

Turning an Arch Bowl

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- Select a defect free rectangular blank. Good first time size is 9-10" long, 4-5" wide and 3" thick. Shorter in length is harder as is a thicker blank. If you have a small lathe, go for shorter and thinner stock.
- Mount the blank between centers with the bottom of the bowl facing the tailstock.
- Flatten the bottom and add a tenon for your chuck. Make sure the tenon is recessed below the outside edge of the blank—i.e., what will become the feet of the bowl. This helps to guarantee that the feet will extend past the bottom of the bowl once the tenon is removed.
- You can do some initial shaping of the bottom of the bowl at this time, but it is not necessary. Do NOT shape the entire bottom at this time, as it is easier to first shape the top.
- Mount the bowl in your chuck using the tenon on the bottom of the bowl.
- Shape the top of the arch. Start by nibbling away at the corner and work your way closer to the center and closer to the foot with each pass. Lathe speed is important to get clean cuts; faster is better. However, be safe with the speed and comfortable with what you are doing. Use the tailstock for support and additional safety.
- Keep shaping the top until there are no flats on the ends and you have a nice arch shape from the center to the end.
- Add a tenon on the top. Recess this inside what will become the bowl portion so that you don't modify your arch shape.
- Reverse the bowl in the chuck, mounting it on the tenon you made on the top. Prior to reversing, mark where the number 1 and 2 jaws of the chuck were on the tenon. This will help to re-center it later.
- Remove wood to shape the legs of the bowl. Try to match the arch shape of the top. Work the legs in sections about an inch at a time down to their final thickness. Once you have a section complete, move on to the next section and don't go back. The legs will begin to vibrate/move as you remove more material so you can't go back.



- As you remove material for the legs, you can also start forming the bowl portion. This can be tricky as you will be working between the legs of the bowl. Keep an eye out for the legs to make sure your bowl gouge does not come in contact with the legs. NOTE: do NOT remove the tenon on the bottom—you will need that to hollow out the inside of the bowl.
- When you get closer to the center of the bottom, it will be very difficult to use a bowl gouge to make the final cuts as the space between the legs/wings will be very small. You can decide to make them meet at a sharp angle which can be done by carefully cutting from both directions with the bowl gouge—however watch the wings of your gouge in both directions to make sure you don't hit the bowl of wings and get a nasty catch. Another option is to put a cove at the base of the bowl and wing using a round nosed scraper. In either case, position the toolrest in the gap between the bowl and legs so that your tools don't hang off the toolrest too far.
- At this point you should sand as much of the bottom as possible. If your bowl is long enough and arch not too deep, you can use a drill and 2" sanding mandrel to sand the inside of the legs. NOTE: do this with the lathe OFF.
- You can also use drum sanders to get into the tight spots. I like the slotted, sleeveless drum sanders as you can just wrap sanding paper around the drum and avoid the high cost of the sanding drums.
- To sand the bowl portion, you may need to use a larger diameter sanding mandrel on your drill. I've used one as large as 5" to get to the top of the bowl.
- Reverse the bowl again and mount it on the bottom tenon again. You should be able to get this to run true if you prior to removing it the first time, you mark on the tenon where the slot between the number 1 and 2 jaws. You can then use the little indentations left by the chuck to re-center it.
- Mark the outside diameter of the bowl on the face based on the shape you made on the bottom. Use this as a guide when hollowing out the bowl.
- When you are done hollowing the bowl, sand the top. I use a sanding mandrel on a drill and sand with the lathe moving. Be care not to over rotate the drill and catch the mandrel on the wing. If you power sand like this you need to reverse the lathe every other grit so you don't round over the same edge all the time.



- With sanding complete it is time to remove the tenon on the bottom.
- My preferred way is to use a vacuum chuck as you can get the tailstock out of the way and do final refinement of the bowl.
- If you don't have a vacuum chuck, take a waste block of wood and make a little donut chuck the bowl will be jammed up against using tailstock support. The center must be concave and have a definite rim to it.
- Place a piece of leather between this jam chuck and the inside of the bowl and bring up the tailstock. The leather acts as a bit of grip and if the bowl slips and spins, it won't leave a mark on the inside of the bowl.
- You can now carefully turn away most of the tenon. Don't cut it all the way off—it is much too dangerous as you can't safely catch a square bowl. Just trim off the remainder with a rotary tool, chisel or knife.
- Finish with the bowl finish of your choice. Mine is Mahoney's Utility Finish, a.k.a. walnut oil.

