



Shaker Single-Step Stool

A quick-to-build
classic that's sure
to get used

BY CHRISTIAN
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The Shakers made the most out of storage space, both with free-standing tall cabinets and floor-to-ceiling built-ins. To reach into the tops of those cabinets required the use of a stool, most commonly found with two or three steps. Single-step stools like this one were not often seen. The stool features a dovetailed leg and step in front, with a brace underneath, and a long handle in back that comes right through the step and serves as the other leg. A hole near the top of the handle makes it easy to carry and hang on a pegboard when not in use.

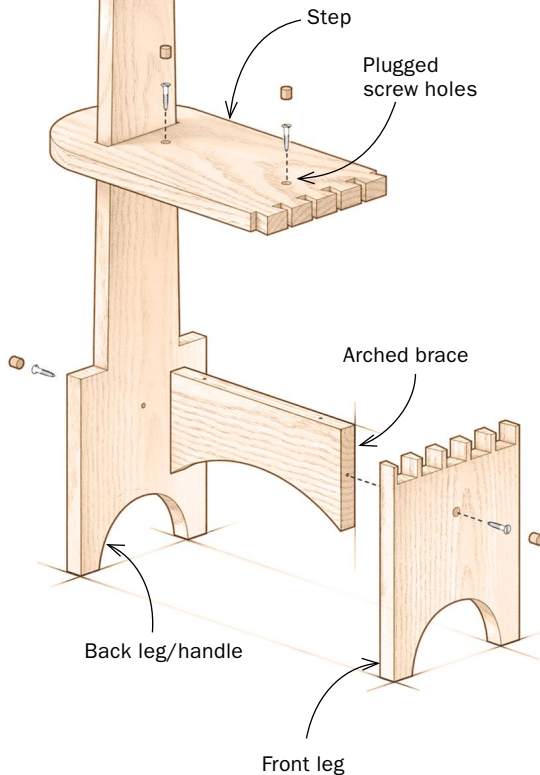
The combined back leg and handle is the most intricate part of this simple stool, so I tackle that first. I cut it to length, and then I measure up from the bottom and use a tablesaw with a miter gauge to make two stopped cuts across the grain, one from each side. At the top end, I mark 1½ in. on either side of center. With a straightedge and pencil, I connect the ends of the two sawcuts with the marks for the 3-in. dimension at the top. At the bandsaw, I cut the long taper, then cut the top end round. I smooth the long, tapered sides with a block plane and drill a hole in the rounded end.



Versatile, portable, durable. The stool is light and easy to grab and go. The simple design holds up painted or in any wood species, and it's built to last for generations.

STEP STOOL

Hand-cut dovetails, a through-mortise, and screwed bracing yield a simple design that's functional and straightforward to make. All the parts are cut from $\frac{3}{4}$ -in. stock.

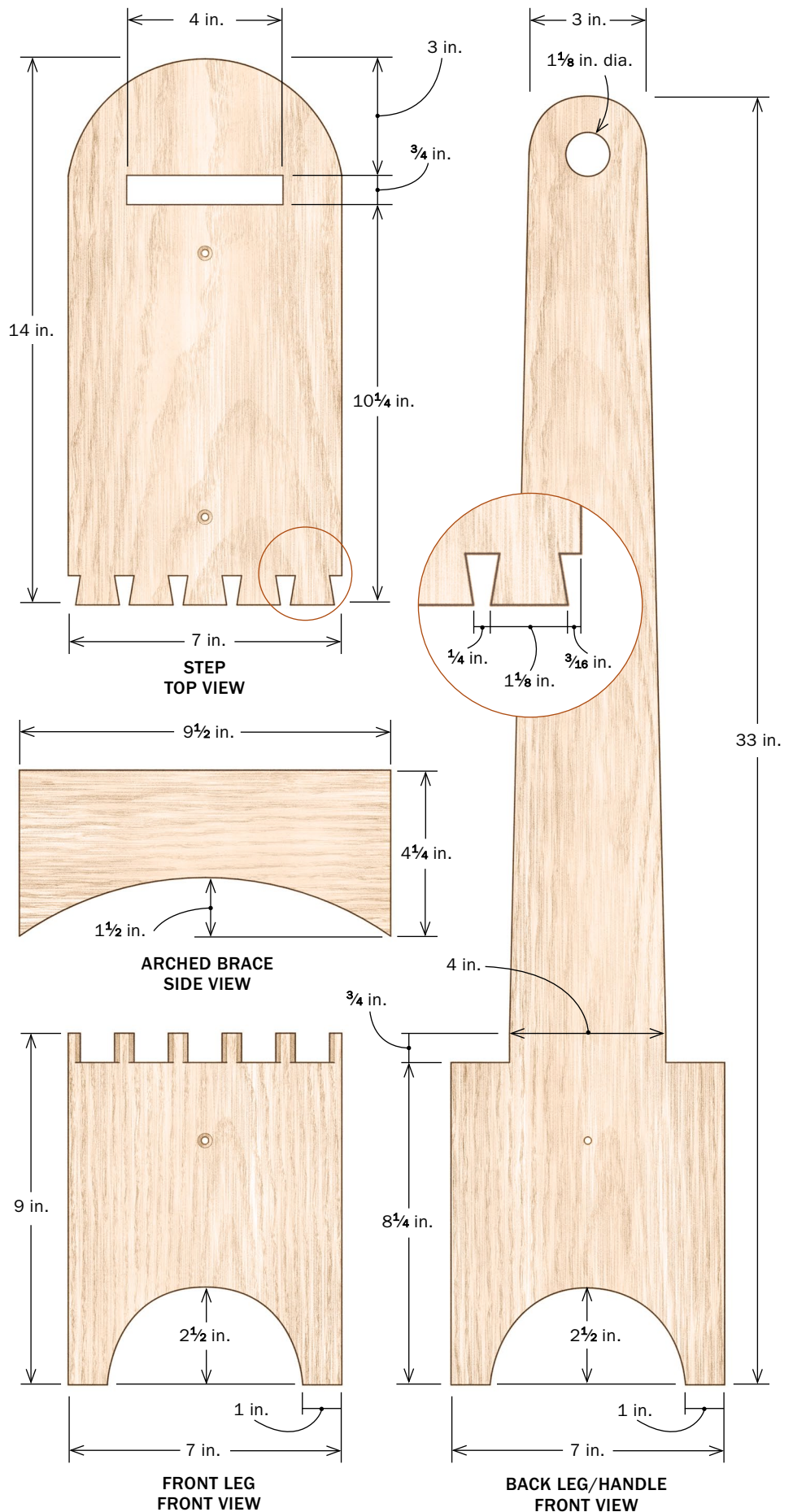


Dovetail the front leg to the step

Next I tackle the step and the front leg. I cut the tails on one end of the step board and then the pins on the front leg. Once they are fitted, I take the joint apart and mark the location of the through-mortise at the back end of the step. Using the back leg as a template, I mark its thickness and width on both sides of the step and chisel out the mortise. Because the bracket underneath locks everything into place, I won't be gluing this joint. But the mortise should be pared to fit snugly.

Rounding things out

If you haven't already bandsawn and sanded smooth the arched cutouts at



Online Extra

To watch our editors and their kids build a version of this step stool, go to FineWoodworking.com/266.

SHAPE THE BACK LEG



Kerf the sides. With the workpiece on edge and the fence as a stop, establish the bottom width of the handle portion of the back leg.



Shape the handle. Use a bandsaw to cut the taper in the sides of the handle and the curve at the top.

DOVETAIL THE STEP TO THE FRONT LEG



Tails first. After rounding the back of the step, cut the tails in the front.



Tackle the hanger. A Forstner bit makes fast, even work of the hole that you'll use to carry and hang the stool.



Move to the pins. Transfer the tails onto the top of the front leg and then cut the pins.

MARK AND CUT THE MORTISE FOR THE BACK LEG



Use the leg to mark out the mortise. With the leg on edge, use a marking knife to scribe the thickness of the leg onto the step. Then set the face of the leg against the face of the step and mark the width of the mortise.

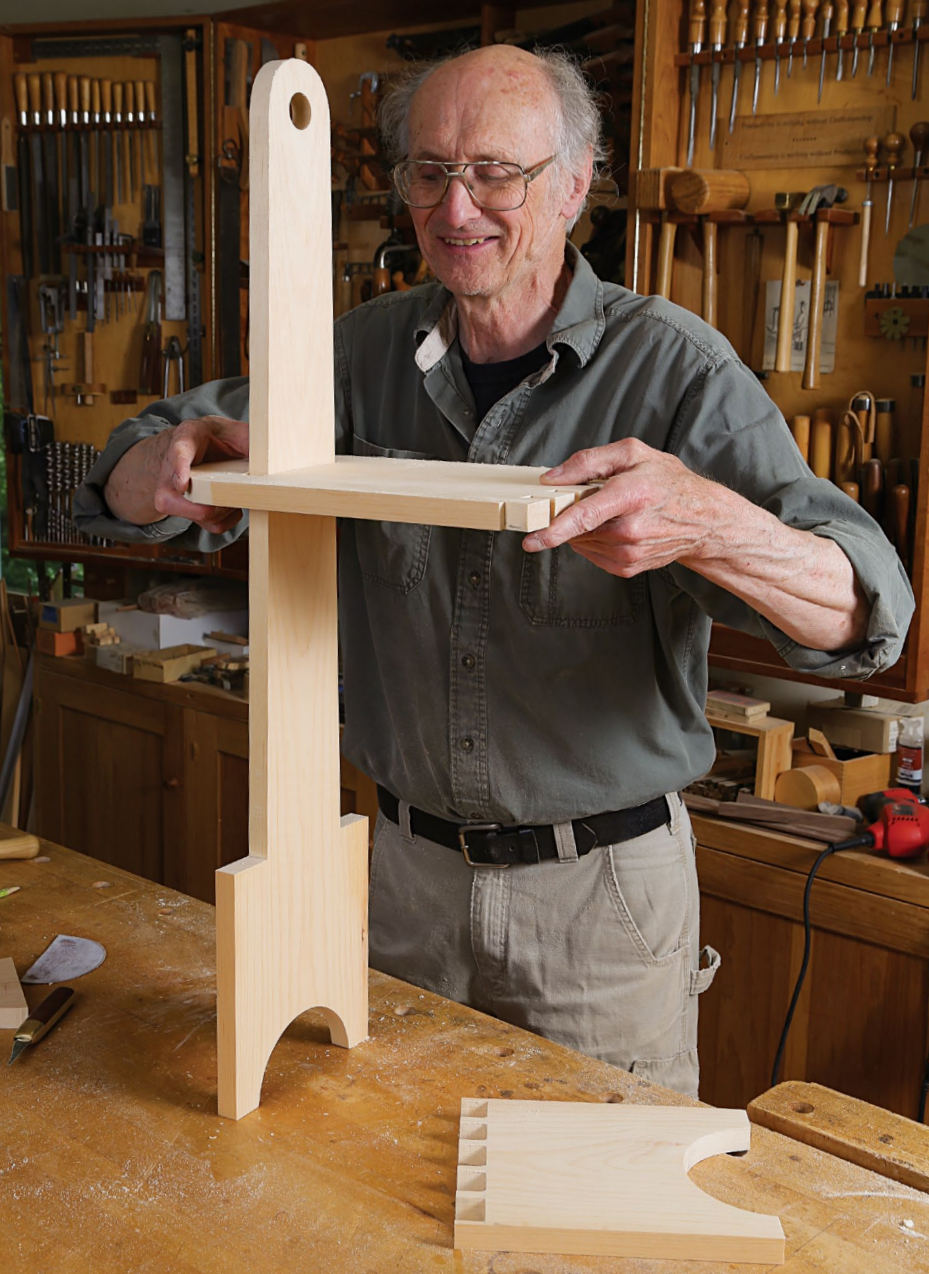


Define and chop. Use a marking knife to deepen the outline of the mortise on both faces of the step, and then chisel the mortise halfway down.



Flip and finish. After going halfway through, flip the step over and remove the waste from the other side until the mortise is completely cut.

PUT IT ALL TOGETHER

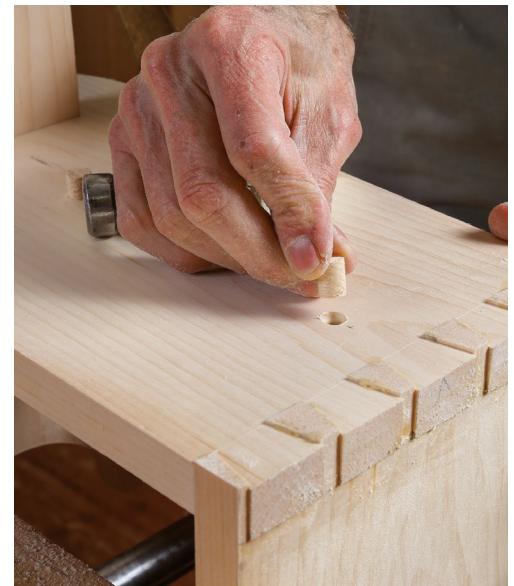


Mortise and dovetails first. Before applying glue, Becksvoort slides the back leg through the mortise in the step and just barely engages the dovetails at the front. He adds glue only to the dovetails and hammers them home.

the bottom of both legs, now is the time to do it. Then slide the back leg through the mortise, making sure it is at 90°, and glue the dovetail joint.

I calculate the length of the underside brace by measuring the distance between the front and back legs, and then cut it to length. It, too, gets an arc cut on the bandsaw. With the brace clamped in place underneath the legs, I counterbore and screw through both legs and the step board. Then I plug the holes and sand, plane, and finish the stool. □

Contributing editor Christian Becksvoort makes furniture in New Gloucester, Maine. See him at Fine Woodworking Live 2018 (finewoodworkinglive.com).



Add the arched brace. Clamp the brace in place, and then screw it in and plug the holes.