

# Thin Stem Flower / Goblet

Don Roetker 4/25/2023

Evaluate wood for defects and pith. Pith location must be off-center and to the same side of the piece for the entire length. Pith cannot be in the center or cross the center, this will cause the stem to break. Decide which end will be top and base.

Place piece between centers with top at the head stock end. If necessary, offset pith out of the center line. Set tool rest to proper height and rotate piece to insure tool rest is not being struck.



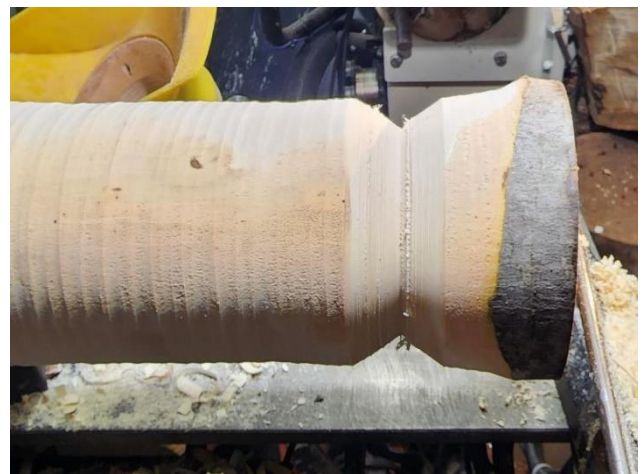
Start lathe at slow speed and begin removing irregular bulk. As bulk is removed and piece is running true, leaving about the same length as the diameter from the end chosen as the top.



On end chosen as bottom make a tenon that is square and straight chuck jaws or correct taper for Dovetail jaws, depending on which you are using. The length of the tenon should be just short of touching the bottom of the chuck jaws. The face of the chuck jaws must be in full contact for the tenon face to give the strongest hold and reduce any movement of the piece while turning.



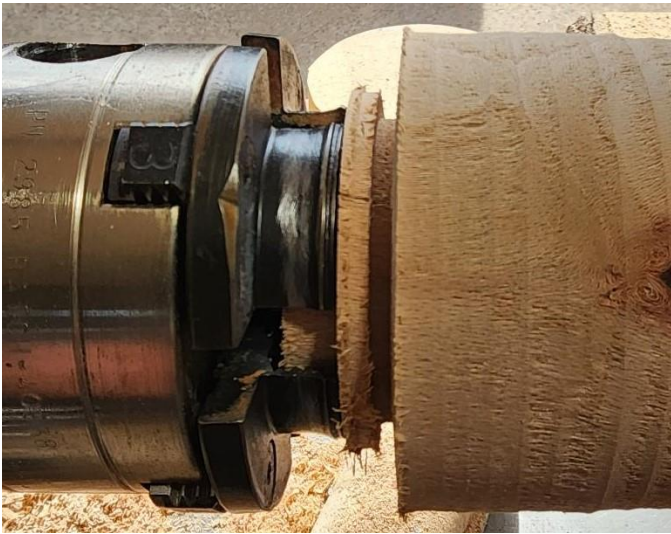
Place the piece in the chuck, bring the tailstock up for support. Begin turning establishing the rim and the interior. Next, rough turn the outside shape leaving about  $\frac{3}{4}$ " from rim. This allows you to change the shape of the rim if needed.



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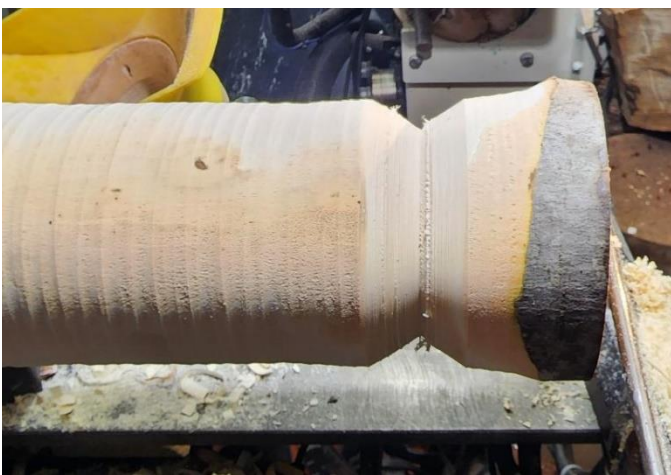
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On the head stock end using a small parting tool establish the bottom cutting in about  $\frac{1}{2}$ ". Move to the right and make another slot about  $\frac{1}{2}$ " deep with the parting tool to give a visual establishment of the base



Remove the center and finish shaping the inside of the bowl. At the very bottom of the bowl taper the bottom slightly so the center can be supported when returned to finish turning the project. If needed use a scraper to remove any tool marks and sand interior.

Now begin to shape the outside of the piece. Length of the bowl / goblet should be approximately  $\frac{1}{2}$  the diameter of the bowl / goblet. Shape the bowl leaving about 1" to 1  $\frac{1}{2}$ " of the diameter of the piece for support while finishing the bowl.



If desired shape rim and do final sanding of interior and upper areas of the outside.

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Return tailstock with golf ball and apply light pressure for support.



Finish the bottom of the outside of the bowl making sure the wall thickness stays consistent throughout the bowl. Bottom of the outside of the bowl should be slightly larger but approximately the same size a desired finished stem diameter. Final diameter and shape will be made after stem is established. Begin turning stem, removing stock from left to right cutting down hill working in sections no longer than 1 1/2" in length. With first section of stem established, finish the outside of the bottom of

the bowl and sand. You will not be able to do any work to this area again.



Continue establishing the stem by turning left to right working in short sections to a slightly larger diameter than final size. To turn the stem to final size use bevel supported peeling cuts, being sure to keep the bevel of the gouge on top of the stem, cutting right to left toward the head stock. Sand stem as you go to remove tool marks. Continue this till you are at the top of the base reference cut. Now turn the base diameter to approximately 1/3 smaller than the diameter of the bowl / goblet diameter.



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Shape the bottom of the base and begin shaping the top of the base working left to right till you achieve the stem diameter.



Do final sanding of the stem. Use small pieces of paper wrapping from the back. Take care not to squeeze to tight or you could twist the stem off. Final sand with the lathe off and sand parallel to the stem rotating the piece by hand.



Part project off or part to small diameter and saw remainder to remove.

Sand bottom of piece.



Once drying is complete, usually in a few days. Final sand and finish or color as you desire.



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Notes: starting the lathe at high speed can twist the stem and cause it to break or fracture do to inertia. Best to start slow and increase speed slowly.

Sanding the bowl / goblet is not possible with the lathe running after the stem is turned. Even the lightest of pressure of sanding will twist the stem and cause breakage.

Let the piece dry for several days, best in shavings in a paper sack before final sanding and finishing.

If longer stemmed pieces, over about 9", a steady rest is required to support the longer piece.

Bending of the stems can be achieved several ways. Wrap stem in wet paper towel or rag and heat with a hair dryer or heat gun slowly while putting light pressure in the area where the bend is desired.

A heat bender can be used by running the stem along the heated tube and applying light pressure to both ends of the piece.

Stretching a rubber band from the top to the bottom on the side you want to bend while the piece is drying. This is the least desirable method since there is no control as to where the bend will be and highest chance for breakage.