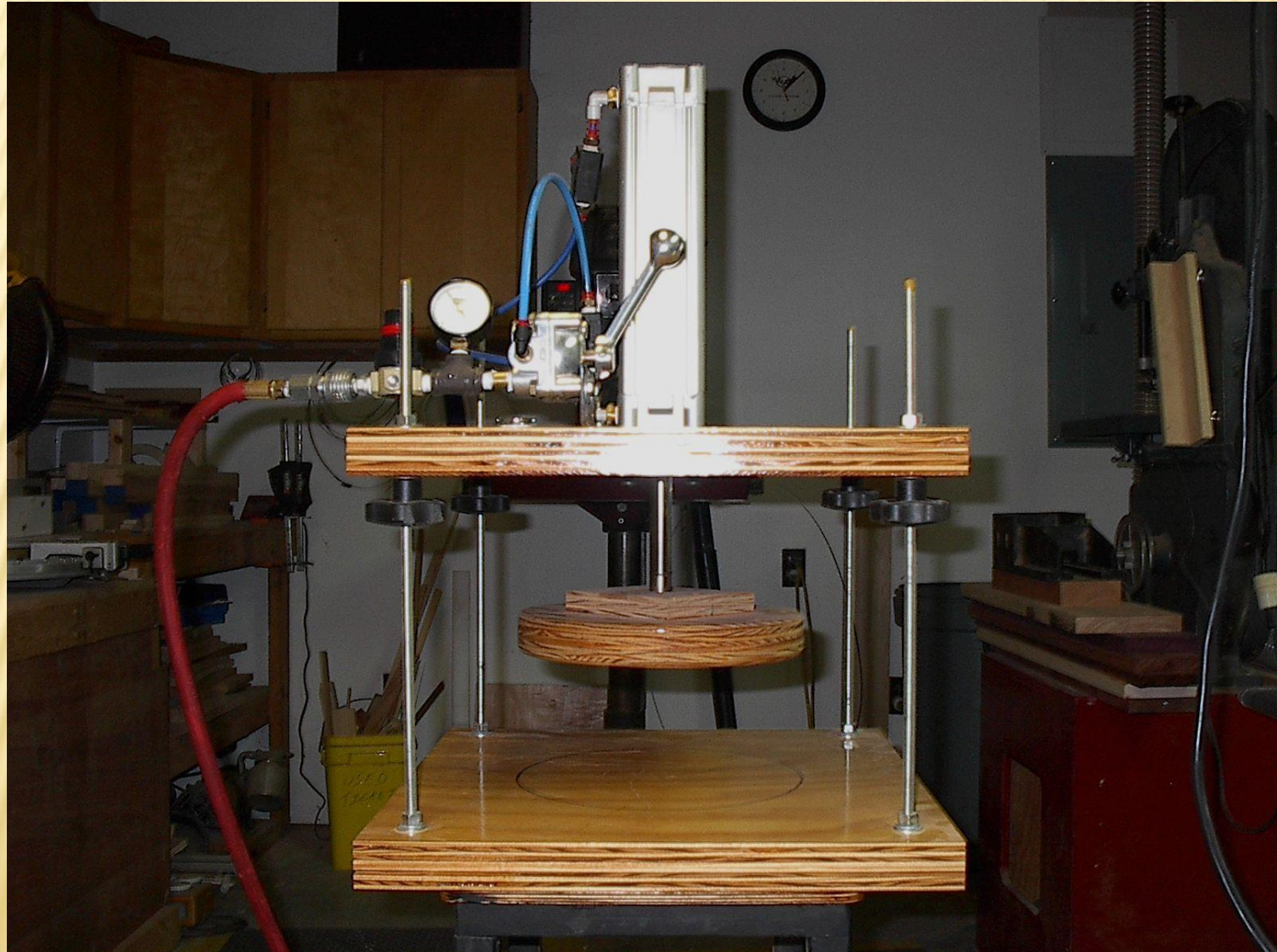


- Stack and glue rings together
- Rings have to be stacked in proper sequence.
- Glue joint position should alternate to form a brick laying pattern.
- It is much easier to glue one ring at a time.

All Rings Glued Together



Pneumatic Ring Glue Press



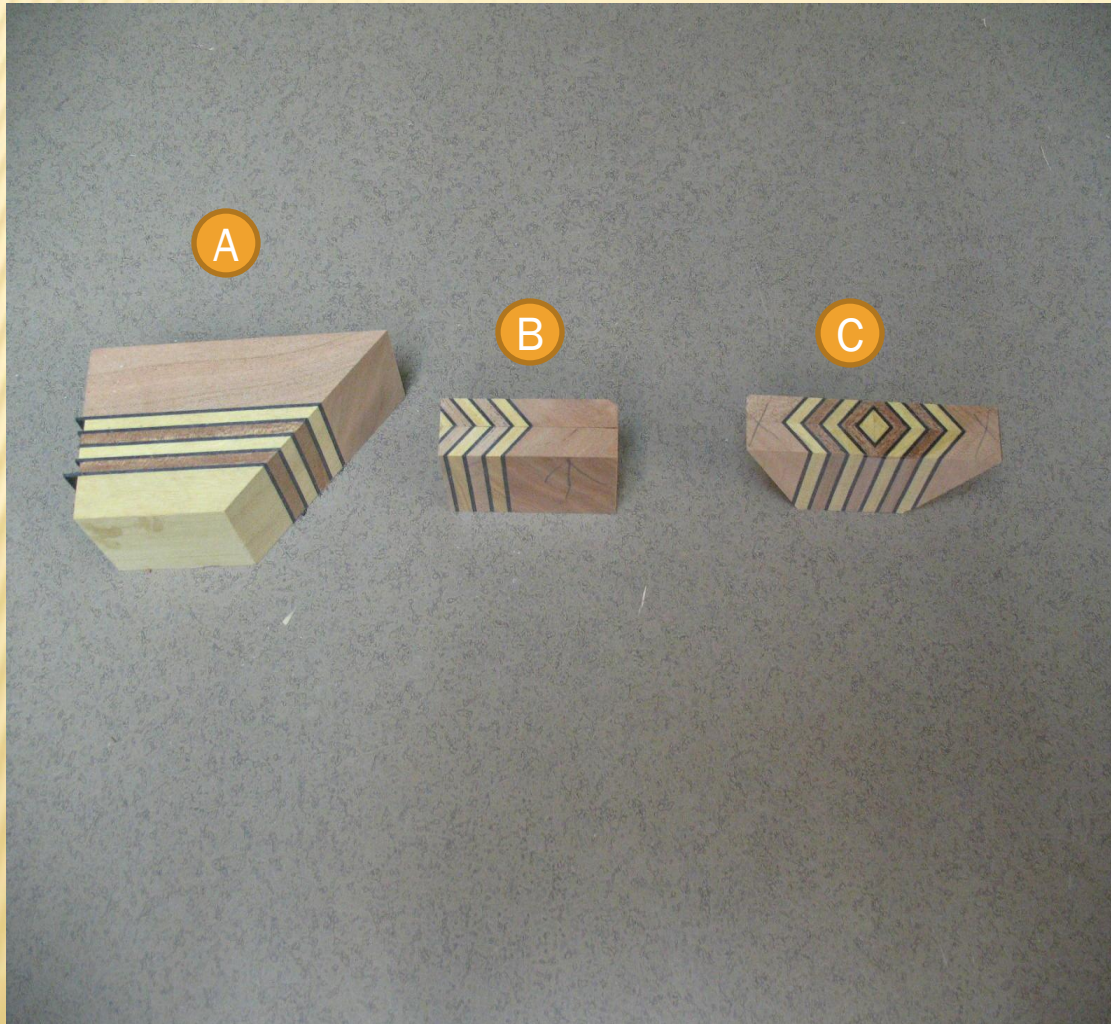
After Turning And Finishing



Example Of Some Basic Designs
Segments can be 1 solid piece or made up of
many small pieces



Chevron Segments



- This segment design is made up of 44 pieces of wood
- Cut 4 1/4" slices off laminated board **A**
- Miter angle set at 45 deg.
- Flip and glue 2 pair together as in **B**
- Then glue the 2 pairs together as in **C**
- Miter cut segment for proper angle determined by number of segments in the ring. This was cut at 30 deg. For 6 segment ring.

Zig Zag Pattern

