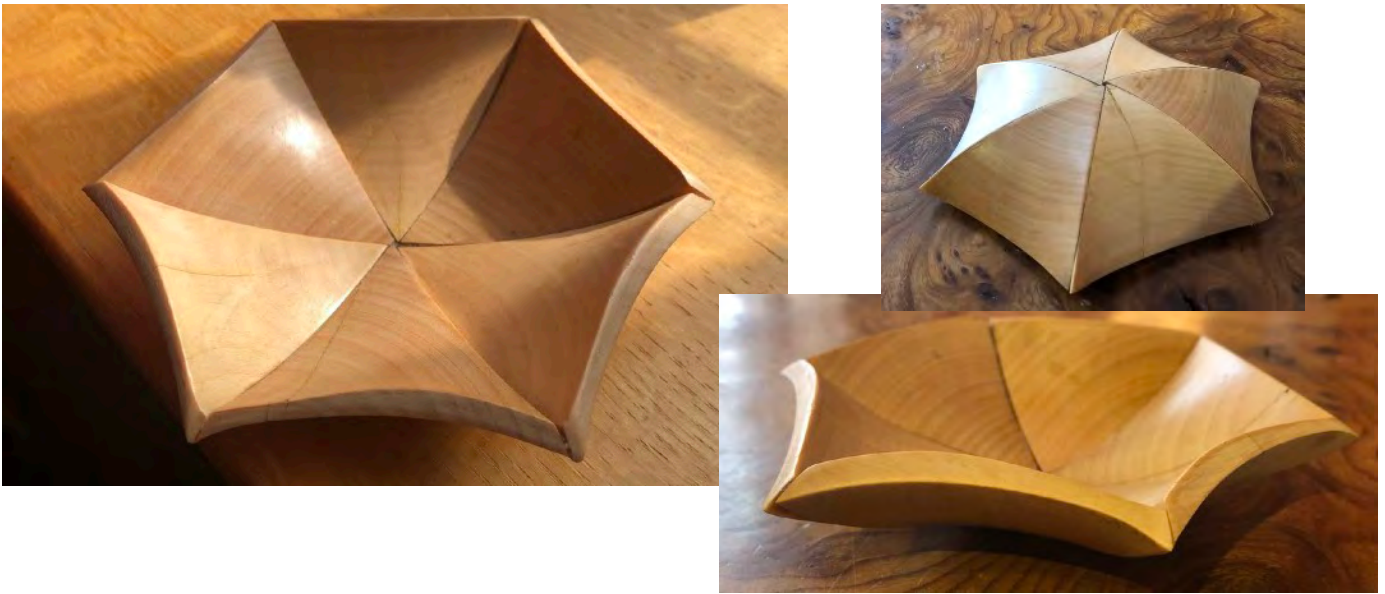


Scalloped Bowl 2



This is another try at a scalloped bowl - again not perfectly successful but still quite a pretty thing and the techniques may be of interest. The wood is Lime - and did have some pre-existing cracks.

The idea was to make the sections crosswise compared to the previous 'double bowl' approach - so the six 'petals' are cut in a single piece at right angles to their orientation in the final bowl. The original idea was to cut a ring from a slab of wood in the toroidal shape of the outer part of a doughnut-with-a-hole. In practice the wood dimensions made this impractical and the hollow ring was instead cut in the shape of the *inner* surfaces of a ring doughnut. The result is a ring in a hyperboloidal shape a bit like a power station cooling tower but more symmetrical. This shape is actually quite pleasing and not hard to make and I may aim to find something else to do with it!

Fabrication

The wood is fitted to a small faceplate and the outer concave/convex shape cut, sanded and sealed. Then a shallow cylindrical indent is cut in the end face matched to the faceplate to enable the piece to be accurately inverted and re-fixed to the faceplate. Also at this stage the lathe's indexing system is used to make six equispaced pencil marks around the perimeter to define the later cuts.

Then the inside of the about 6mm thick ring is cut out to half the wood thickness - with some extra space for the tool. After some experimenting this was done with a 3.5mm parting tool - with the side of the tool used in scraper mode to smooth the curved inner surface. The wood is then inverted and the opposite inner face of the ring cut though from the other side, going slowly as the sound shows it is almost parted. This is a lot simpler than I expected.

The separated ring is then mounted in a button-jaw chuck and the interior finished with sandpaper and waxed - obviously alternately from either side.

A bandsaw is then used to cut the ring into six square pieces using the pencilled index marks. These are then edge-sanded to 60 degree triangles by hand and using a jig with a disk sander - being careful to cut them in the correct way (see pictures).

They were then glued with thick slow epoxy and put into a circular embroidery loop to hold them in place whilst the glue set - but this is not clamped - just 'put'. Then finished by hand.

Notes:-

- The waxing at an early stage was designed to make any excess glue easier to remove - which only partially succeeded
- The wood had pre-existing cracks - this and the too-small radius (cut from the ring 'residue') of the support pieces used in the jig caused some issues and two petals were re-glued.
- The main issue in the final piece is that the ring was not of uniform thickness - this requires more care next time.
- A bit of geometry shows that the starting wood thickness needs to be about half the ring diameter, and also about half the final piece diameter. This limits the overall scale - the final bowl is about 130mm diameter.



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