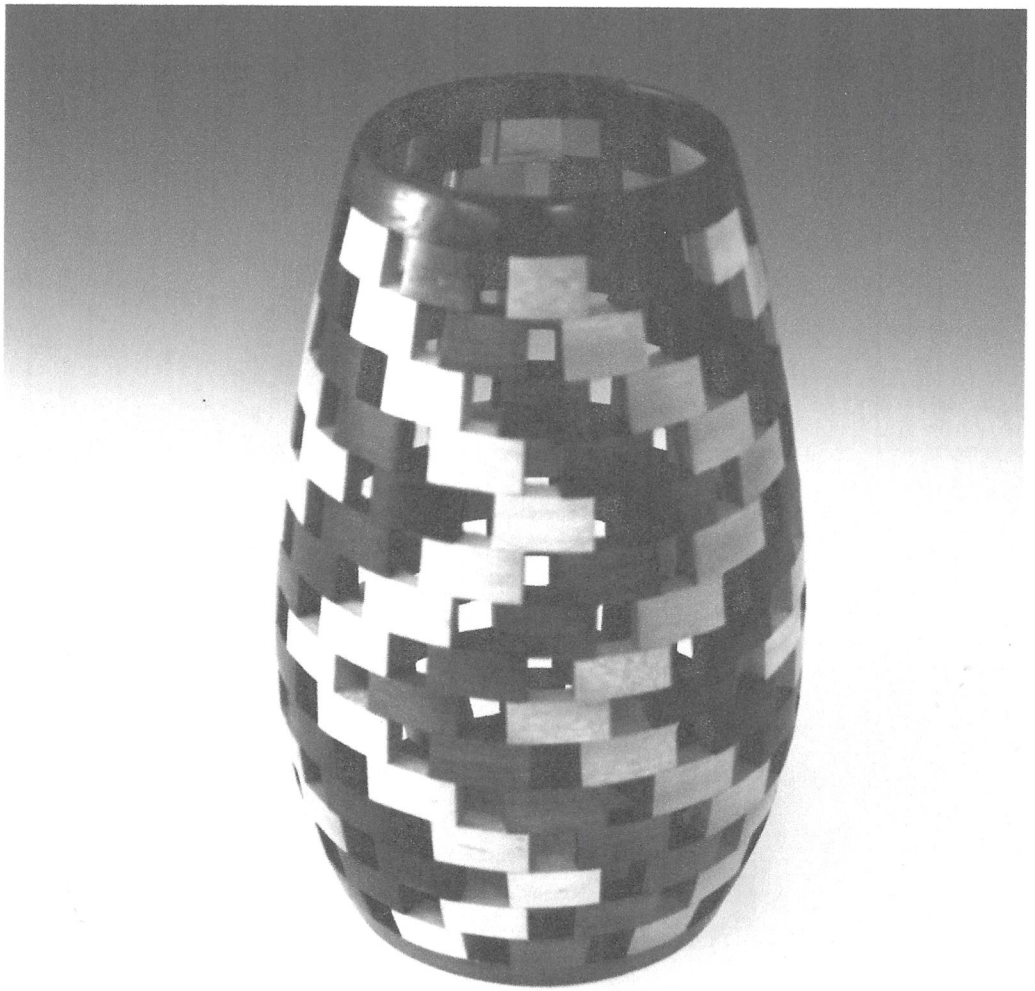
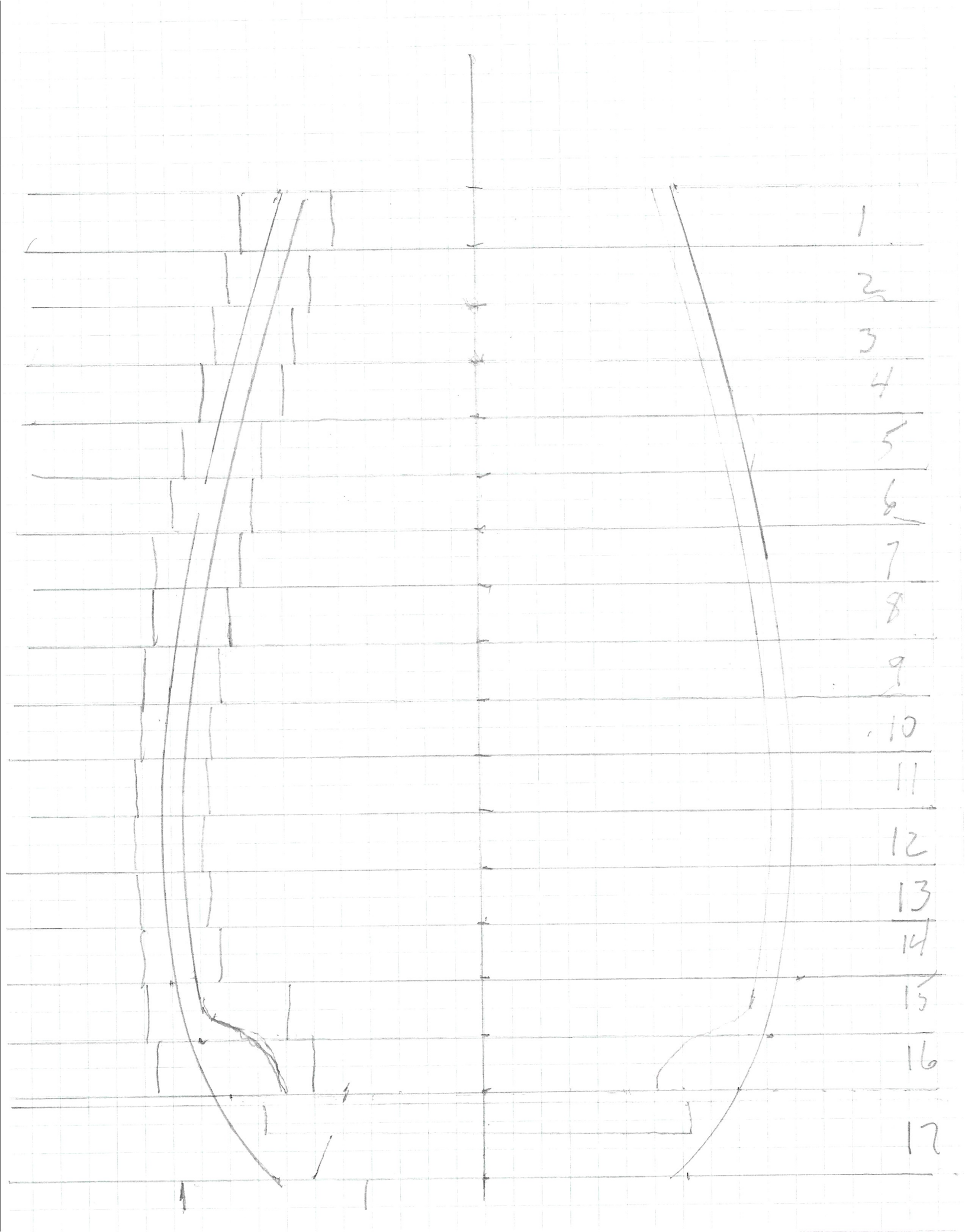
Open Segment Construction

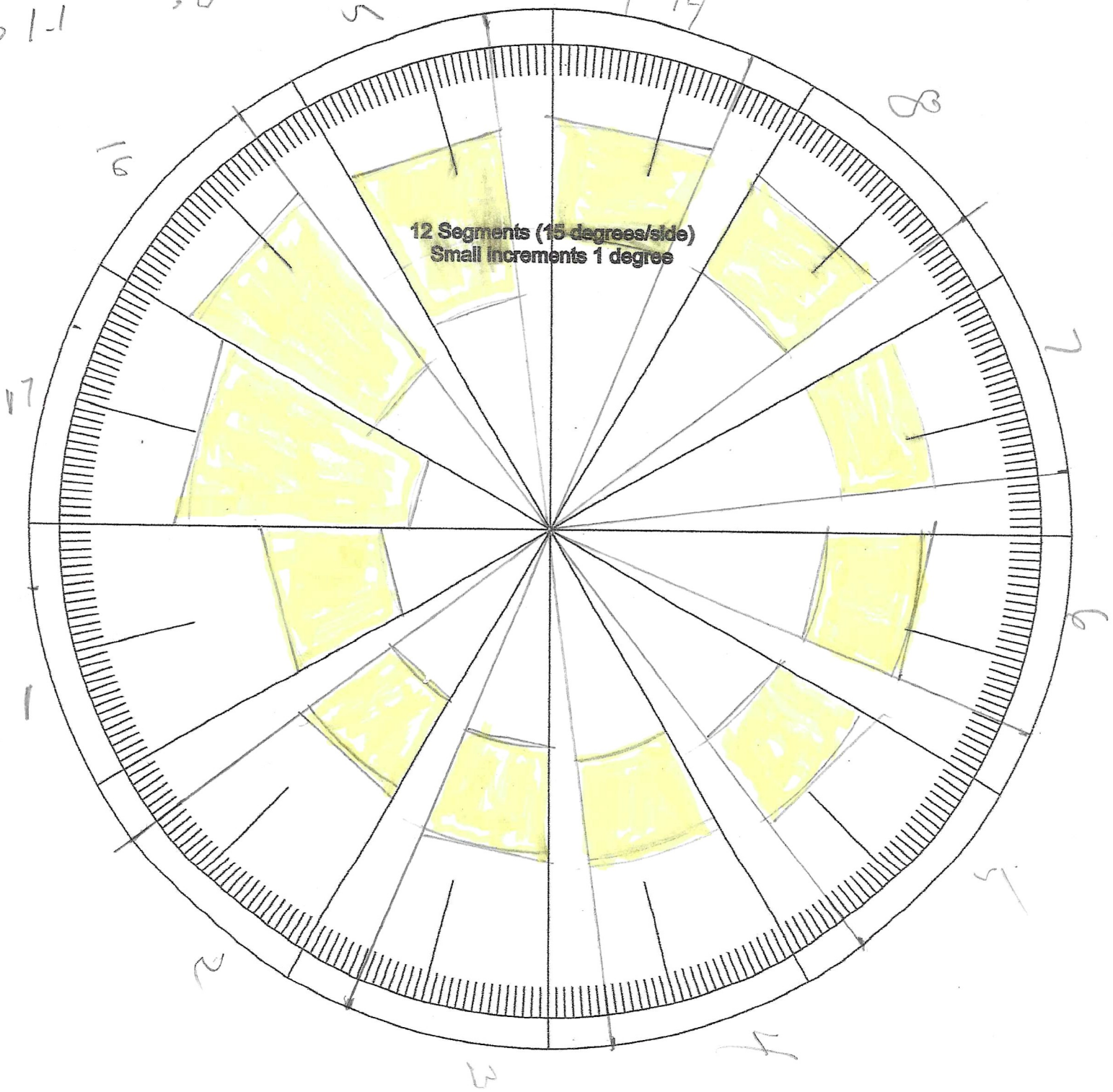


return

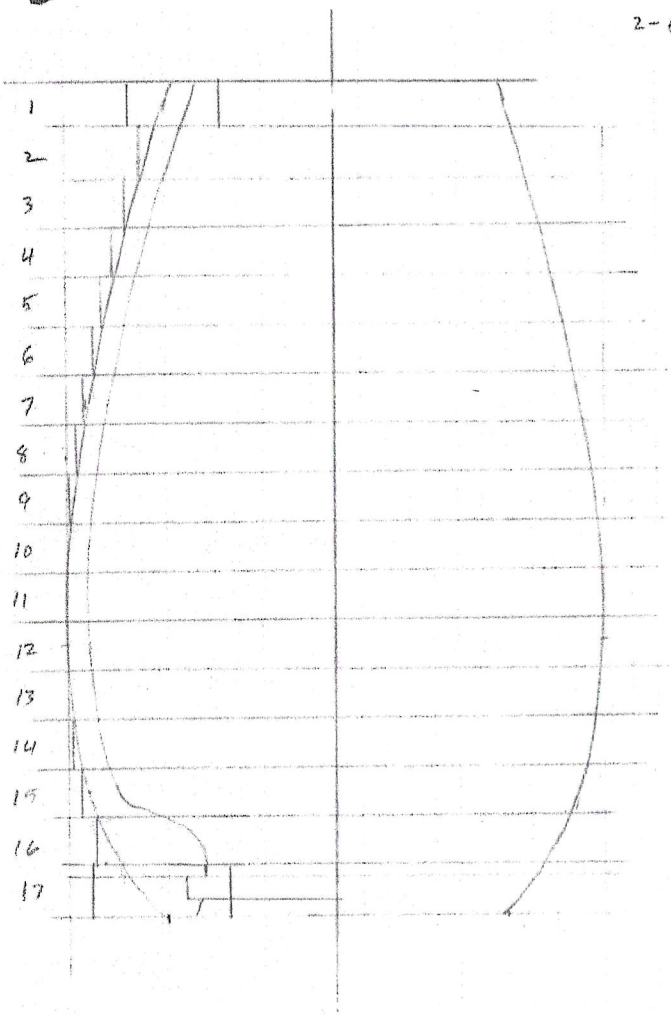

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17

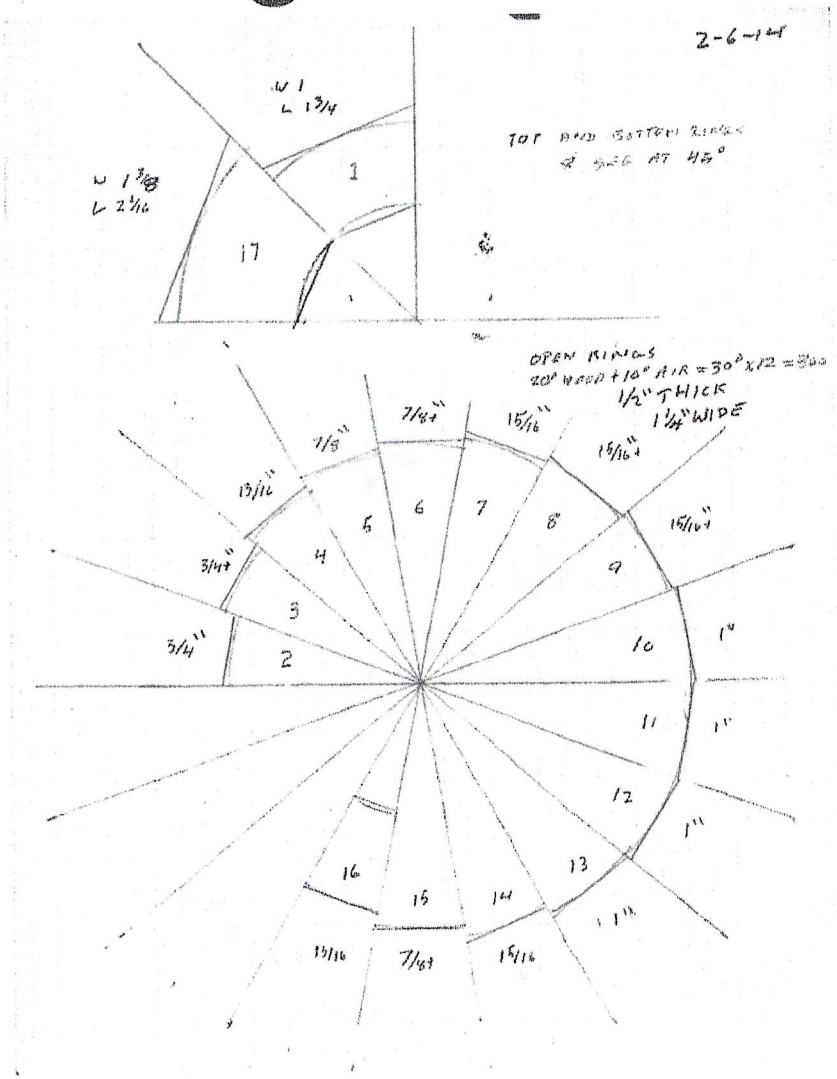
1	1.1	.86
2	.89	.8
3	.95	.8
4	.98	.84
5	1.04	.8
6	1.1	.8
7	1.1	.8
8	1.16	.8
9-14	1.19	.86
15	1.19	1.16
16	1.15	1.5
17	1.36	1.7

3 3/4 + 1/4 X 1/4



Layout Profile and Segment Map

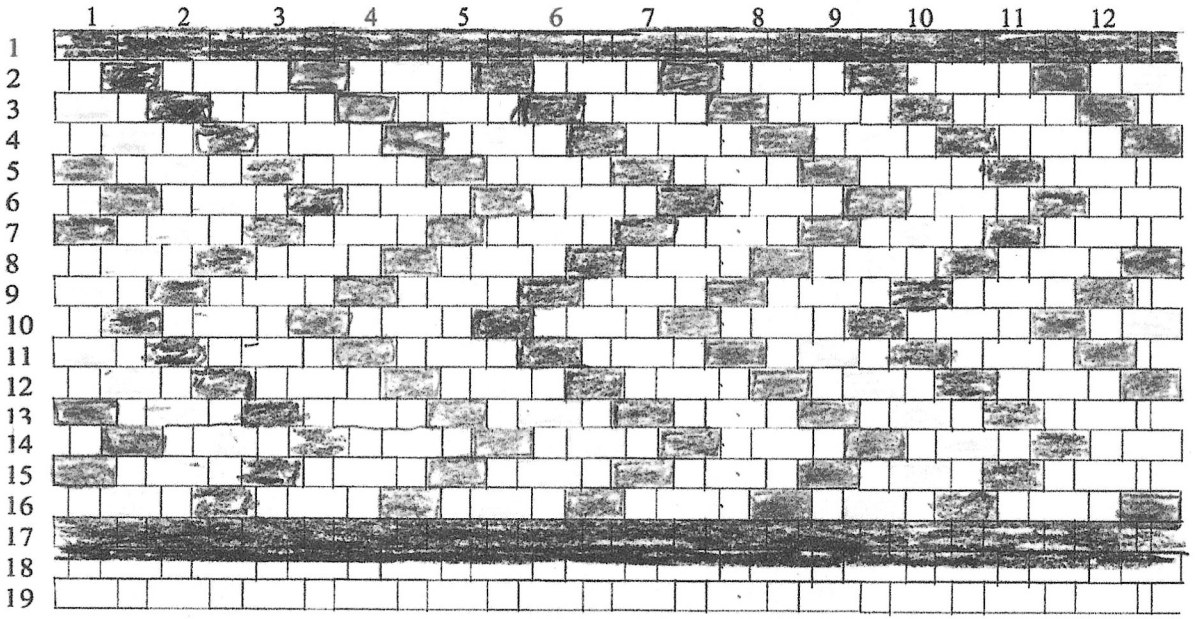




return

Layout Design for 12 Segment Construction

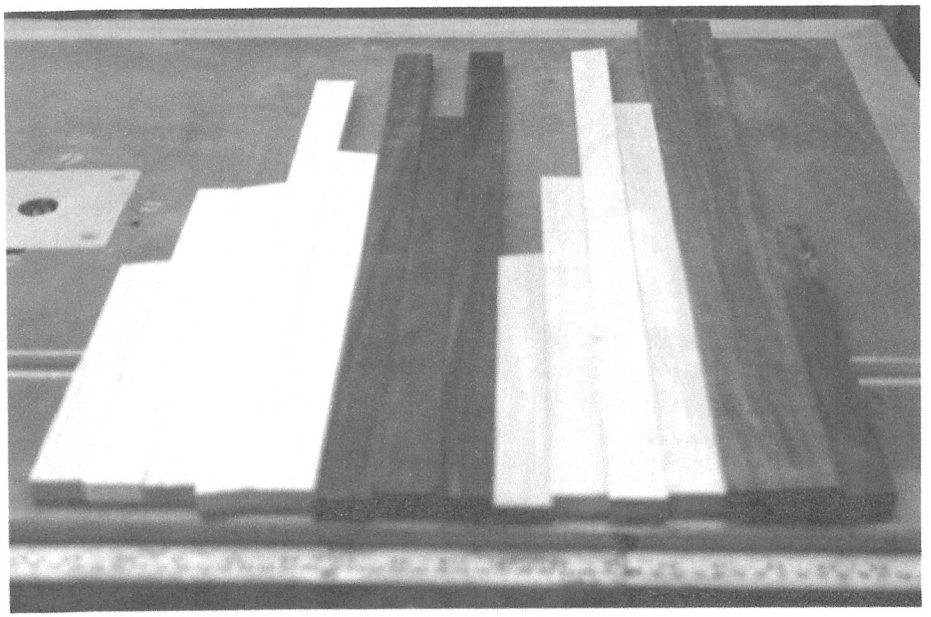
OPEN SEGMENT LAYOUT FORM



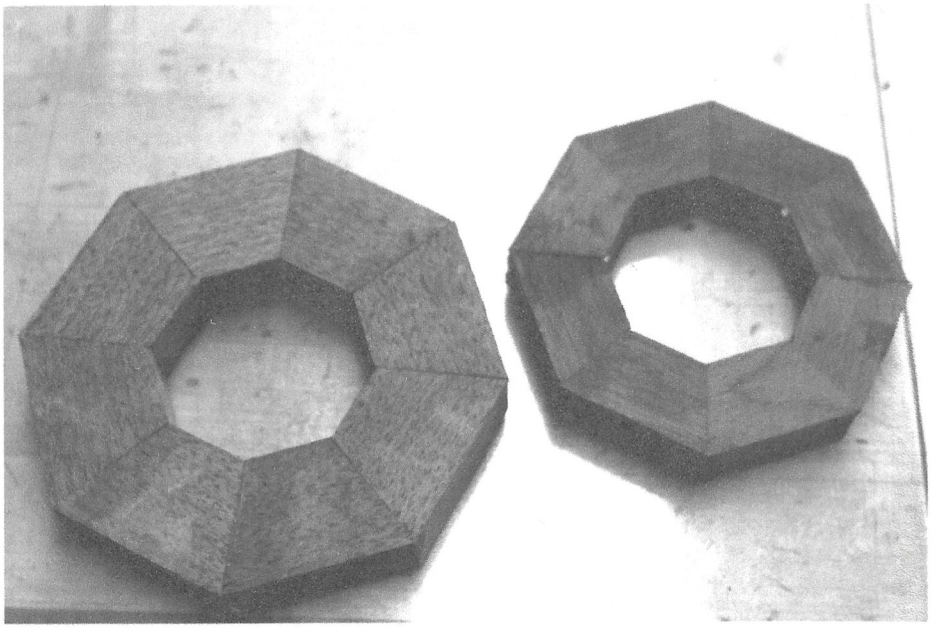
2-6-14

return

Mill Material



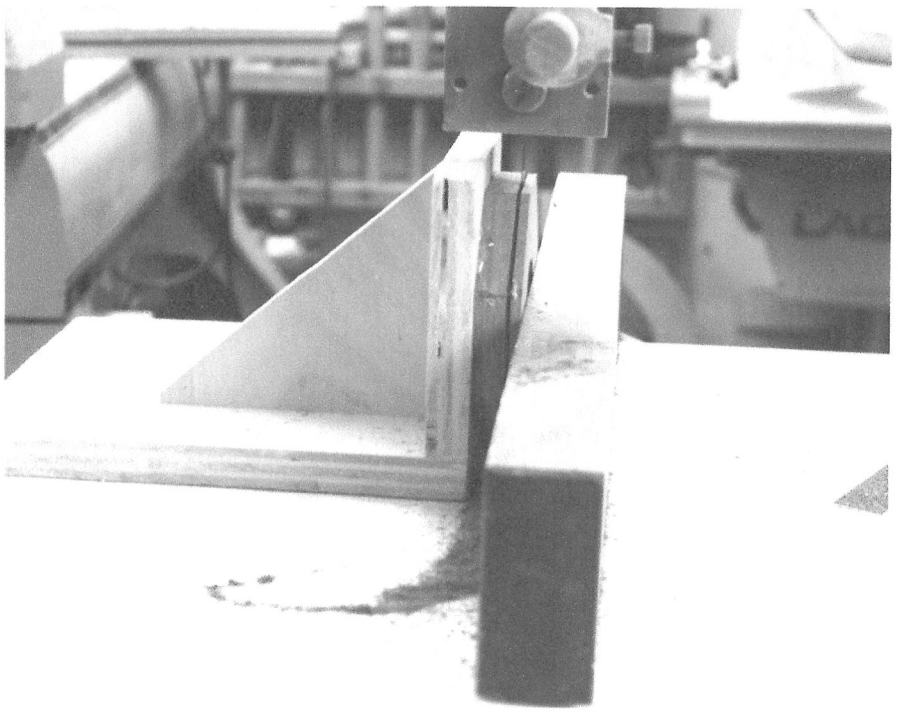
Material for open segment layers is milled to ½" thick and 1 ¼" wide

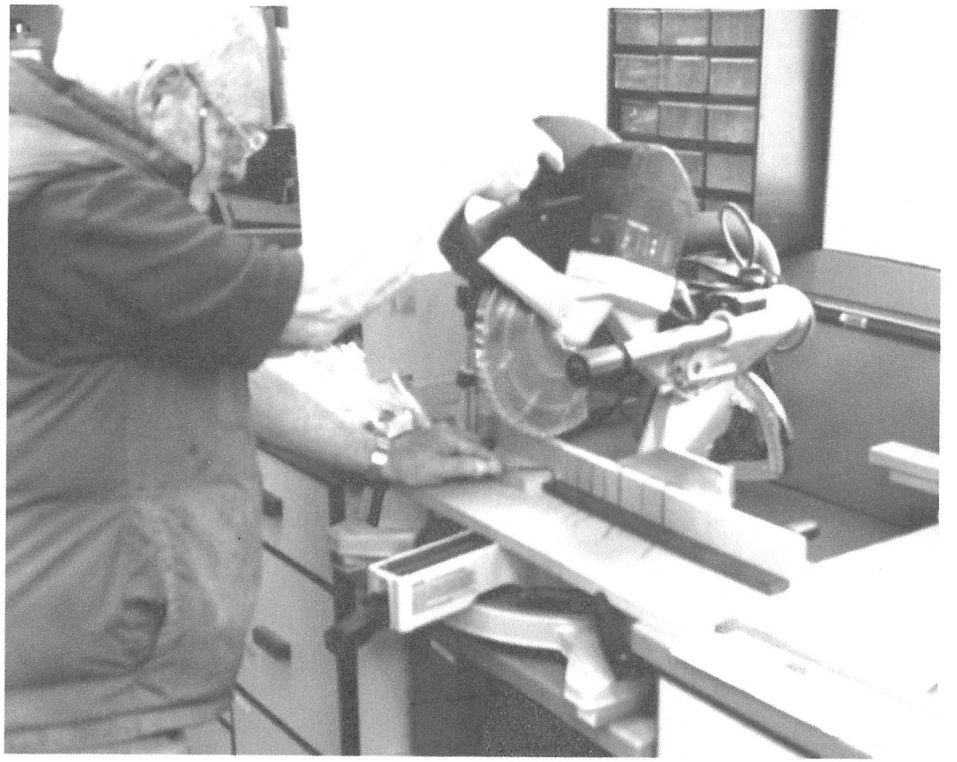


Top and bottom rings are from ¾" material and are 8 segment construction

return

Prepare Bottom Ring and Open Segments





A thin slice is cut off the bottom ring to go on top of floating bottom

Open segments are cut at 10 deg on the miter saw for 12 segment construction

12 segments = 30 deg. – 10deg gap
20 deg. Wood = 10 deg. cutting angle

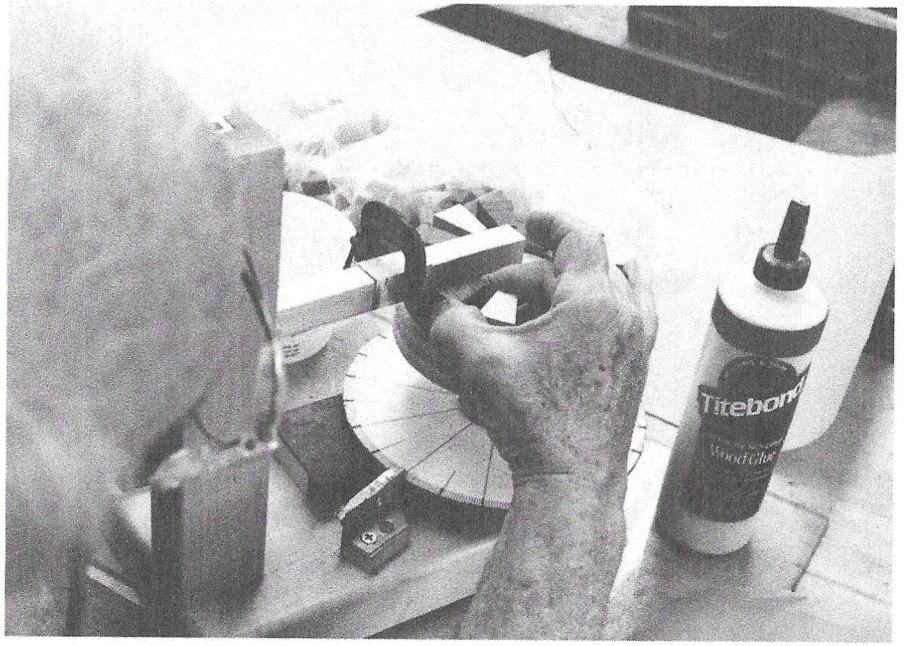
return

Start Open Segment Assembly

First layer

Follow design layout for segment color order.
Set stop to radius of layer and lock wheel to required index line.
Use a fast tack molding and trim glue.

Apply glue to full surface of segment



Position segment to arm and stop

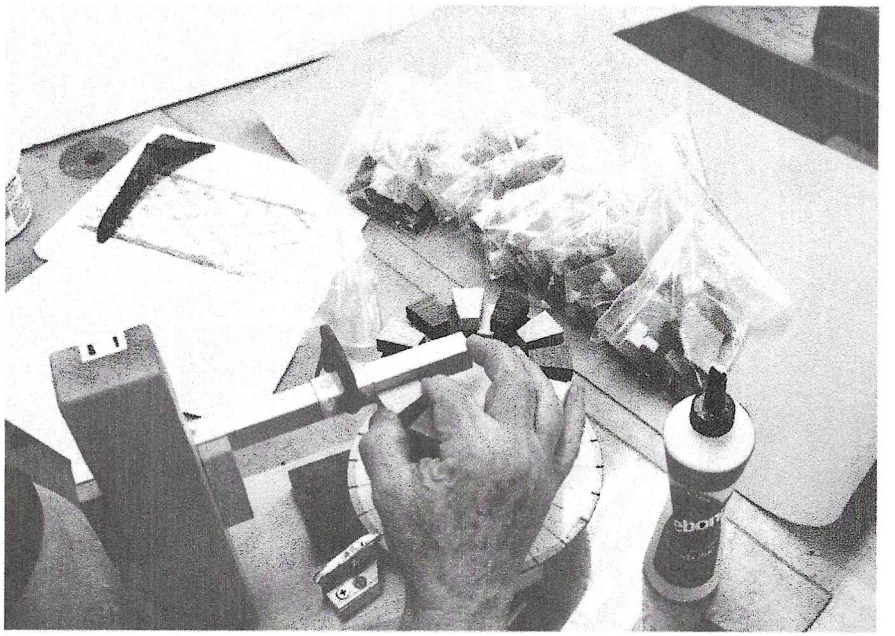
return

Continue Assembly

After first layer

Follow design layout for segment color order and offset.
Set stop to radius of layer and lock wheel to required index line.

Apply glue along edge of segment



Set segment to arm and stop

return

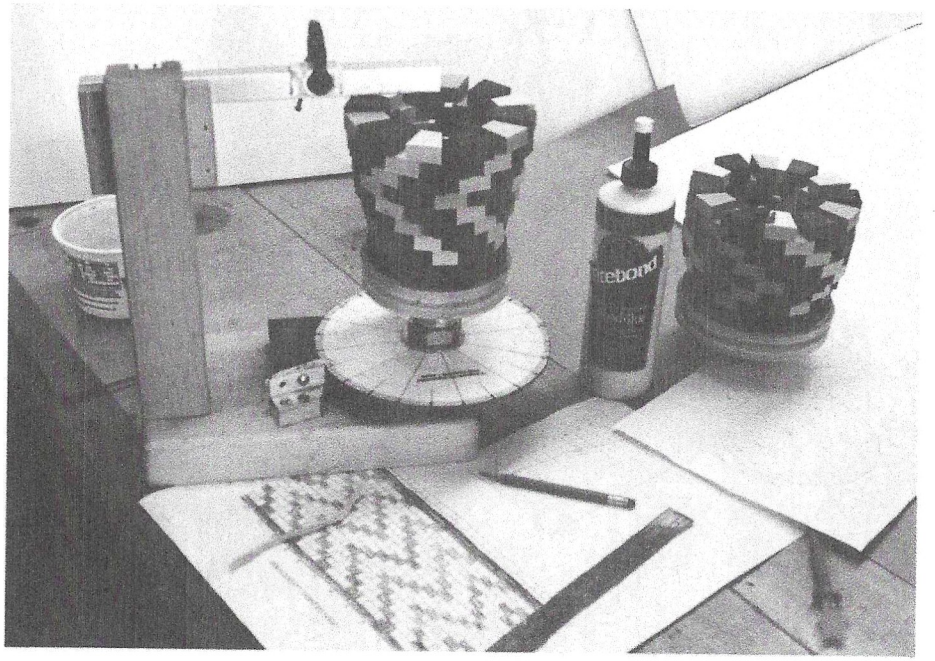
Complete Assembly of Bottom Half

Note design layout and profile layout used with scale

return

Continue Process on Top Half

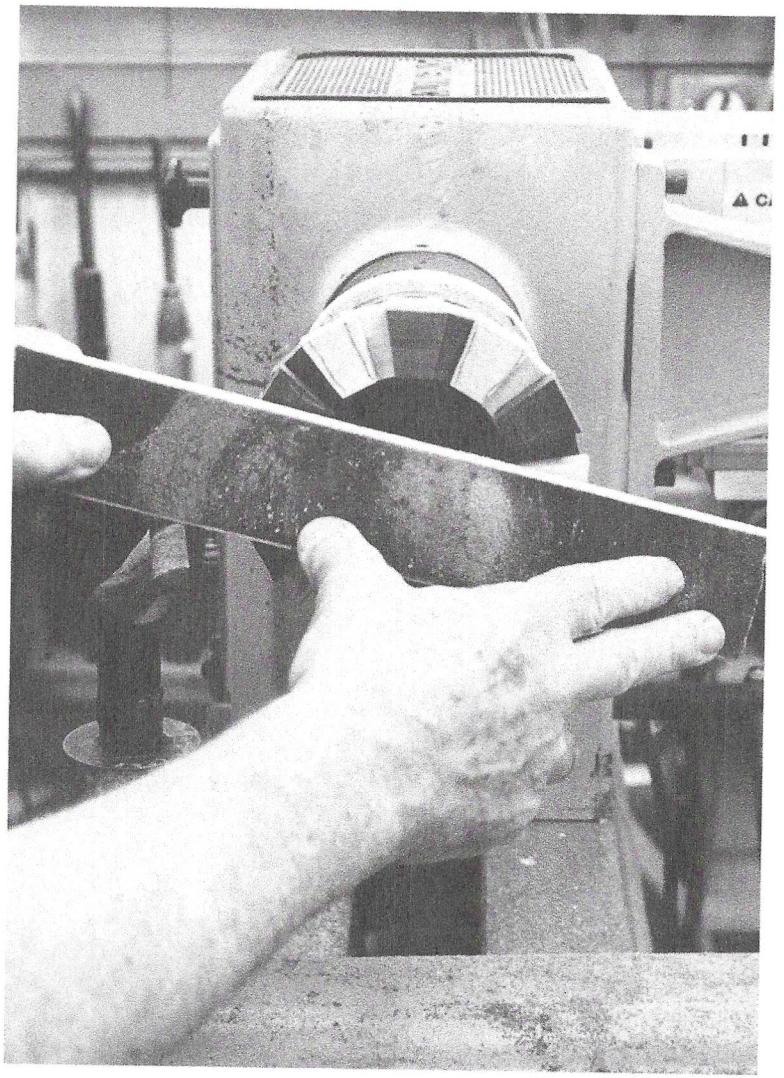
Start top half taking care that segments color order and offset are correct



Continue building following layout of color order and offset

return

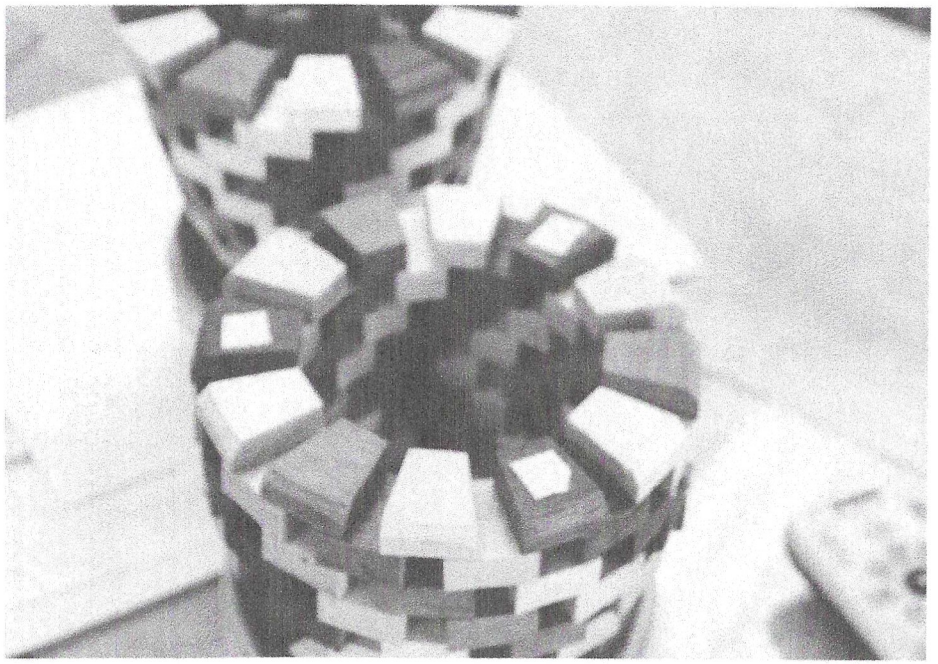
Flatten Each Half



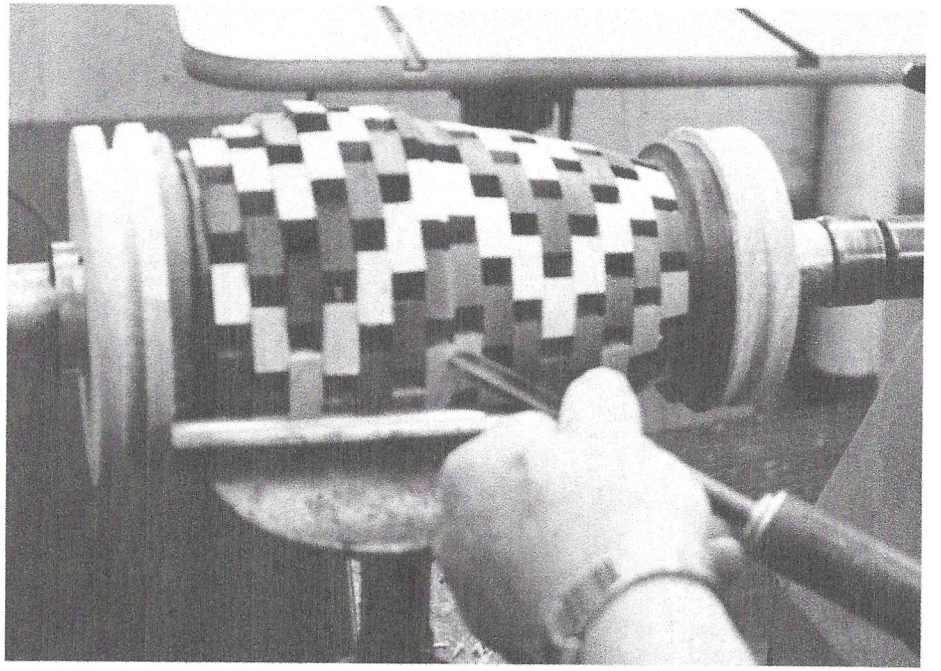
Note pencil marks
to verify flatness

return

Turn Outside Shape



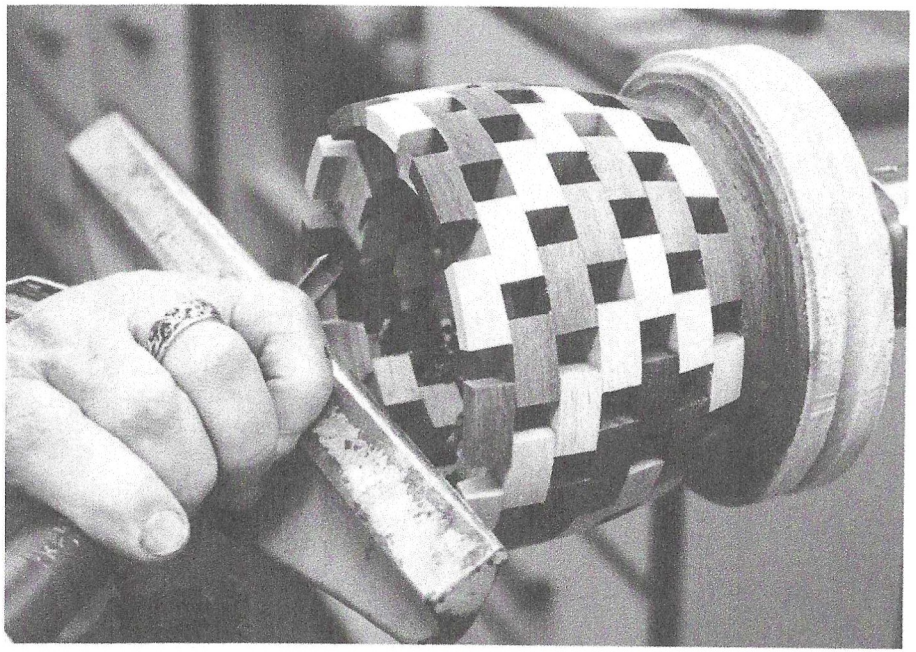
Use three small strips of double back tape to prevent slippage



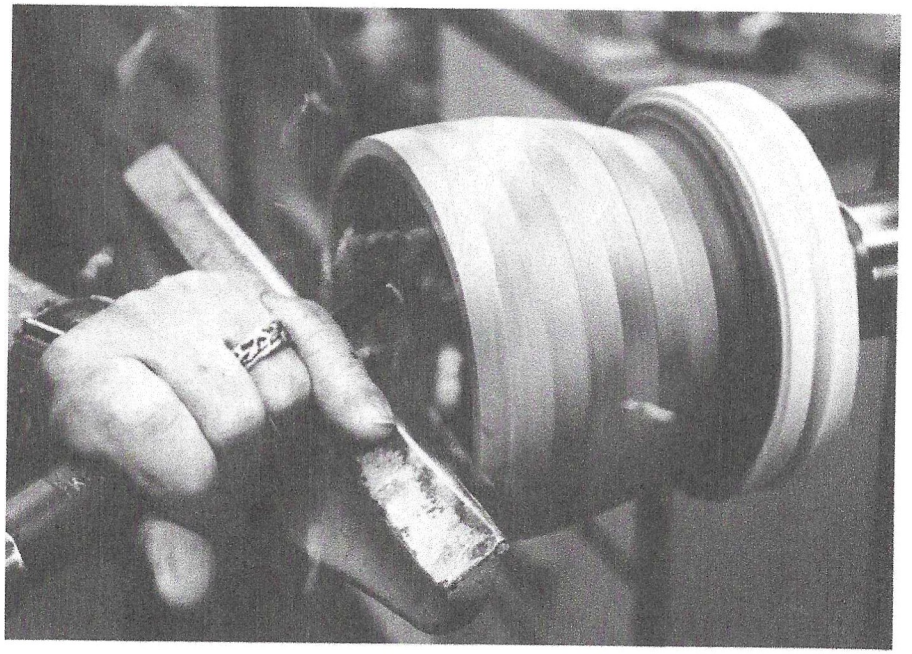
Bring the two halves together between centers and turn until no flats are present then adjust shape for a smooth curve

return

Turn the Inside



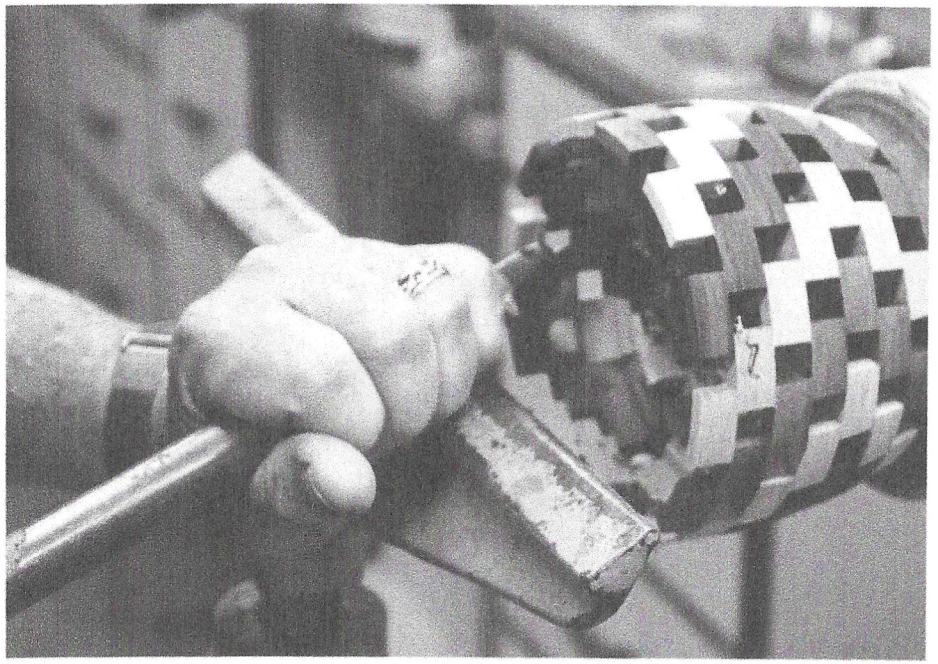
Turn inside one layer at a time to final thickness



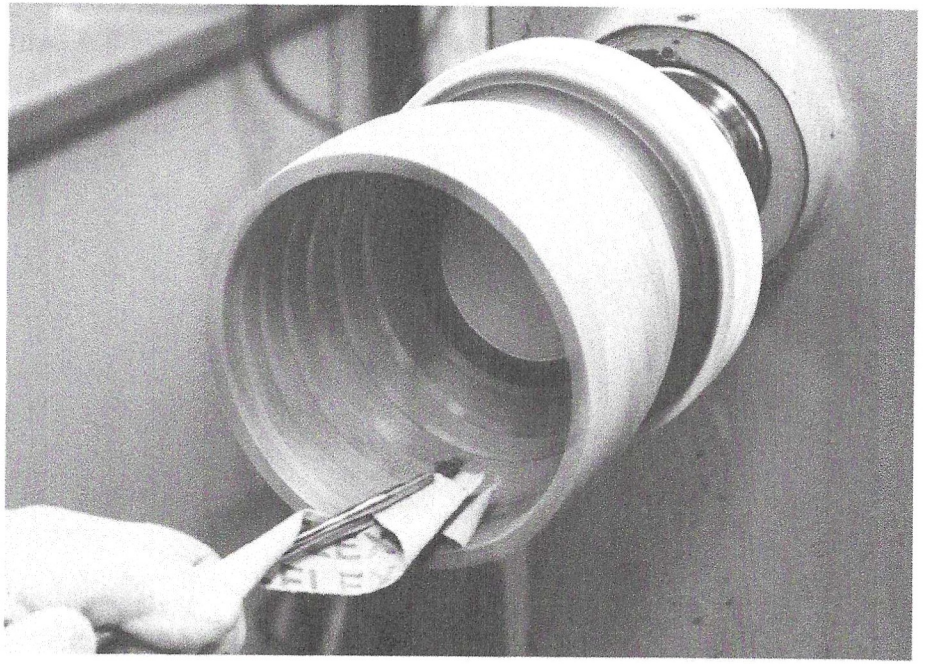
Continue for 3 or 4 layers with small bowl gouge

return

Continue Inside Turning



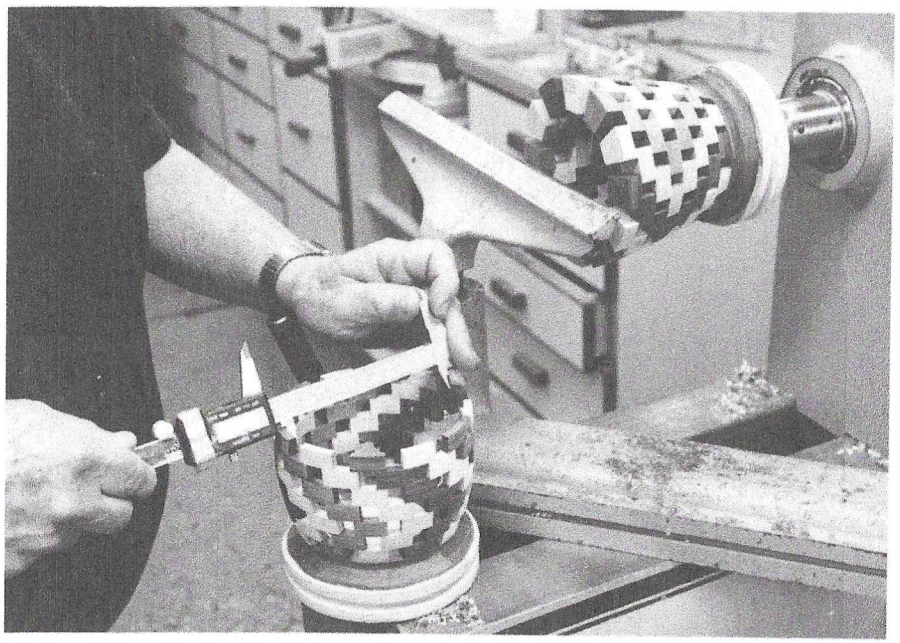
When reach is too long for bowl gouge use a boring bar



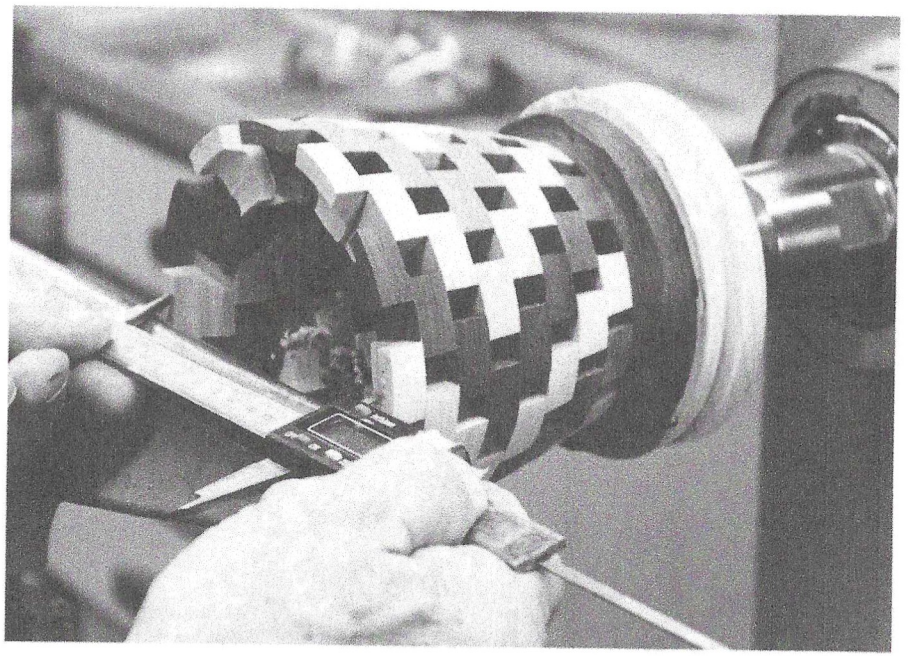
Sand the inside using forceps to keep hands safe

return

Turn Inside of Second Half



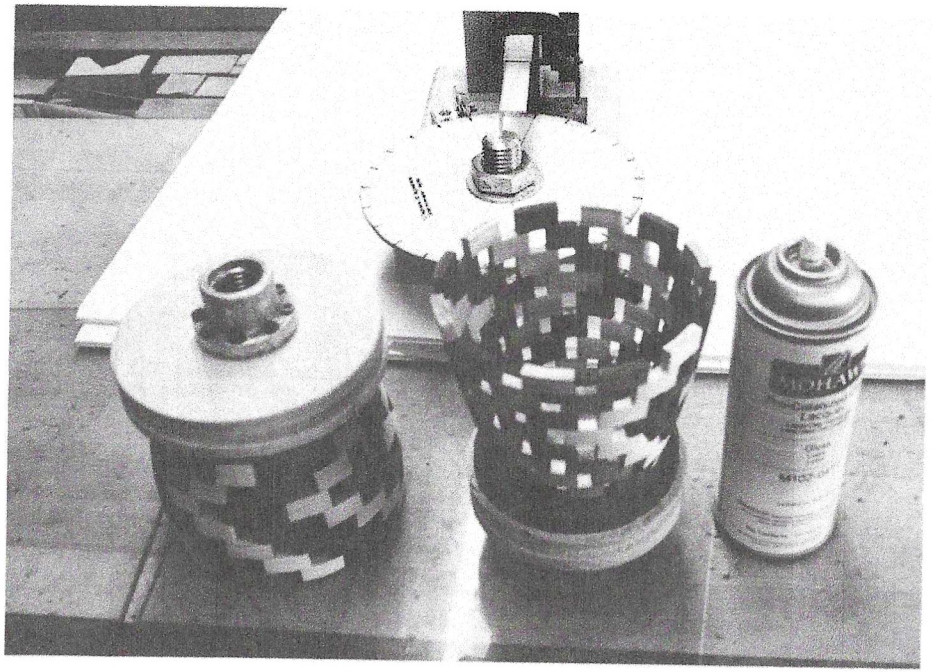
Set calipers to inside of first half



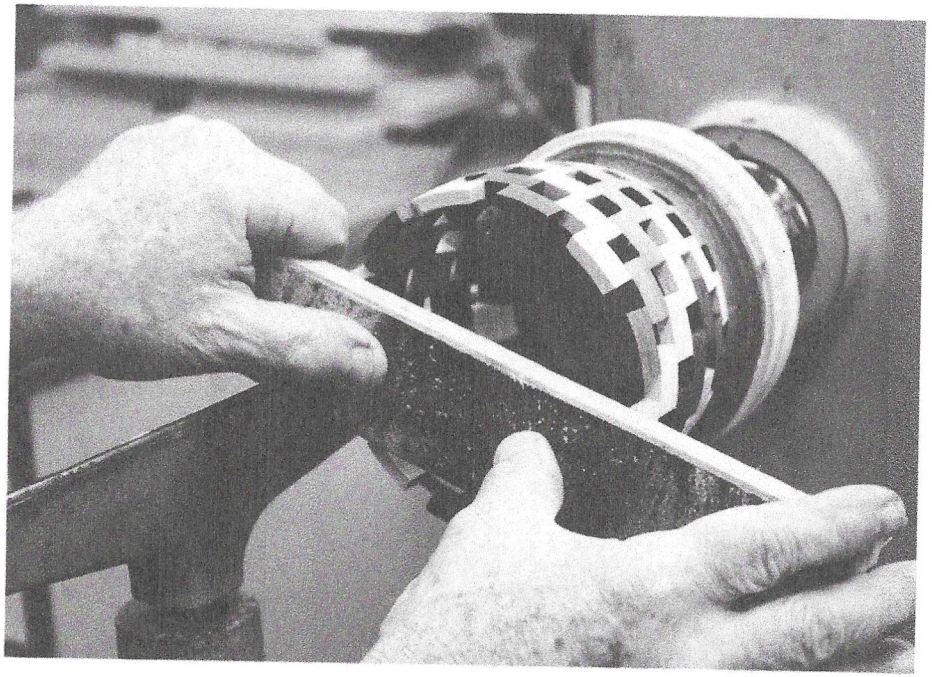
Turn inside of second half
to match the first half

return

Prepare To Join the Halves



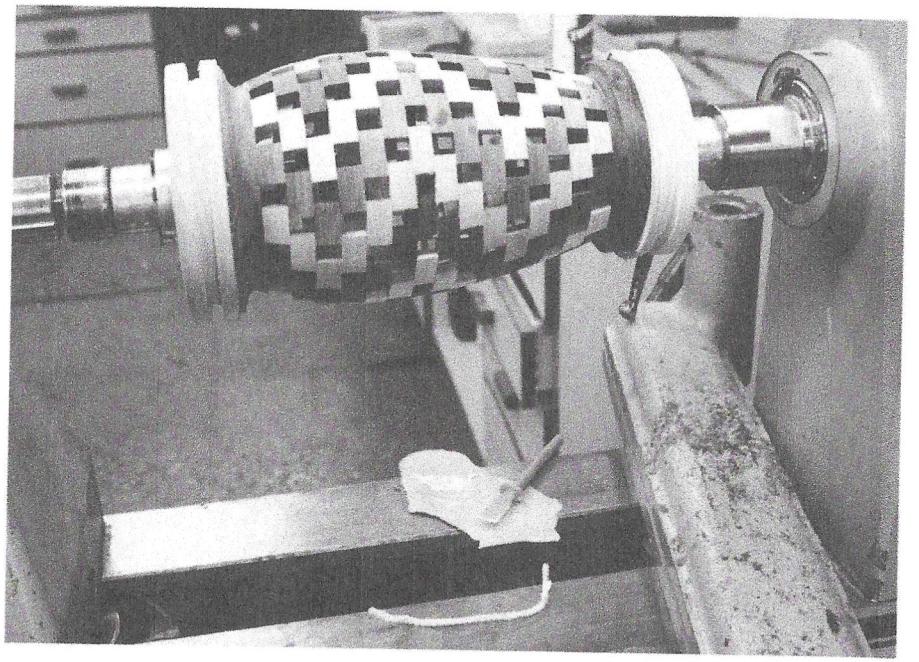
Spray 2 coats of lacquer on the inside of each half



When lacquer has dried, sand mating surfaces before joining the halves

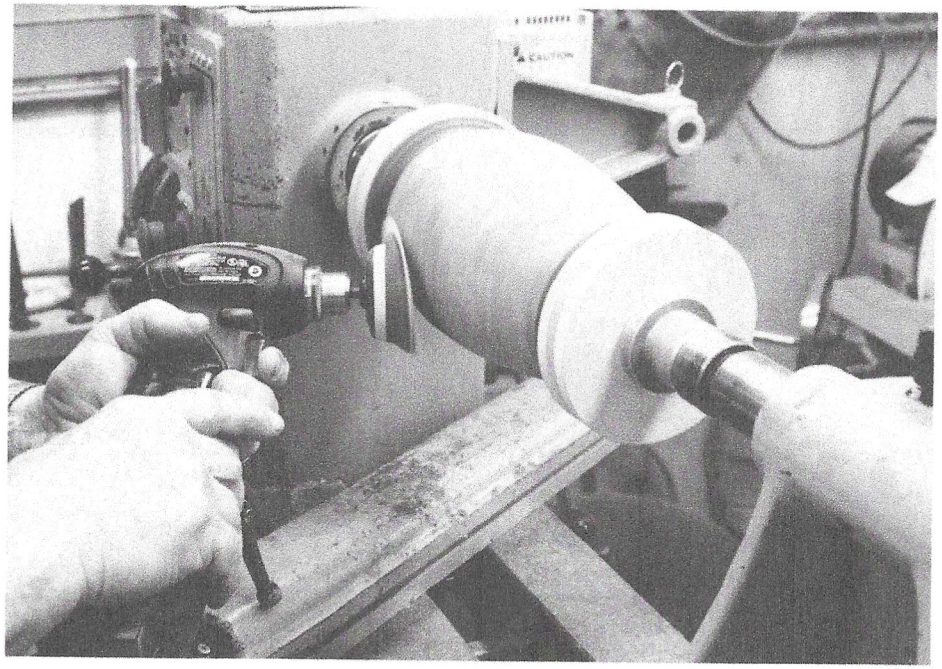
Join the Halves

Apply a dab of glue to the corner of each segment

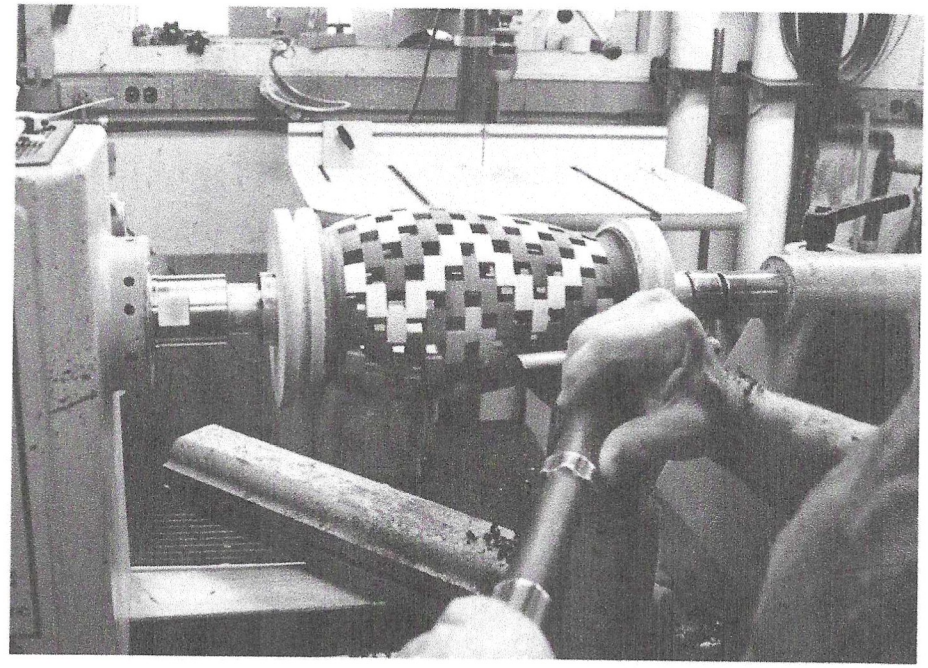


Join the 2 halves between centers making sure the design aligns as drawn

Continue Process

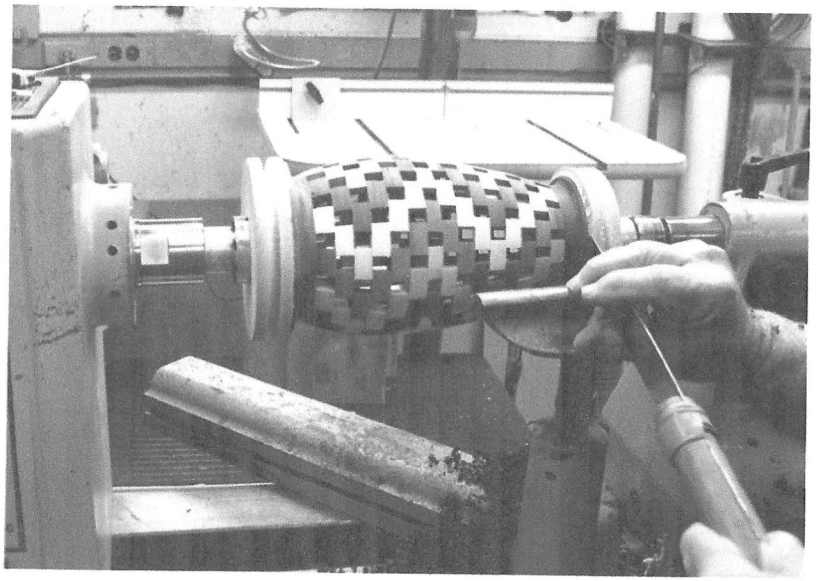


Sand joint area

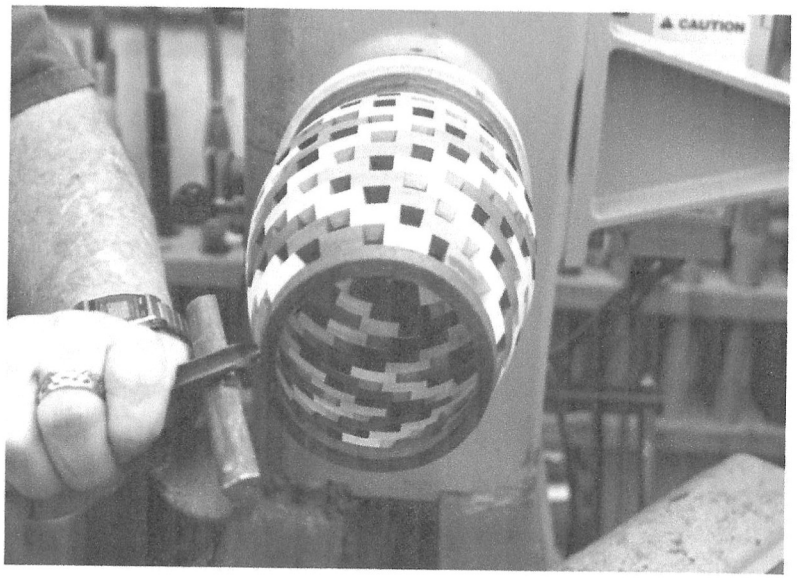


Finish turning top ring

Part off Top

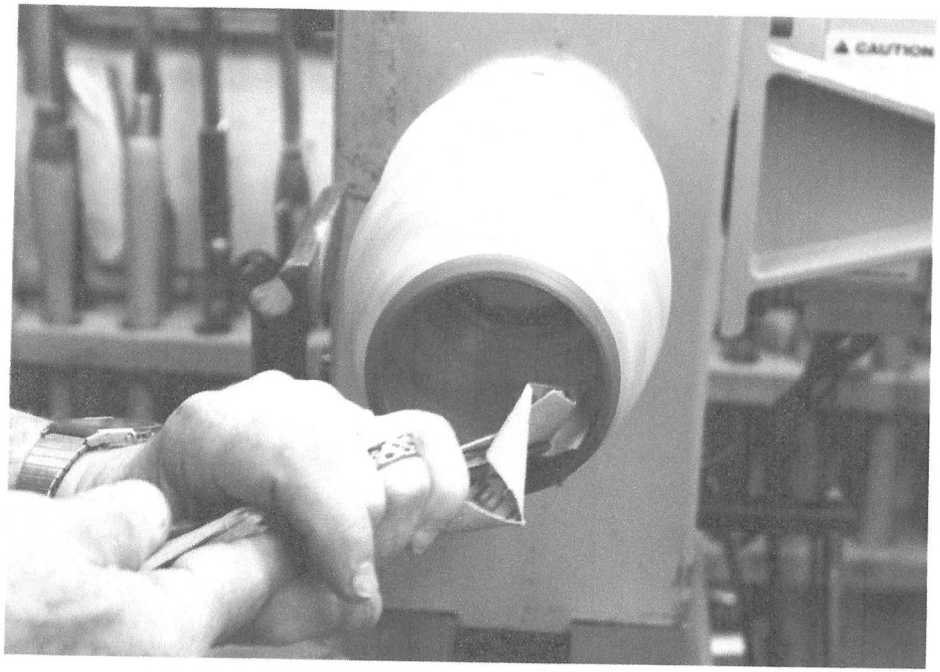


Part off top waste block



Final shaping of top lip with care

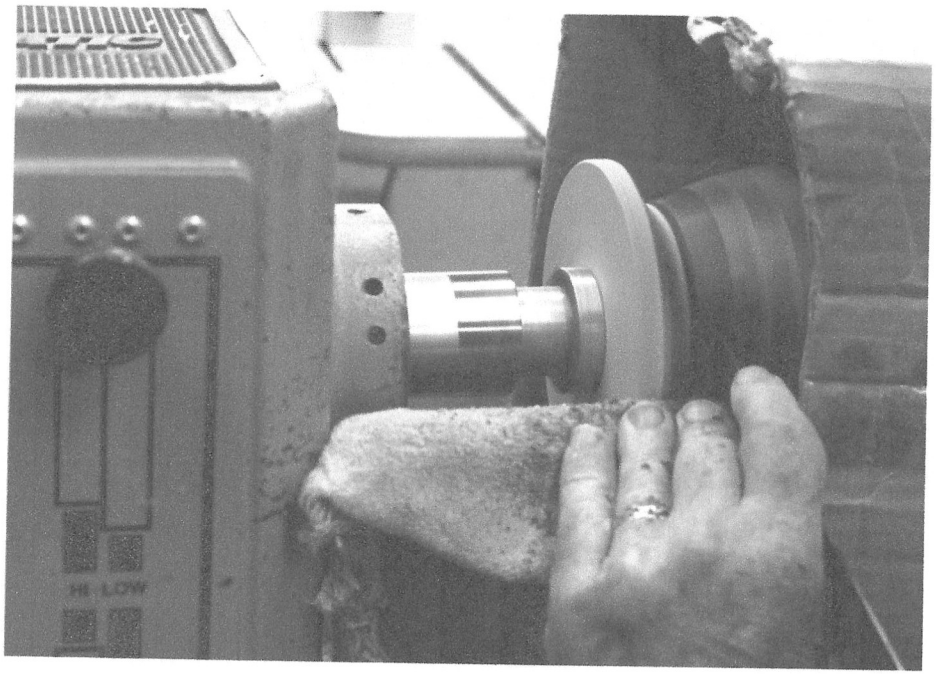
Final Sanding



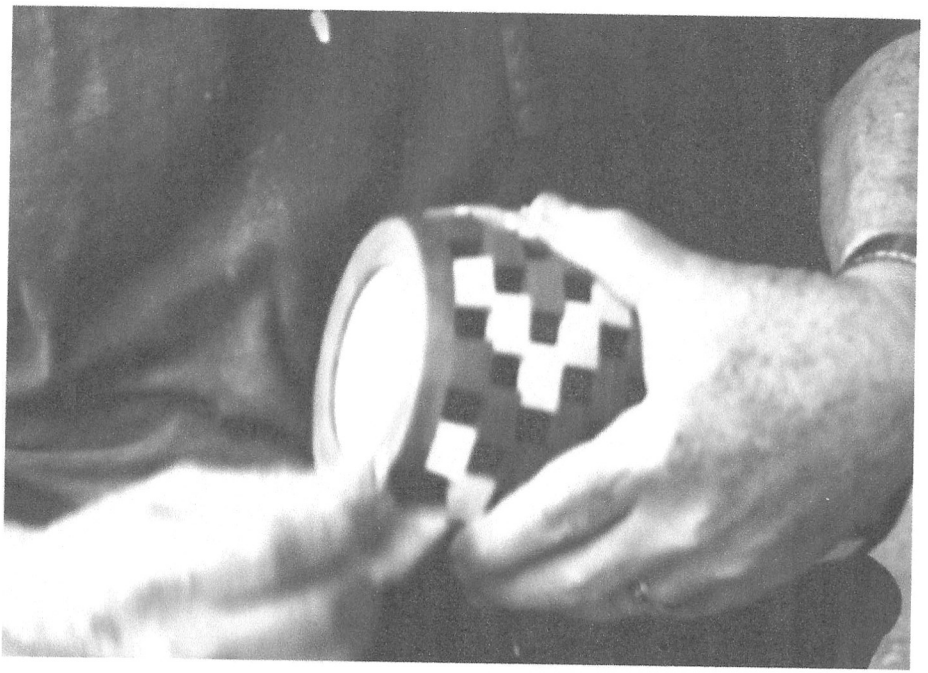
Sand inside of top lip

Final outside sanding

Parting Off

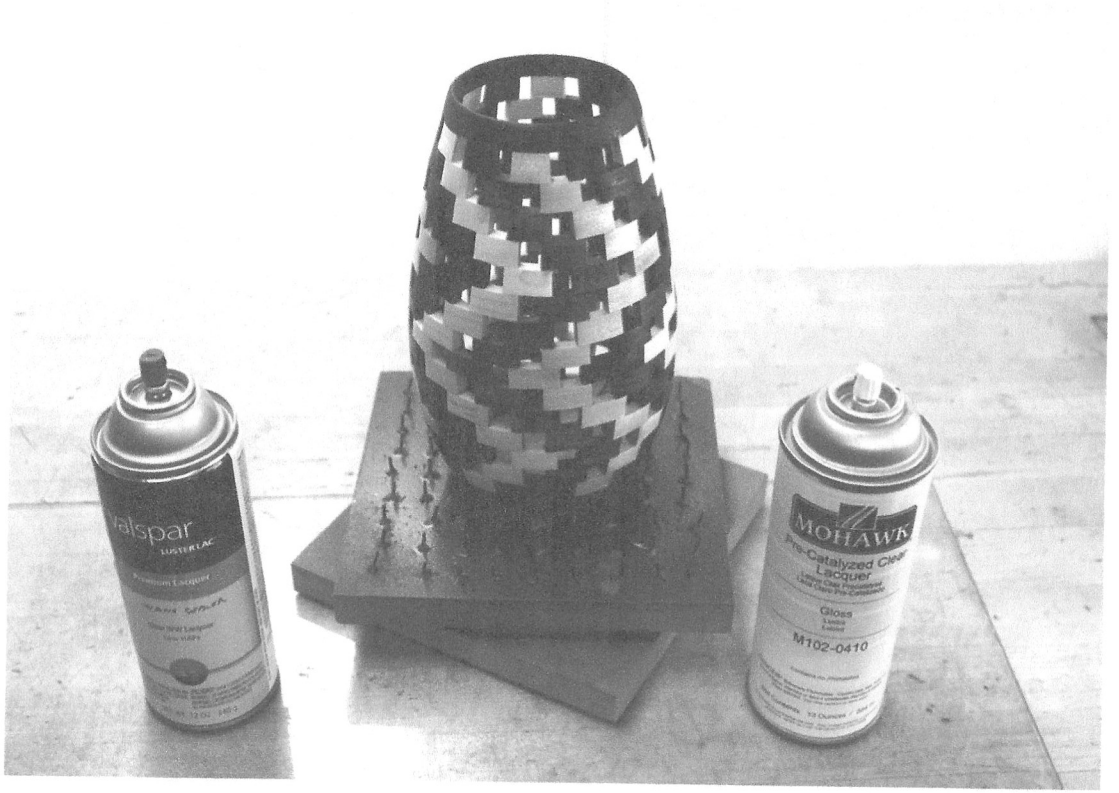


Use catch box to catch vessel when parting off



Hand sand bottom

Apply Finish



Done

return