Segmented Bowl Making Presentation

(Polychromatic Stave-Type Bowl Making)

by

Jay Helland

More Woodworker than Wood Turner

George “Sonnie” Sharrar

About Your Safety

- Working with wood is inherently dangerous! Improper use of hand and power tools can lead to permanent injury or even death.
- Don’t ignore the proper safety rules that come with your power tools.
- Don’t try to perform operations you learn here (or elsewhere) unless you’re certain they are safe for you.
- For your own safety, use guards and methods of work so that you can enjoy this craft for many years.
- The author of this material is not responsible for injuries relating to the procedures demonstrated or illustrated in this document.

The Four L's Axiom of life: To Live, To Love, To Learn and to Leave a Legacy are exemplified in the following poem.

Things men have made with wakened hands, and put

soft life into

Are awake through years with transferred touch and go on glowing

For long years

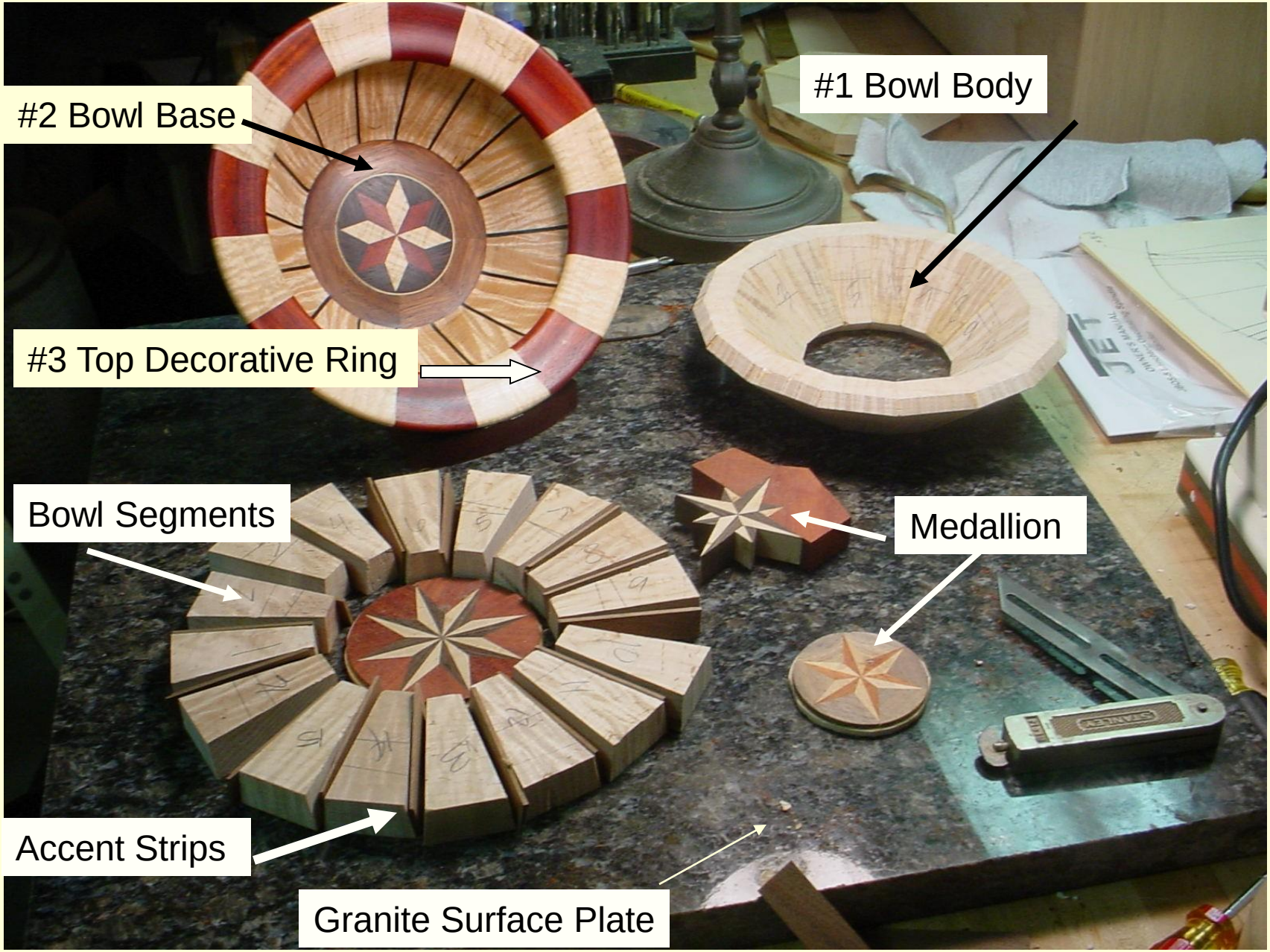
And for this reason, some old thing are lovely

Warm still with the life of forgotten men who made them.

D.H. Lawrence

1885-1930

Three Main Parts of a Segmented Bowl



Stave-Type Segmented Bowl Making Process

Objectives: The woodworker will know or be able to:

1. Design a stave-type segmented bowl. (see movie clip)
2. Calculate the length and width of the bowl's individual segments using computer generated program.
3. Set-up the table saw sled used to cut the individual segments. (see movie clip)
4. Cut accent veneer used between the individual segments. (see movie clip)
5. Glue individual segments together. (see movie clip)
6. Sand bowl halves on disc sander. (see movie clip)
7. Glue bowl halves together.
8. Use drill pres to mill top and bottom of bowl parallel to each other.
9. Construct and assemble the top decorative ring and bowl base.
10. Attach the top and base to the bowl body.
11. Turn the bowl round and cut mortise for tenon of base. (see movie clip)
12. Cut out individual pieces of wood used to form the star pattern for the bowl base. (see movie clip)
13. Turn bowl's inside profile.
14. Glue decorative ring to bowl body.
15. Finish turn bowl and sand.
16. Reverse chuck bowl to turn the bottom and sand.
17. Apply finish the bowl.

Segmented Bowl Making Process

(Tools, Equipment, Materials, Jigs and Fixtures needed)

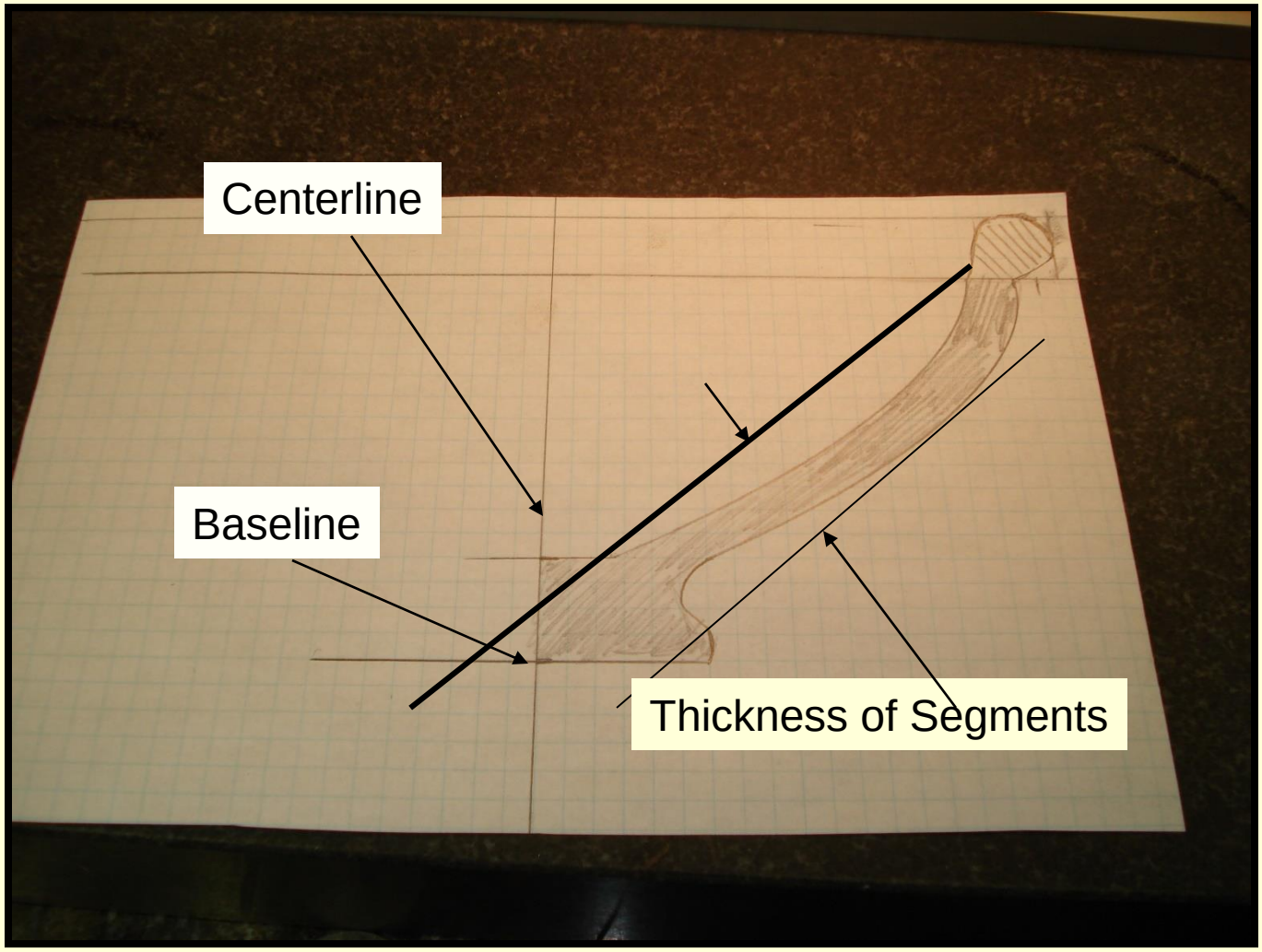
- Table saw
- Drill Press
- Wagner Safe-T-Planer
- Wood Lathe and face plates
- Band Saw
- Granite Surface Plate (or a smooth surface for alignment of segments when gluing)
- Clamp-On Straight Edge
- Segment-Cutting Table Saw Sled
- 12” Disc Sander
- Table Saw Veneer Wood Cutting Jig
- Abrasive Paper
- Finish
- Depth Gage

Begin with the end in mind!

Stephen Covey: 7 Habits of Highly Effective People

Designing Stave-Type Segmented Bowls

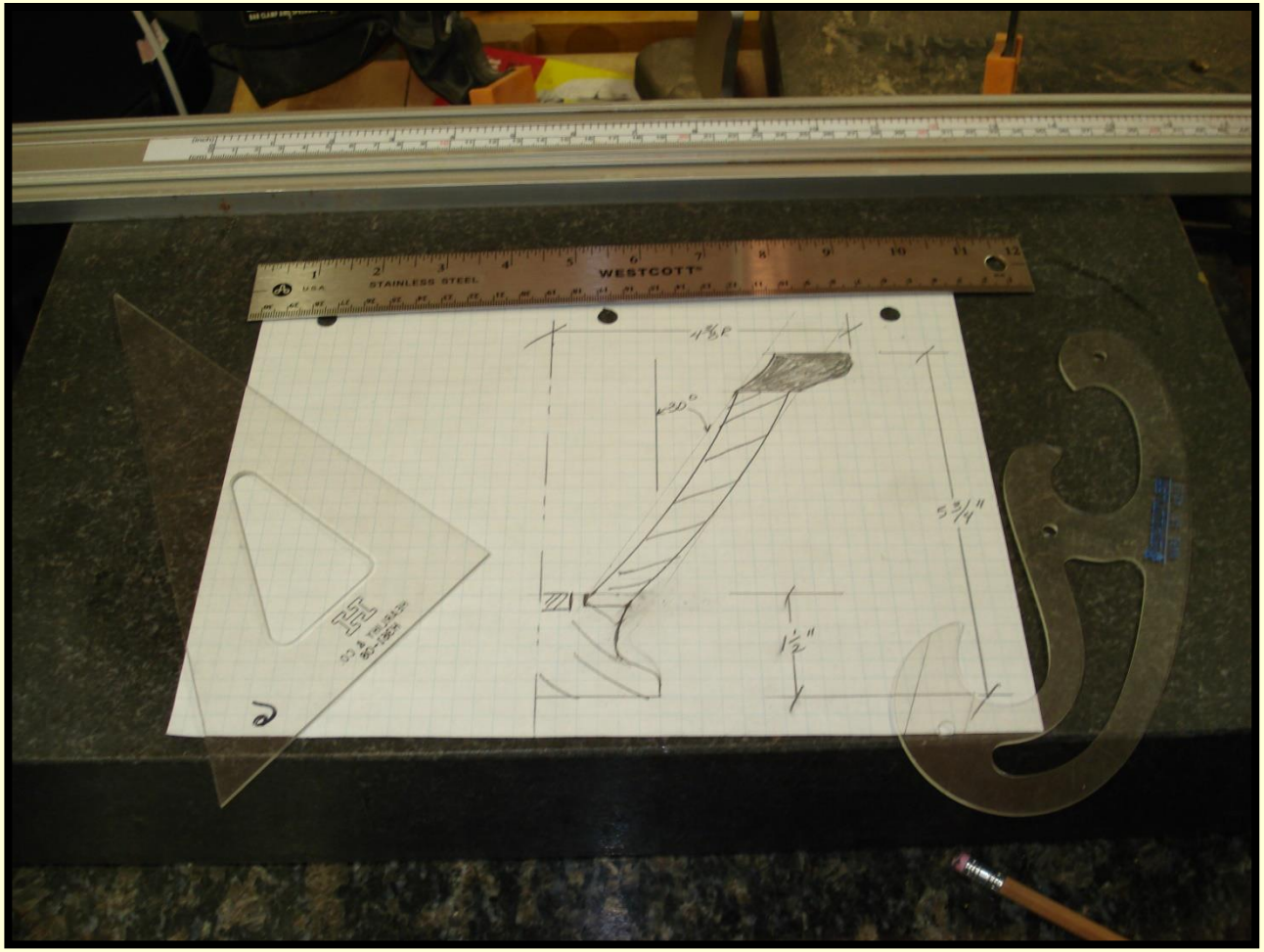
1. Determine rough dimensions of bowl (major and minor diameters and overall height).
2. Fold a graph paper in half and draw profile and then cut out with scissors.
3. Determine angle of bowl side measuring from the vertical centerline to the inside angle.
4. Using the Kevin Neely's *Compound Angle Computer Program or WoodturnerPro to* calculate the dimensions of the individual bowl segments.



Designing a Stave-Type Segmented Bowl

Drawing Methods: Freehand or Use Drafting tools, AutoCAD, or other Drafting Programs to Assist in the Design Phase.

Where can design ideas originate?: Books, the Internet, American Indian Pottery and other local craftsman.



Kevin Neelley's Computer Generated Table Saw Miter Angles

www.turnededwood.com or email: kevin@turnedwood.com

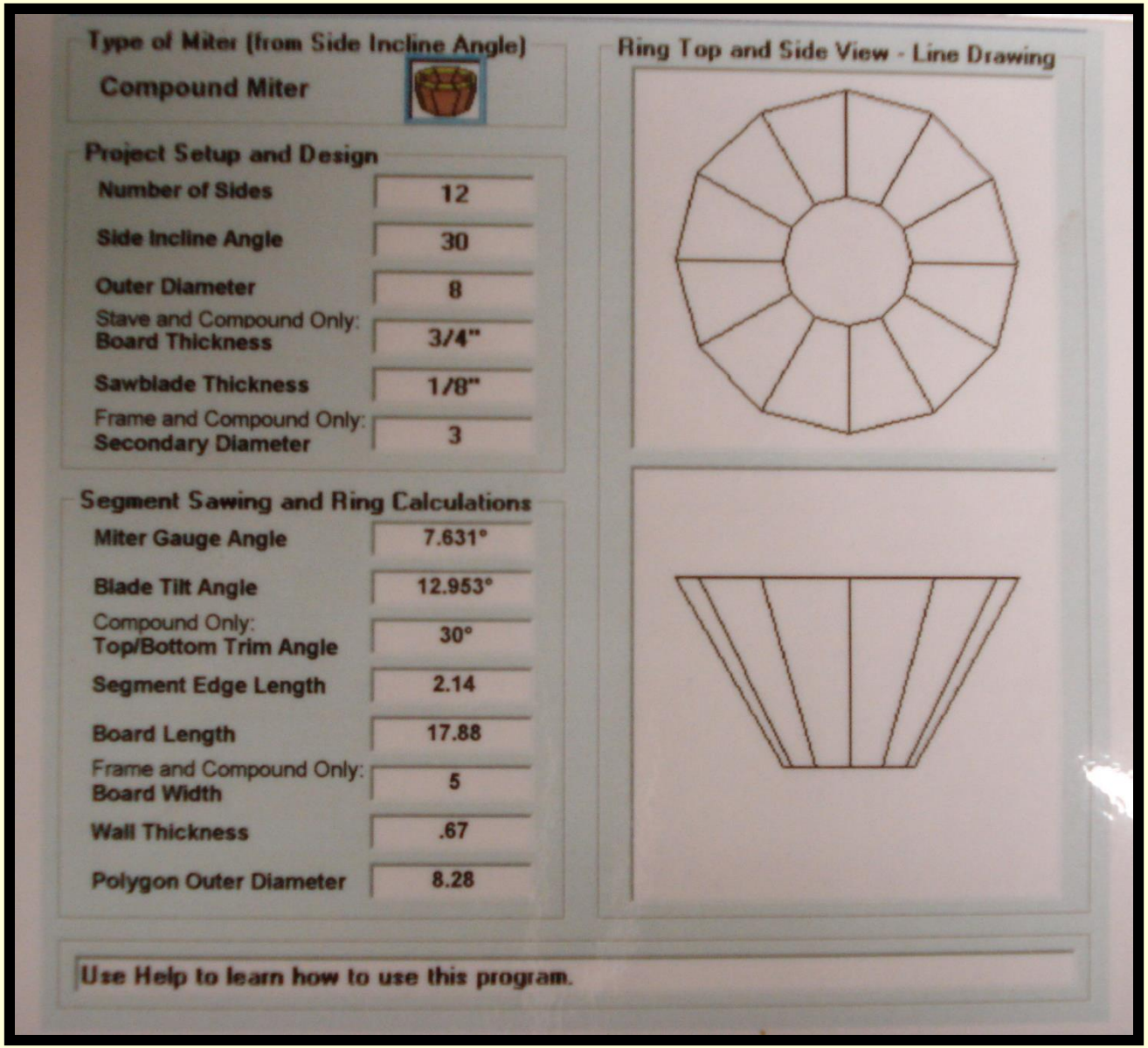
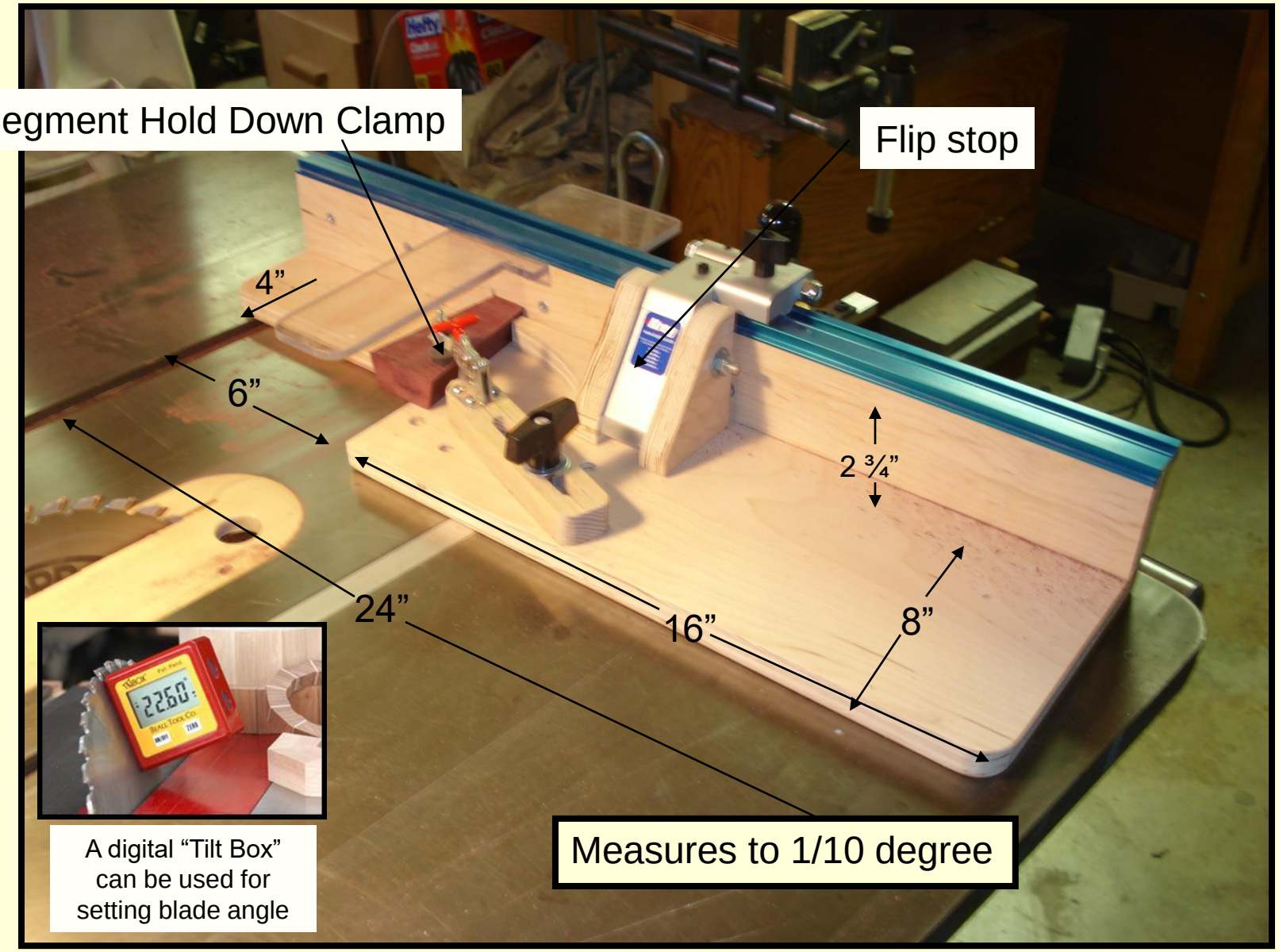


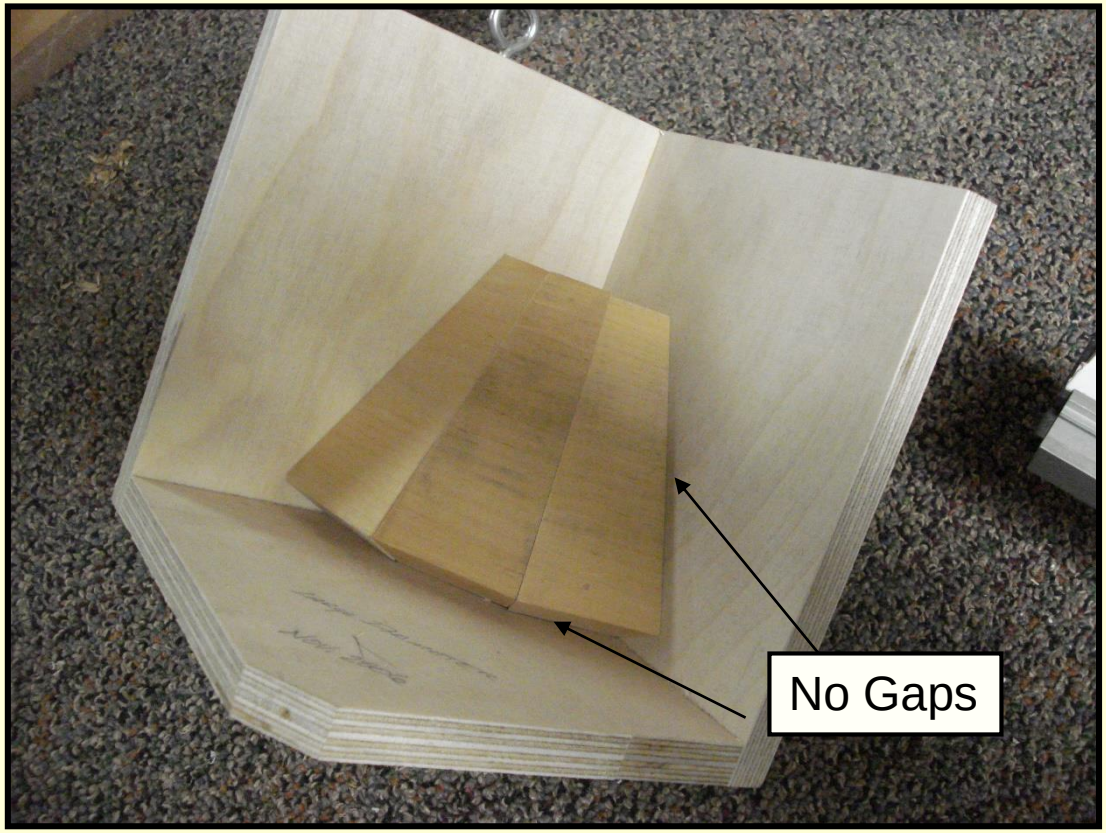
Table Saw Compound Angle Cutting Sled

Modifications © to a Kreg Miter Jig (Designer: Jay Helland)



Checking Angles of Segments

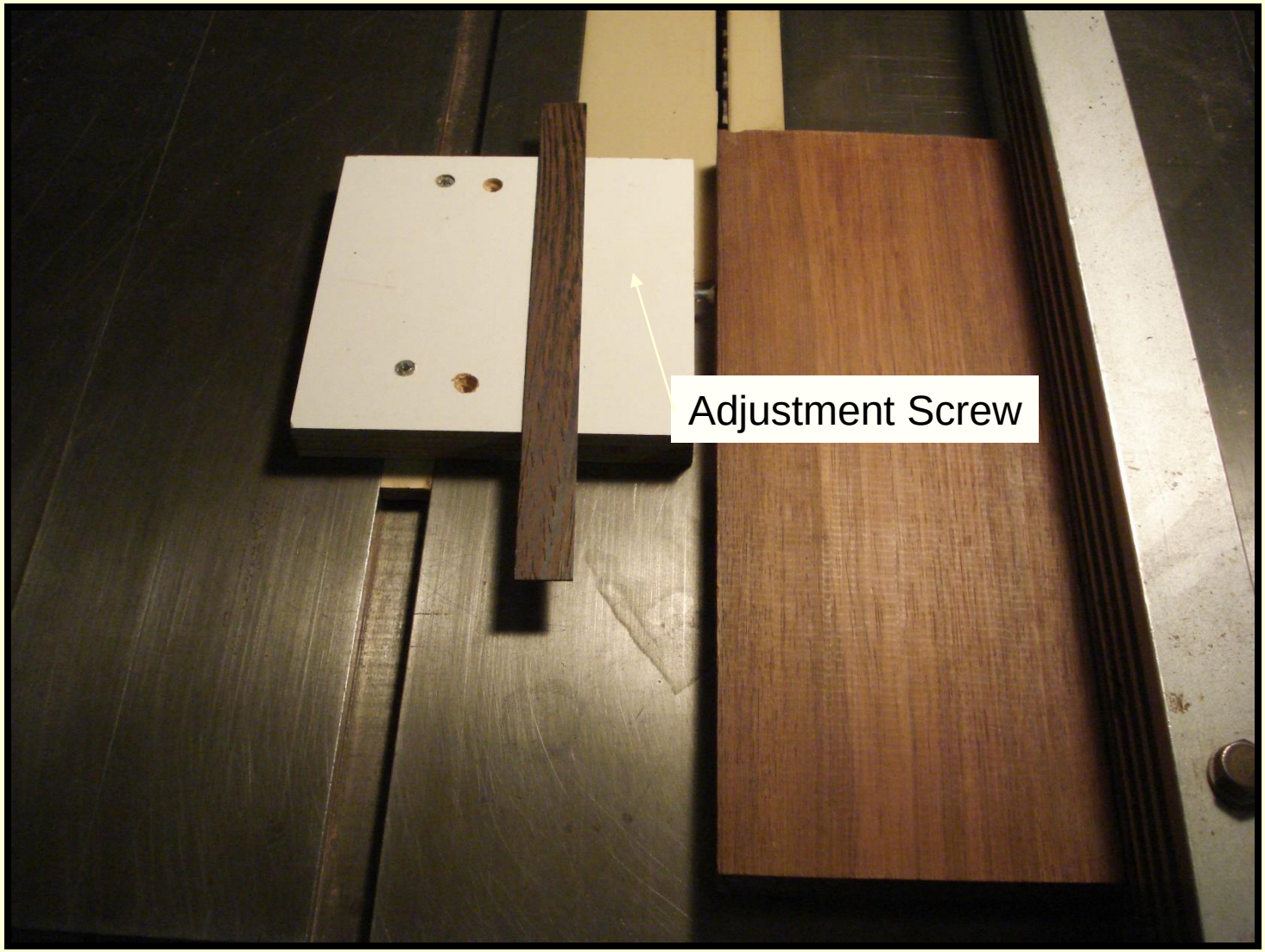
Quarter-Bowl Angle Gauge



Confirming the Inclusive Angle of ¼ of the Vessel

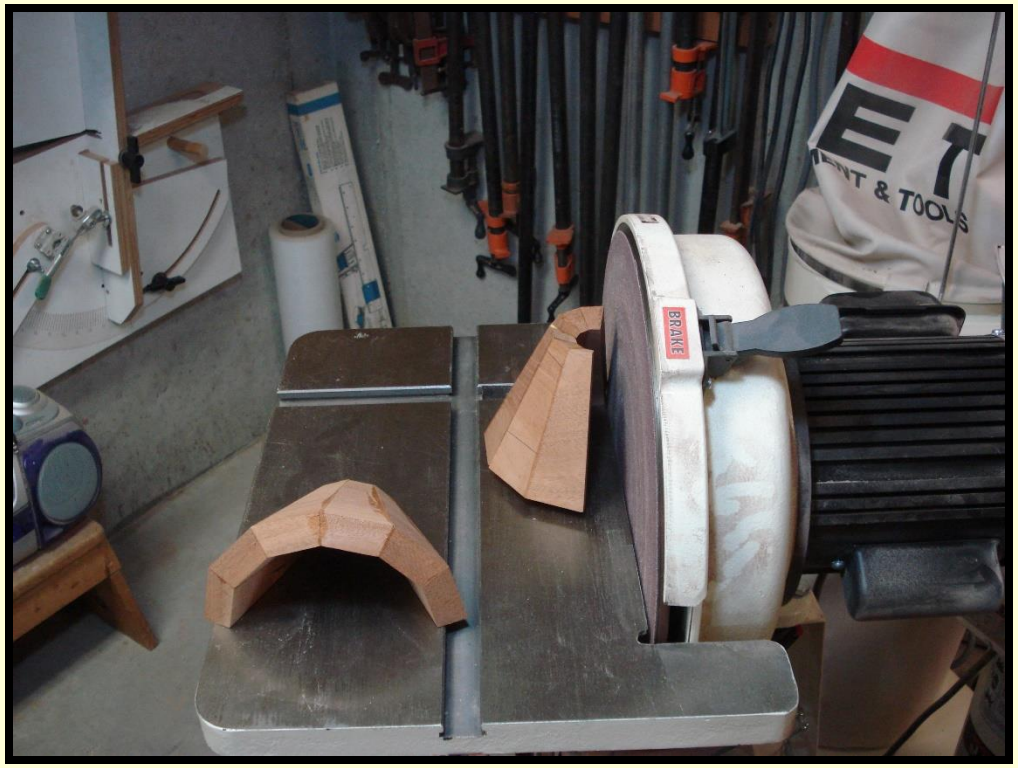
Cutting Uniform Thickness Accent Strips or Veneer

Distance between Adjustment Screw Head and Outside of Saw Blade Determines the Thickness of Veneer.



Gluing Accent Strips

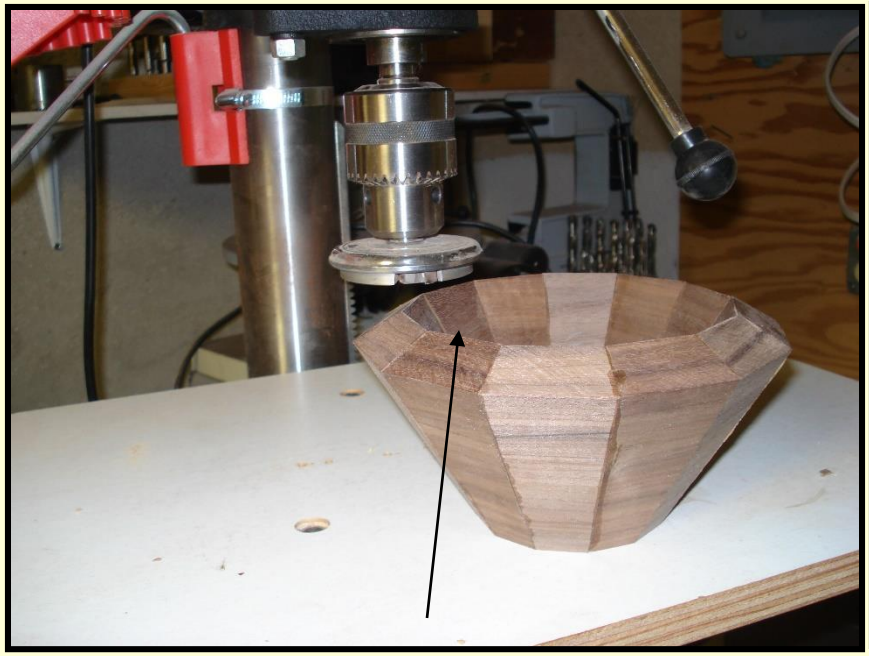
Bowl Halves ready for sanding on the disc sander. Mark the ends of the bowl halves with pencil before sanding to provide visual assurance that the halves are sanded flat.



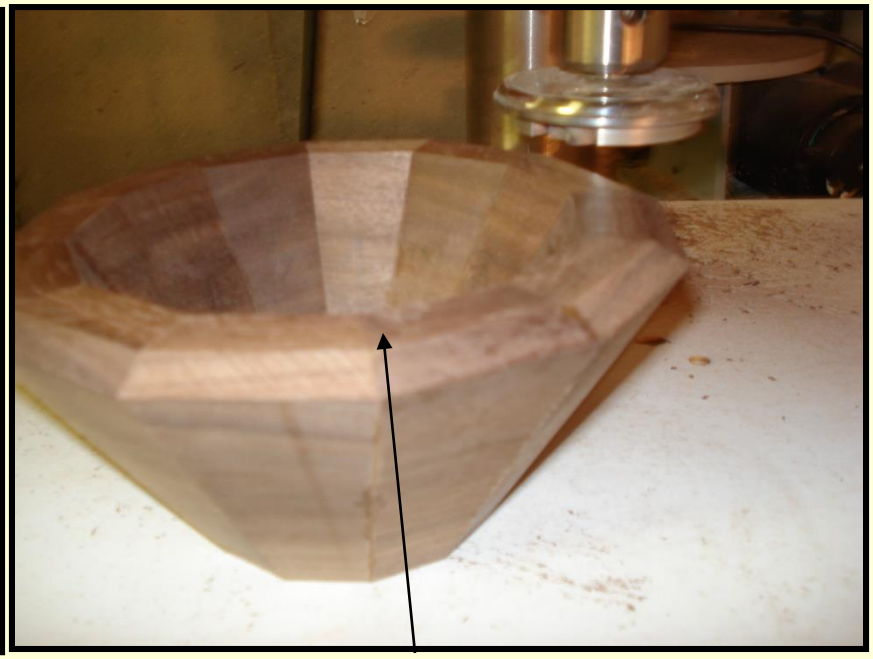
Mark end with pencil.

Sanding Bowl Halves (click on screen to start video and outside border to stop video) ©

After milling the bottom of the bowl; turn the bowl over and mill the top edge so that they are parallel to each other.

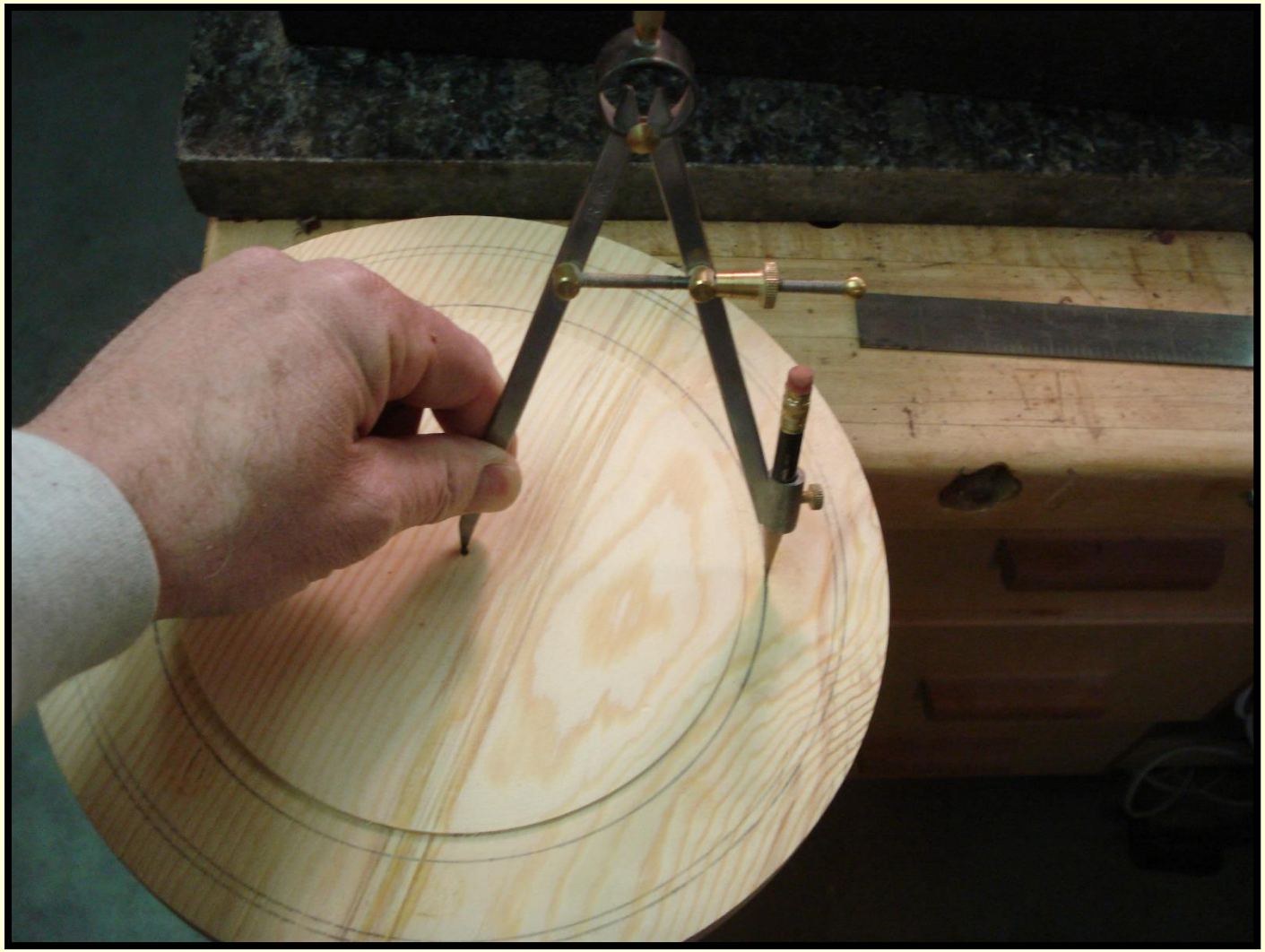


Edge Before Milling

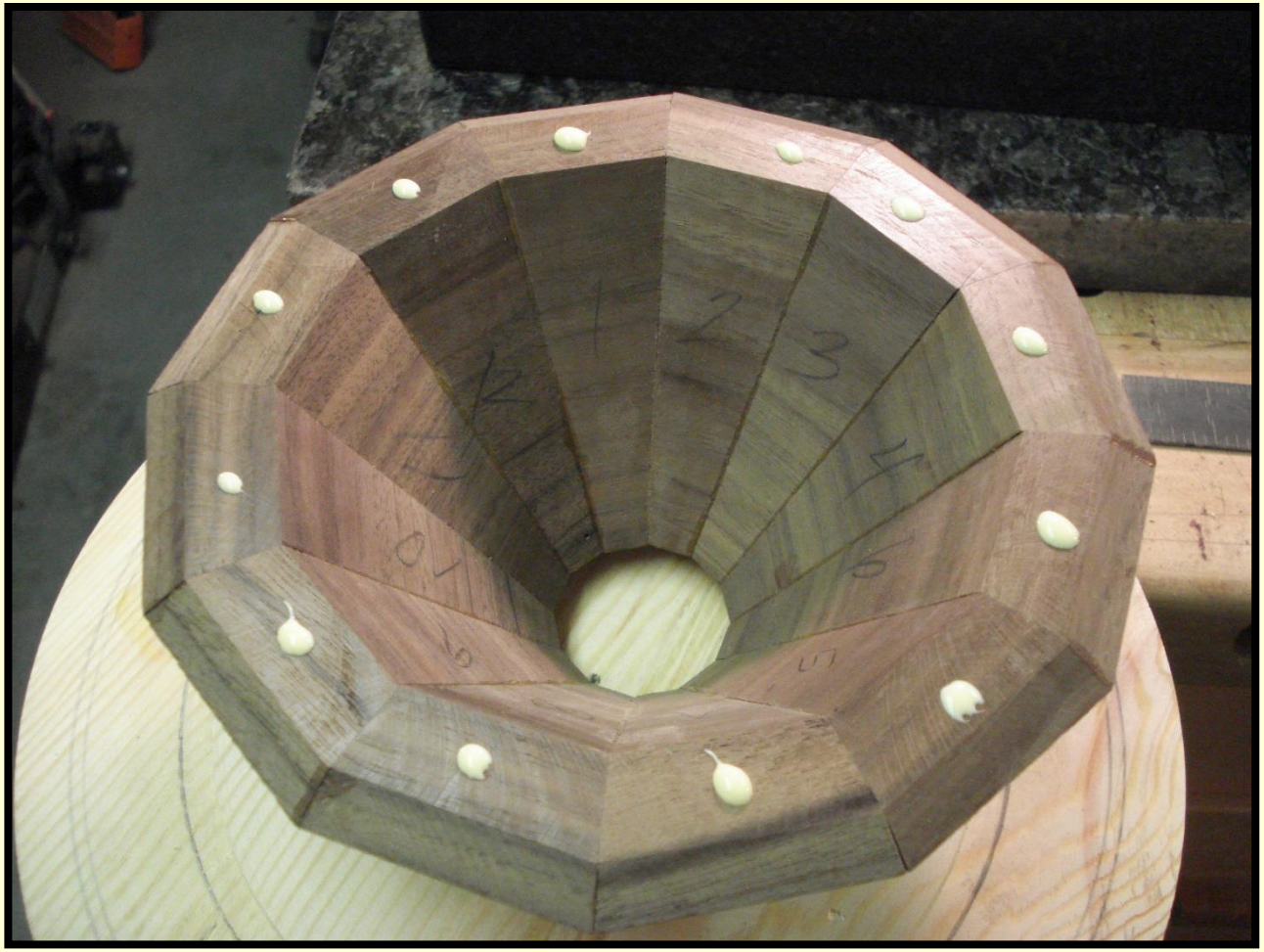


After Milling:
Top Flattened

Draw a Circle the Size of the Bowl's Large Diameter



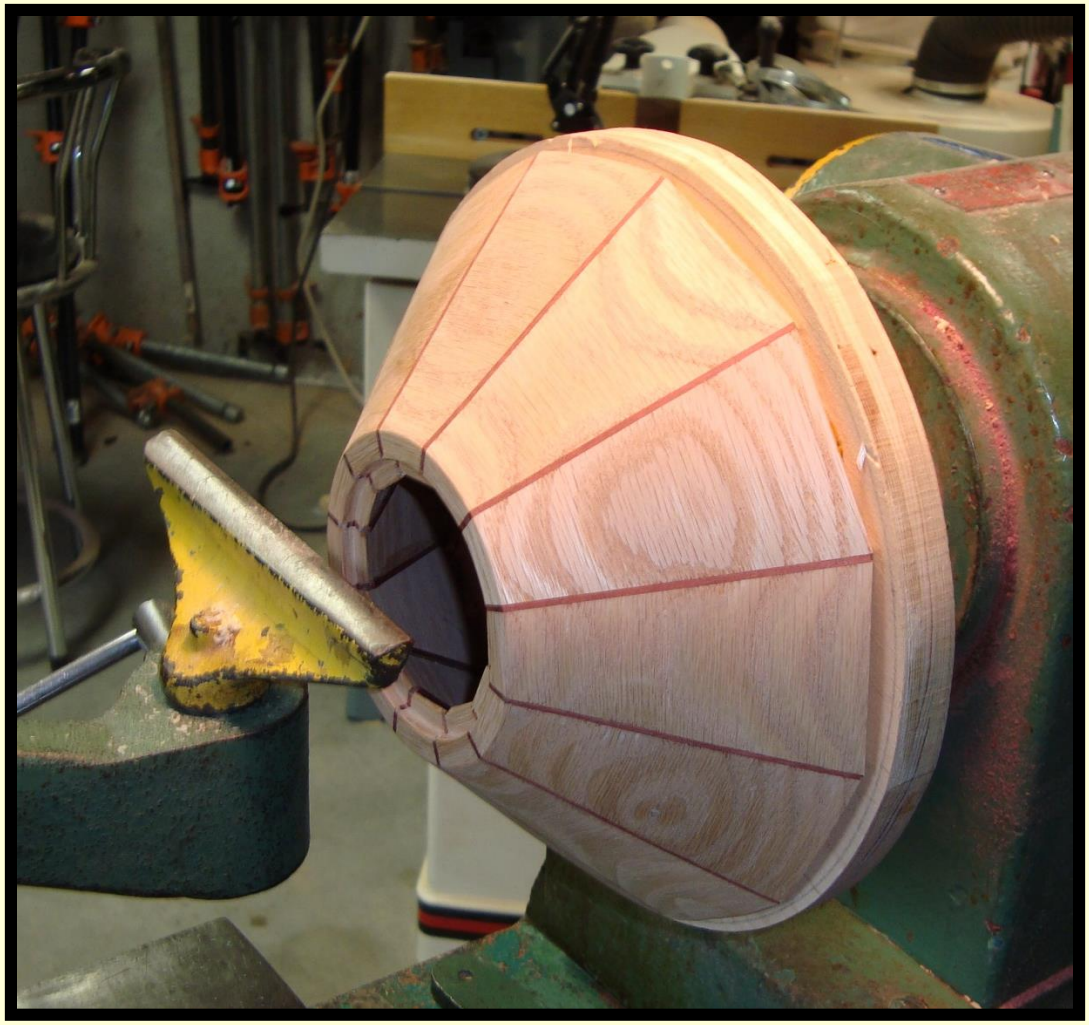
Small glue dots about 1/8” to ¼” diameter is all that is needed to glue the bowl to a wooden face plate.

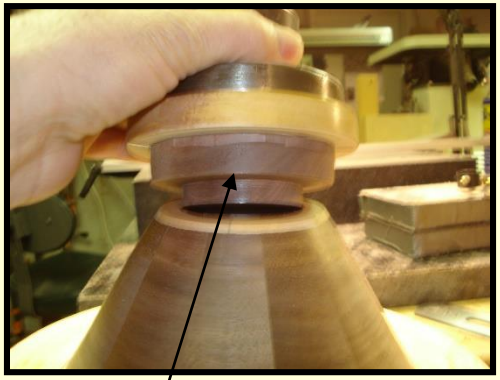


Glue Bowl to Face Plate (10 lbs. of Weight)

Turning Outside of Bowl

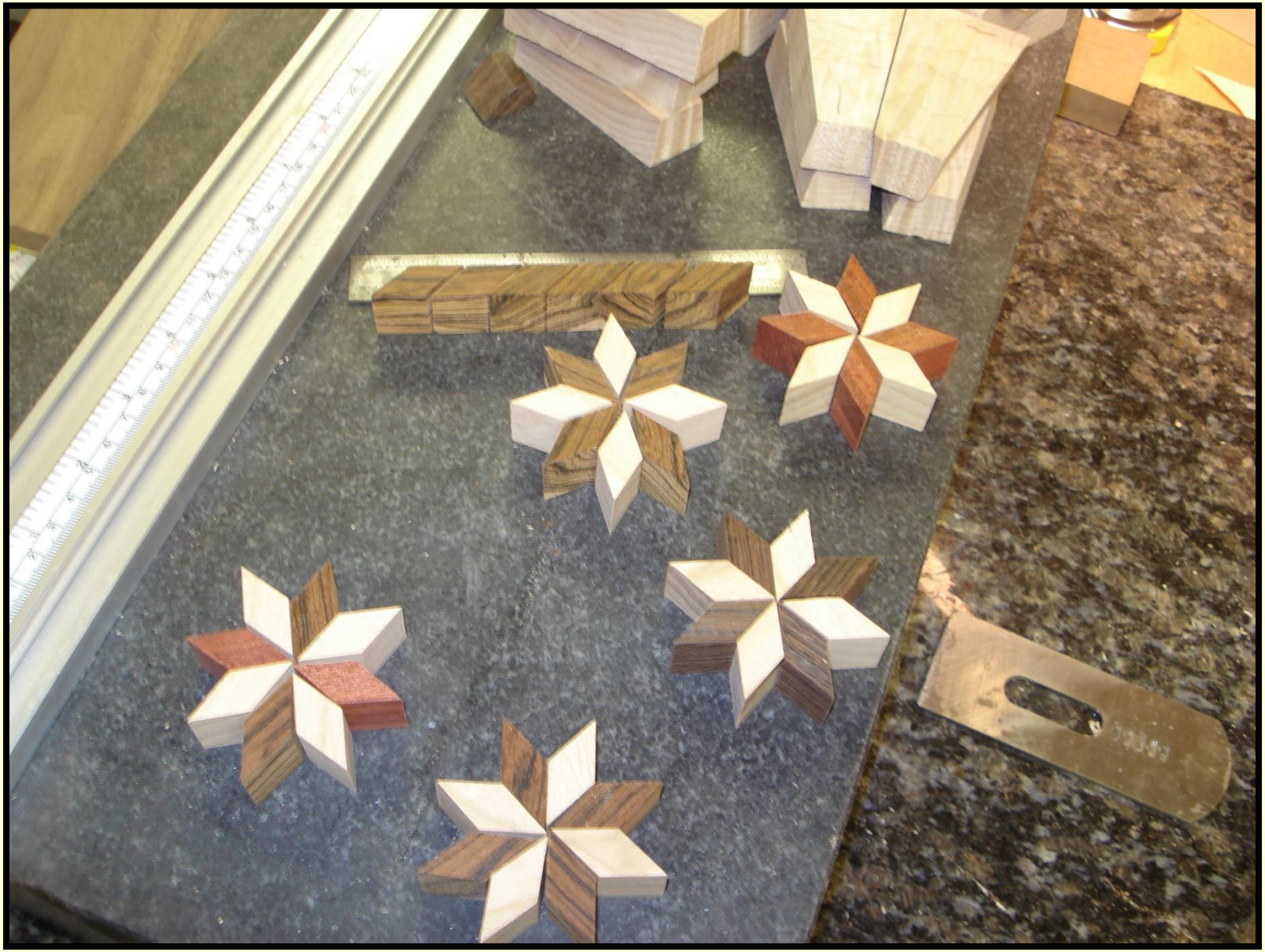
This step involves cutting the base flat and then cutting a mortise to receive the tenon cut on the base. Use a depth gage or a small adjustable square to check 90 angle between the mortise and the bottom.



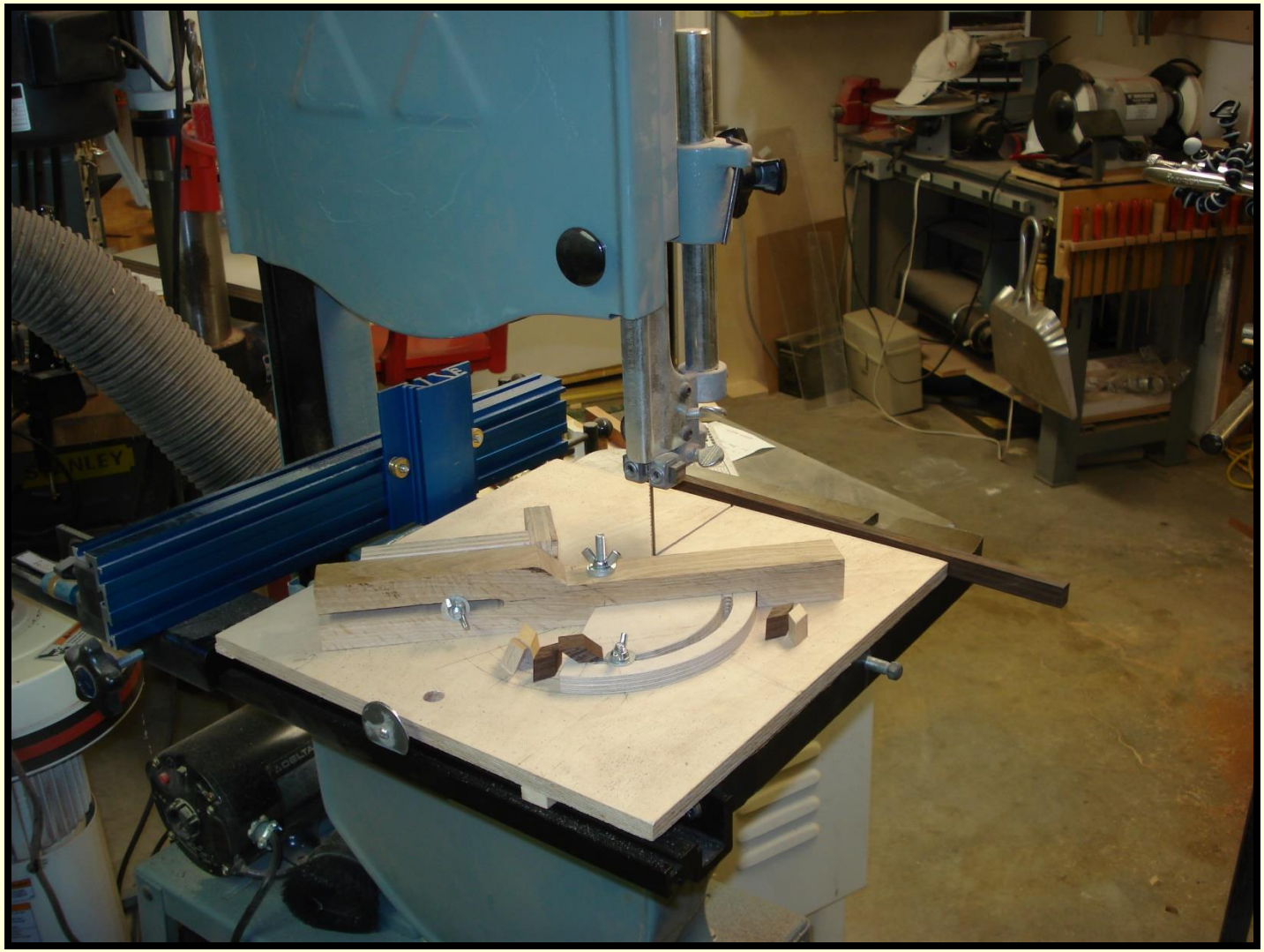


Tenon on Bowl Base

8 Point Star Layout

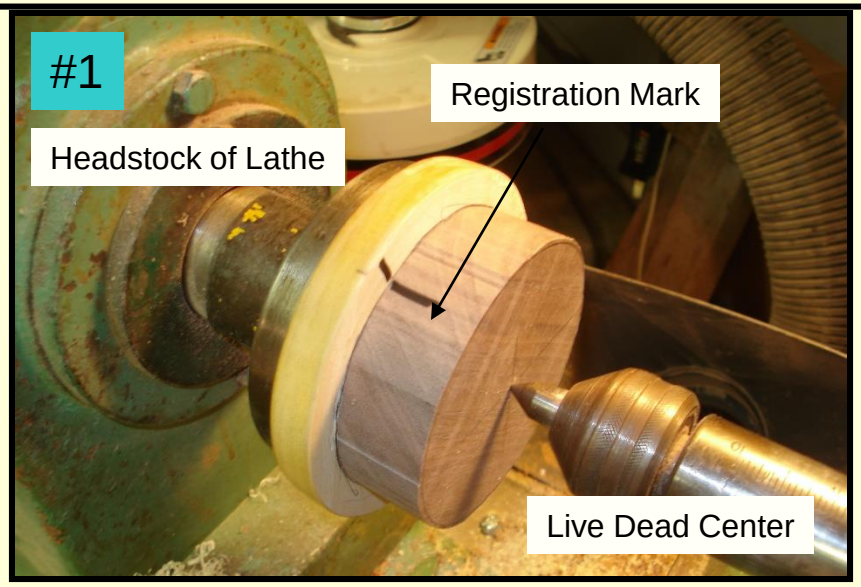


Star Medallion Construction Method. Individual pieces are cut on the band saw.



Steps For Proper Alignment and Gluing of Bowl Base to Faceplate

Registering or aligning the base on the wooden face plate so that it can be glued on center for future turning.



Four or Five 1/8” diameter glue dots will secure the base to the face plate. Allow glue to cure before turning.

Align the Base on the Face Plate After Applying Glue

Apply Pressure While Glue Cures

Forming the Tenon on Base

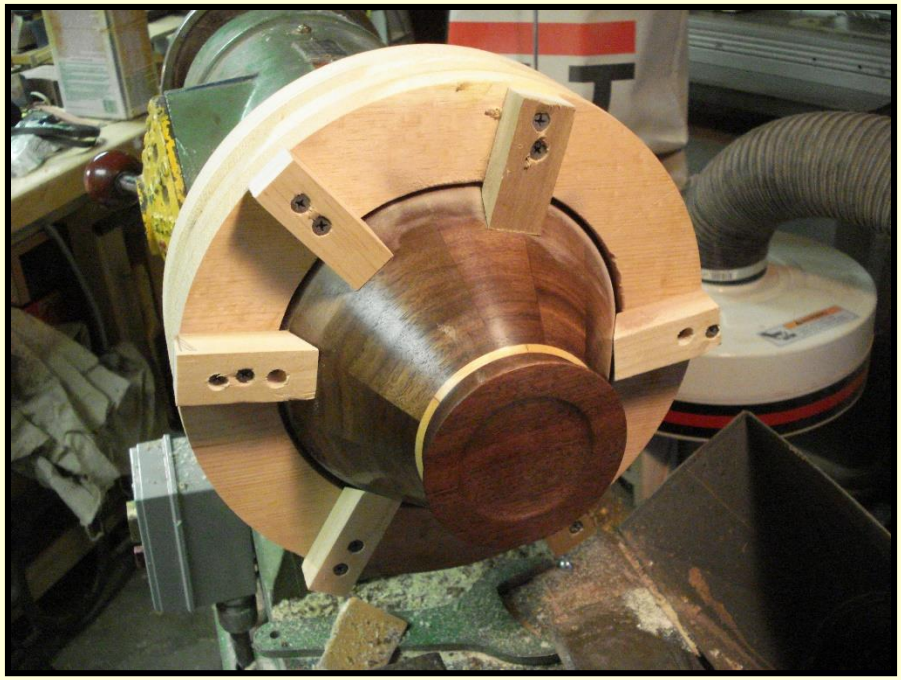
The Segmented Bowl Making Continued:
Process: Gluing and Clamping the Decorative Ring to the Bowl Body

Bowl with top decorative ring is attached to faceplate and mounted in lathe.

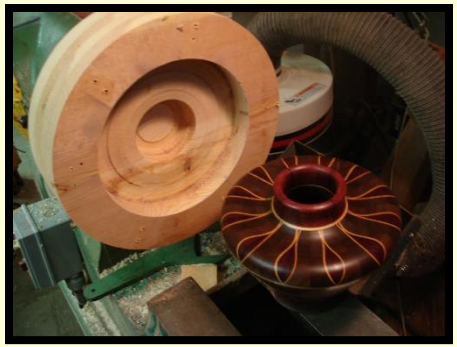
Reverse Chucking of Bowl

Purpose: To finish turn the bottom for appearance and so that it won't wobble on a flat surface.

Shop-Made Chuck



"ONEWAY" Jumbo Chuck



Segmented Bowls

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George “Sonnie” Sharrar
and
Jay S. Helland

Tribute To Sonnie Sharrar

Sonnie Sharrar was my segmented bowl making mentor. He shared his knowledge with anyone interested in learning how to design and construct bowls. In addition, Sonnie had many friends who also freely shared their knowledge and expressed themselves through the medium of wood.

Ruth and Sonnie were married for 64 years and their home was always a welcome place to visit.

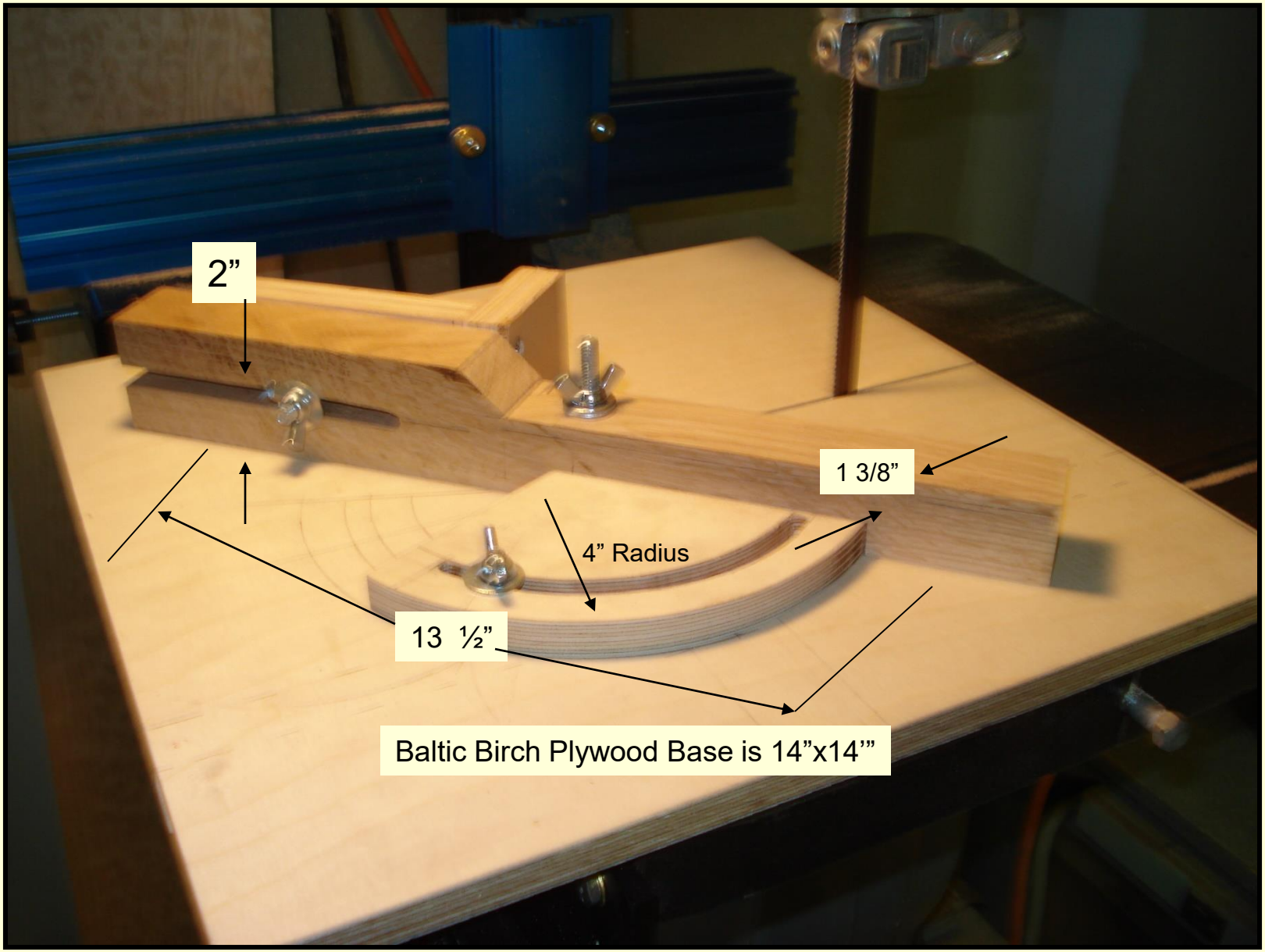
JSH

Sonnie Sharrar and Kevin Neeley

Resources

- www.turnedwood.com Kevin's Woodturning
- *The Art of Segmented Wood Turning* by Malcolm Tibbetts
- *Woodturning with Ray Allen* by Dale Nish
- Jay Helland H: 525-7193
- Beal Tool Company (Tilt Box & Vernier Protractor) Newark Ohio

Band Saw Sled Measurements



Jay S. Helland is not responsible for injuries relating to the procedures demonstrated or illustrated in this presentation.

Woodworking can be hazardous to your health!
DO NOT ATTEMPT WOODWORKING PROCEDURES OR PROCESSES THAT YOU DO NOT FEEL COMFORTABLE DOING!

Bibliography

Seven Habits of Highly Effective People by **Stephen Covey, 1989**

End of Presentation