

Turning and Carving Piecrust

Traditional methods still pay off

by Eugene E. Landon

A piecrust top looks intimidating, but even a beginner can carve one with sharp tools and some attention to the order of events. You don't need many carving tools—a $\frac{3}{8}$ -in. #5 gouge (or one suitable for the shape of cove to be carved), a #2 gouge about the same width and a medium-size flat chisel will suffice. I've probably turned and carved three or four dozen piecrusts, and can tell you that the job is very satisfying. Be sure, however, that your wood and your glue joints are sound. I once had a knot catch the tool while turning a 30-in. blank, and the exploding top left permanent marks on both my shop and my memory.

Tops come in a variety of sizes. The one shown here is medium size, about 20 in. in diameter. Feel free to scale the design up or down. You expect a mahogany tabletop of any size to be one piece—mahogany was once available in very wide planks indeed—but walnut tabletops larger than 12 in. in diameter are generally glued up from two or three boards.

Old tabletops were made from air-dried wood with about a 15% moisture content. In modern houses, they shrink quite a bit

as central heating brings the wood's moisture content down to about 8%. One hallmark of a genuine lathe-turned antique top is that it's no longer round. So, for this reproduction, I'm using air-dried walnut from the stack out behind my shop, rather than wood from my kiln. With luck, it'll shrink about as much as the original table, which is $\frac{3}{8}$ in. out of round. This shrinkage will take a year or so to occur.

The process begins by gluing up the blank, bandsawing it round and attaching a glue block to which the lathe faceplate can be screwed. I don't use paper in the glue-block joint because I don't want any chance of repeating that memorable explosion. It's easy enough to saw off the bulk of the block when the turning is done—run the tabletop horizontally over the tablesaw to make a series of side-by-side kerfs in the block, chisel off the waste, then plane the bottom of the table flat.

Gene Landon works wood in Montoursville, Pa. The original of the table shown here is at Independence Hall, in Philadelphia.



1. With my lathe turning at its slowest speed, about 700 RPM, I flatten the back and round the outside edge with a gouge, then clean the surface with a skew used as a scraper. This produces dust from the endgrain areas, but pretty good shavings from the long grain.

2. I traced a portion of the tabletop, which the curators at Independence Hall in Philadelphia were kind enough to let me do, and took careful measurements. Here, with a parting tool, I'm marking the inner extent of the piecrust—the center of the top will be dished out flat up to this line. If you look closely, you can make out the slight step at the outside rim, made with the point of a skew. This is my gauge line for the final thickness of the rim.

3. Here's an early stage of dishing, using a gouge. As wood is removed, the top will warp slightly because the uneven tensions in the wood are finding new balances. This causes the rim to go out of a flat plane, which is desirable—the final carving will not look too mechanical, but will have a little up-and-down wander.



4. I turn the cove with a carbide-tipped scraper (soldered up for me by my favorite local machine shop) that has a profile like a flat little fingernail. This narrow profile allows me to fine-tune the shape of the cove until it exactly matches the profile of the gouge I'll use for the carving, as shown in the next step.

5. Check the profile of the cove by stopping the lathe and pressing the gouge—in this case a $\frac{3}{8}$ -in., #5 sweep—into the cove at the same angle as when you will be carving. The fit shown here is just right and matches the original table. Piecrusts superficially look alike, but each carver makes the cove to match his particular tools.





6. With the top cut to final depth, tool marks can be removed by scraping. I made this tool from a power-hacksaw blade—there's a clear view of it in photo 15. It has a slightly convex edge, and I use it with the burr left by the grinding wheel.

7. With a template made from the tracing of the top, you can step around the circumference. Note that each small scallop comes the same distance from the step at the top of the cove. This distance will be the width of the outer bead when the carving is complete. One reason I don't make a lot of drawings is that I document each reproduction with photos of the original; I also make rubbings of carvings and other relief details when possible.



8. Bandsawing the profile is about as nerve-racking as this project gets. The scallops are at the limit of what this $\frac{1}{4}$ -in. blade can turn. Be sure before you start that you can cut the tight radius, or else everything up to this point is wasted labor.

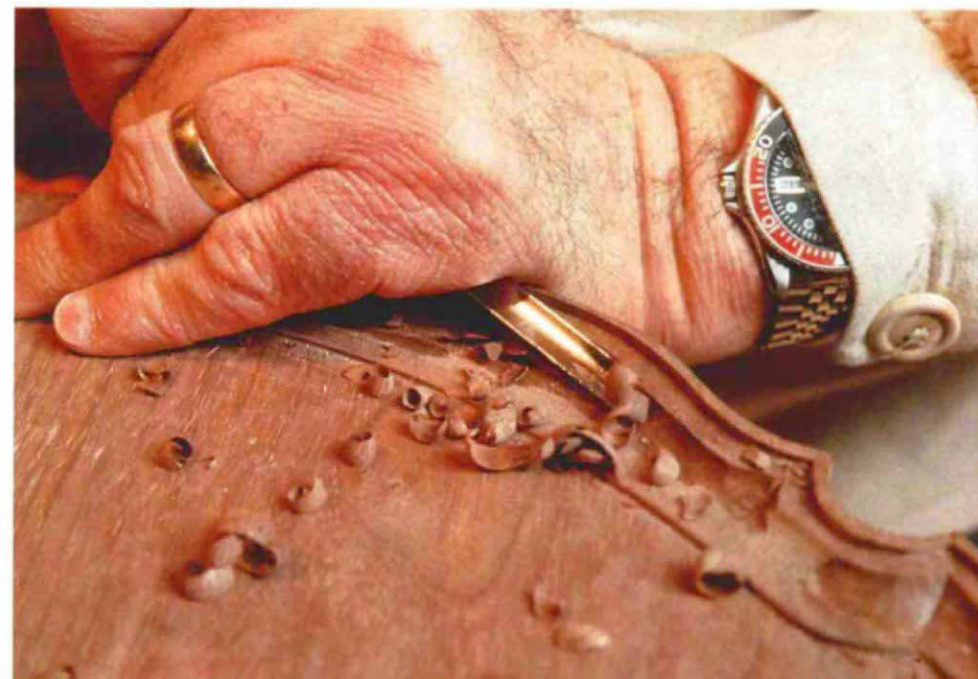


9. After filing the profile smooth, mark the width of the outer bead with calipers or a compass, then make vertical "stop cuts" using gouges of the appropriate sweeps to match the curves. These cuts define the inner border of the bead and prevent it from splitting off when the adjacent surface is lowered. I prefer narrow gouges for this job, because wider ones require so much pressure that they may split the bead off anyway. Where the grain is short, I use an X-Acto knife for the stop cut. However, with a bead as narrow as this one, be prepared to glue some chips back on (I use model-airplane cement).

10. Using a #2 gouge, which will make cleaner cuts than a flat chisel, rough a level surface from the bead to the top of the turned cove. Deepen your stop cuts if the chips aren't coming off clean next to the bead, but don't go so deep that the cuts will show in the finished carving. If the gouge digs in, cut from the other direction.



11. With the gouge from photo 5, gradually work the profile of the cove out toward the rim, leaving enough wood beneath the cove to allow for the stepdown to the tabletop. I've chosen this photo out of sequence so that you can see what the finished step will look like (see lower right corner of photo). The tool action for the roughing cut is worth practicing—it's a combination of turning a screwdriver and prying up a paint-can lid. This slices and scoops uniform, controlled chips. Work with the grain as much as possible. Where the coves meet, a skew chisel or a knife can make a neat miter stop cut, but it's a tough job to carve the cove up to the miter—the wood gets in the way. When it gets impossible to get the gouge into position, switch to a #2 gouge and use the corner of it, working at whatever angles it takes, to slice and scoop out the final shape of the cove. Some cuts will have to be made vertically. Expect the miters to take some time. Be patient worrying away the wood and the result will be just fine.





12. The next four photos show a critical part of the carving, extending the flat top up to the cove. Marking out is done with a compass, then stop cuts are made with chisels and gouges. Be careful not to make your stop cuts too deep, or they will mar the look of the top. The trick is to work the flat down gradually.

15. Final leveling and polishing comes from scraping. The tool is pushed and the touch is very light. Up to this point in the process (including the turning), I've re-ground the edge three times to refresh the burr. The fuzz in front of the tool is not so much dust as it is super-thin shavings.



13. The first cuts, made with a #2 gouge, can be fairly bold, similar to the way in which the roughing cuts were made when carving the cove. But be somewhat cautious. There's a real danger of going too deep and making a depression between the flat top and the cove. This will absolutely ruin the look of the table.



14. I've switched to a flat chisel here for paring away the gouge marks. Note the size of the chips and try to match them with your own tools. You must work in thousandths-of-an-inch—if you can't produce chips of this size, your chisel is dull. Check frequently with a small straight-edge to be sure you don't go too deep.



16. Here's the idea on the back. Rough out with a coarse rasp, then finish up with ever-finer rasps and files until the wood shimmers. You'll probably find that the back has warped as a result of the dish on the other side. This is no problem, because the surface ought to be planed flat anyway, when the glue block is removed.

17. I still have a way to go yet, and the sun is going down, but I'll have plenty of time tomorrow to finish the carving. Even with just this small section done, I think it's astounding how sculptural and strong a piecrust looks, especially when you consider that the carving stands only $\frac{1}{4}$ in. proud of the top. Those old carvers really knew how to catch light and shadow, didn't they? They set the standards for us all. □

