

Authentic Shaker Knobs

Turn and attach
a classic knob in minutes

BY CHRISTIAN BECKSVOORT

I make mostly Shaker furniture, so a number of my pieces have Shaker-style knobs—commonly called mushroom knobs—mounted to the doors and drawers. Although you can buy them, I prefer to make them. Commercial versions come in limited sizes. Plus, some of them don't quite have the graceful curves that are the hallmark of a classic Shaker knob. I'm also free to use any wood species.

Then, too, when I make my own knobs, I can size them in proportion to the drawer front. For example, I make a 15-drawer chest that has 2¼-in.-tall top drawer fronts and a 5½-in.-tall bottom drawer front (see photo, left). That piece has eight different knob sizes, varying from ⅝ in. dia. to just under ⅞ in. dia., in increments of 0.025 in., or just under 1/32 in.

After 30-plus years of turning these knobs, I've managed to learn a few tricks that help get the job done quickly and efficiently. In fact, I now turn a typical 1-in.-dia. knob in about eight minutes.

Early on, I realized that the tenon diameter is the only critical dimension on a knob. The tenon must fit snugly into its hole. Too big and it won't fit; too small and the joint strength is compromised. And extra glue won't correct the issue.

So rather than turn the tenons on a lathe and have to deal with some inevitable inaccuracy, I use a drill press with a ⅜-in. or ½-in. tenon-cutter (depending on the knob size) to do the work. A tenon-cutter creates perfect tenons every time. You can order one for between \$20 and \$25 from www.woodworker.com.

For any knob to look good, it must have correct proportions. When turning a Shaker mushroom-style knob, I make the exposed length the same as the diameter. Add about 1¼ in. to the rough blank to accommodate a 1-in. tenon and the turning process.

*Contributing editor
Christian Becksvoort is
a professional furniture
maker in New Gloucester,
Maine.*



MAKE THE TENON AND ROUGH-TURN THE BLANK



1

Center the blank. Draw diagonals on the end of a square blank. Mount a drill bit in a drill press, and support the blank with two blocks screwed to a plywood base. Shift the base until the center of the bit is centered on the blank. Then, clamp the base to the drill-press table.



2

Cut the tenon. Clamp the blank to the blocks and replace the drill bit with a tenon cutter. Set the drill-press speed to 1,200 rpm for a $\frac{3}{8}$ -in. tenon cutter and 1,000 rpm for a $\frac{1}{2}$ -in. cutter. Set the depth stop at 1 in. and make the cut.



3

Set it free. Measure the tenon depth and mark it on the outside of the blank. At the bandsaw, using the mark as a guide, make a cut into all four sides about $\frac{3}{16}$ in. deep, or as deep as you can go without cutting into the tenon. The last cut frees the outside ring.



Rough in the outside. Slip the tenon into a three-jawed chuck, leaving about $\frac{1}{4}$ in. of the tenon exposed. Set a caliper to the desired knob diameter, and then use a gouge to turn the blank from square to round (4). Check your progress frequently. You've arrived at the correct size when the caliper just clears the turning (5).



4



5



6



7



Turn the shoulder. Use the same caliper setting to mark the knob length, measuring from the front of the blank (6). Use a parting tool or a beading-and-parting tool to undercut the base of the knob by a few degrees (7).

TURN THE CURVES



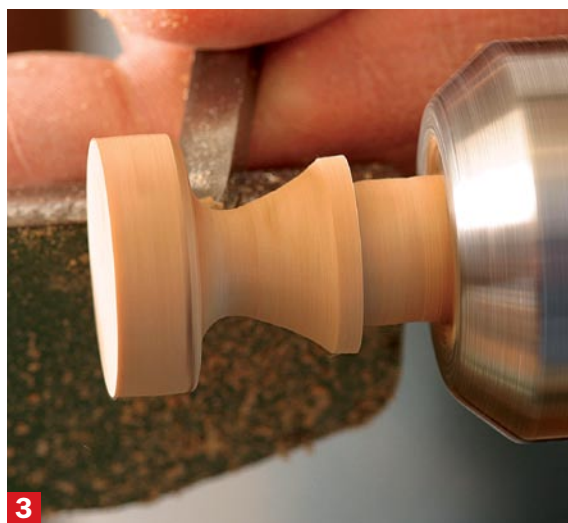
1 **Mark the rim.** With a pencil, mark the location of the outside rim of the knob about $\frac{1}{4}$ in. from the end.



2

Begin to turn the stem. Using a small gouge, start to turn the profile behind the rim of the knob.

How to tame a tricky area. Use a small round-nose scraper to shape the tight curve behind the rim (3). Once close to the desired shape, use sandpaper wrapped around a dowel to make a smooth radius (4).



3



4



5

Shape the cap. The small round-nose scraper is used once again, this time to turn the flared cap on the end of the knob. Avoid reducing the diameter at the rim of the cap.



6

Sand the knob. With the knob spinning, start sanding with P150-grit paper, then P220-grit (6). Avoid rounding the edge of the cap. Polish the cap with 0000 steel wool (7).



7

CUT THE TENON TO FINAL LENGTH

A helpful jig. The knob can spin out of your hands if cut free-hand on the bandsaw. The cut will be safer and easier if you make a little carriage. It also makes it easier to get a square cut. To make the jig, drill a hole for the knob's tenon in a piece of stock. Then saw that piece in half as shown.



Trouble-free trimming. Place the tenon in the carriage, with the shoulder butting against the jig. The jig secures the tenon, holding it level while allowing the knob to clear the bandsaw table.

ATTACH THE KNOB



Tenon too big? If damp weather causes the tenon to swell, it can be made to fit without much fuss. Slip the tenon into any vise and squeeze. Repeat, turning the knob slightly each time until the entire circumference of the tenon has been slightly compressed. Once glue is added, the compressed wood will swell, creating a super-tight fit that's sure to hold fast.

Handle with care. Rather than attach a knob by tapping it with a mallet or hammer, which can dent, deform, or even break it, squeeze the knob into place using a hand screw with a strip of leather taped to the jaws.

