

WOODWORKER'S JOURNAL

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Classic Plan

In this plan you'll find:

- Step-by-step construction instruction.
- A complete bill of materials.
- Construction drawings and related photos.
- Tips to help you complete the project and become a better woodworker.

Chippendale Foot Stool



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<http://adobe.com/reader>.

Molded Leg Chippendale

Foot Stool

Whether you want to put your feet up or have a seat, you'll find this piece just the right height and width. Our stool, based on an early 18th-century piece, has been enlarged and simplified. Factory standards for size or style didn't exist when the original was constructed. In that period, craftsmen would size a piece to fit the customer and detail it with their own interpretations of current stylistic trends.



Before You Start

A perfect weekend project, this stool provides an opportunity for you and the fabric artist in your house to pool your talents. Or, if you prefer to make it a surprise, have an upholstery shop prepare the cushion.

We made our stool out of attractive and easy-to-work cherry stock, then stained it dark red. However, feel free to choose your own wood and finish—it will look equally handsome.

Knowing that stools must often bear heavy loads, we chose to construct ours with tried-and-true mortise and tenon joints. They provide superior strength, and a mortising machine makes quick work of them. However, loose tenons or double biscuits would also suffice.

As you read the instructions, note that we initially specify oversized stock. We do this to ensure that we can joint the stock straight and plane it square and to eliminate planer snipe on part ends.

BILL OF MATERIALS

BENCH

PART	T	W	L	MTL. QTY.
A Legs	1½"	1½"	16"	C 4
B Stretchers-top front	1⅝"	2⅝"	16½"	C 2
C Stretchers-top side	1⅝"	2⅝"	14½"	C 2
D Stretchers-bottom front	⅝"	1⅝"	16½"	C 2
E Stretchers-bottom side	⅝"	1⅝"	14½"	C 2
F Seat pad*	½"	15⅝"	17⅝"	PW 1

*Part cut to final size during construction. Please read all instructions before cutting.

MATERIALS LIST

C—cherry PW—plywood

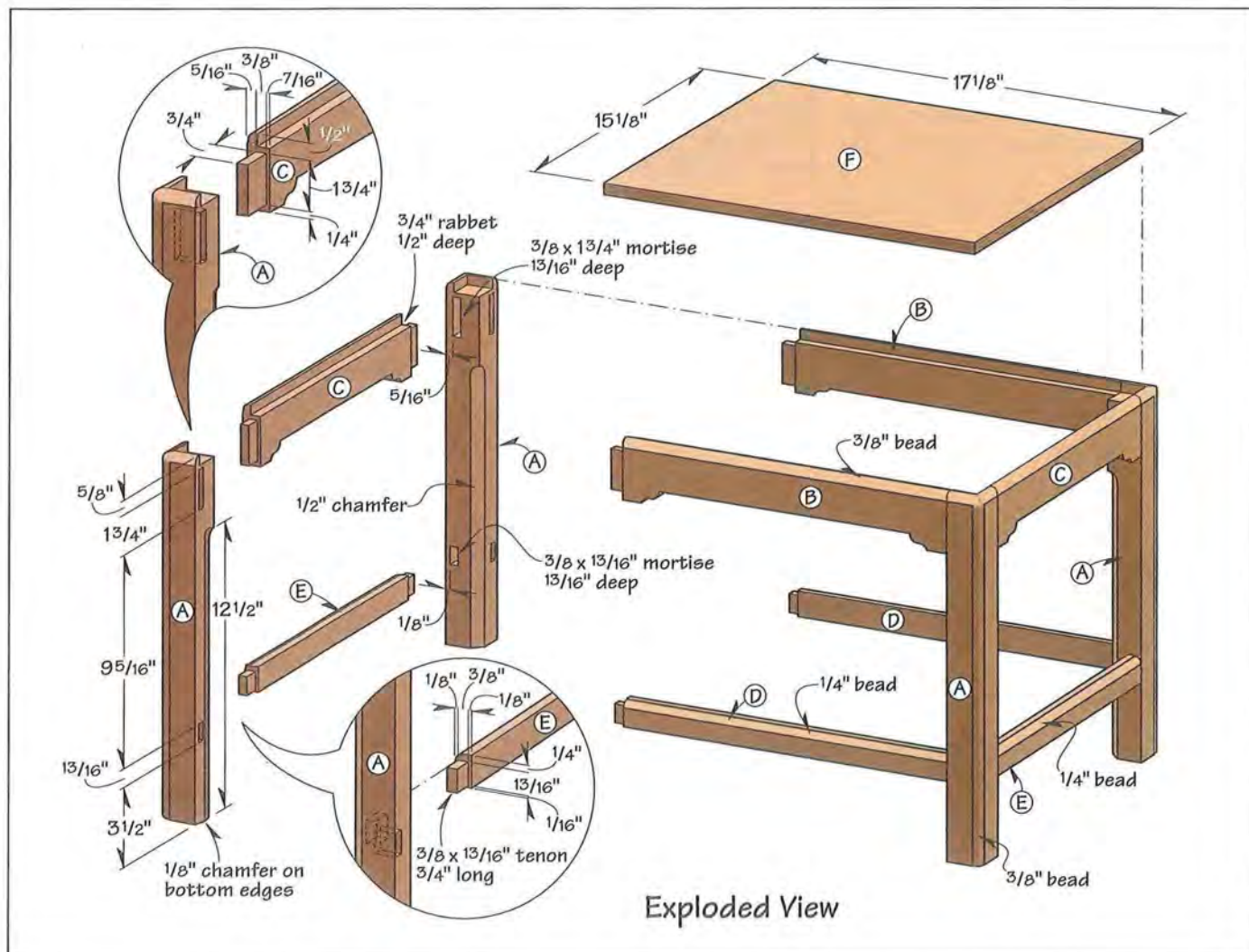
SUPPLIES

Stain, finish

Cut and Mortise the Legs

Step 1. From 8/4 stock, first joint and rip a blank to 1⅝"x1⅝"x72". (We used cherry.) Next, plane the blank to 1½" square, then crosscut four 16"-long legs (A) from it.

Step 2. Select and mark the top end and the two outside faces of each leg. Using the dimensions shown on the Exploded View details, lay out mortises on the two adjoining inside leg faces to accept the top and bottom stretcher



tenons. Note: To simplify the process, we first laid out the four mortises on one leg, then placed the other three leg blanks alongside it. After aligning the top ends, we clamped the legs together and transferred the mortise lines across their respective faces using a try square. After marking the upper and lower limits of the mortises, we used a marking gauge to scribe their vertical lines.

Step 3. Form the leg mortises. Note: The tenons on the top and bottom stretchers will be $\frac{3}{4}$ " long, but make the mortises $\frac{1}{8}$ " deeper to allow space for glue. (We used our hollow-chisel mortising machine. If you don't have one, you can use a plunge router, an edge guide, and a straight bit to cut each mortise, then square the ends with a chisel. Or, rough out the mortise on a drill press by drilling overlapping holes, then clean out the waste with a chisel.)

Step 4. Mark the upper limit of the $\frac{1}{2}$ " chamfer on the inside edge of each leg. (See the Exploded View.) Using your table-mounted router and a chamfer bit, rout each chamfer by making several shallow passes. Then, using a chisel, cut a $\frac{1}{8}$ " chamfer along the bottom ends of each leg. Now, finish-sand the legs.

Cut the Stretchers and Form the Tenons

Step 1. For the top stretchers (B, C), joint and rip two pieces of $\frac{3}{4}$ "-thick stock to $2\frac{3}{4} \times 72$ ". Face-glue and clamp the two pieces, aligning the ends and edges. Note: To save material, you may use a piece of less costly stock (such as pine or poplar) for the second or inside face.

Step 2. Plane the laminated strip to $1\frac{1}{8}$ " thickness. Note: For stability, plane equal amounts of stock from both faces. Rip and plane the strip to $2\frac{5}{8}$ " wide, then set it aside until Step 4.

Step 3. Joint, rip, and plane a strip of $\frac{3}{4}$ "-thick stock to $\frac{5}{8} \times 1\frac{1}{8} \times 72$ ". Using your table-mounted router and a $\frac{1}{4}$ " beading bit, rout one edge of this blank.

Step 4. From the $2\frac{5}{8}$ "-wide blank, crosscut two front stretchers (B) and two side stretchers (C) to the lengths listed in the Bill of Materials. (We cut these in front-side-front-side sequence to wrap the grain around the stool.) From the $1\frac{1}{8}$ "-wide blank, crosscut

two bottom front stretchers (D) and two bottom side stretchers (E). (We used our miter saw and a stopblock.)

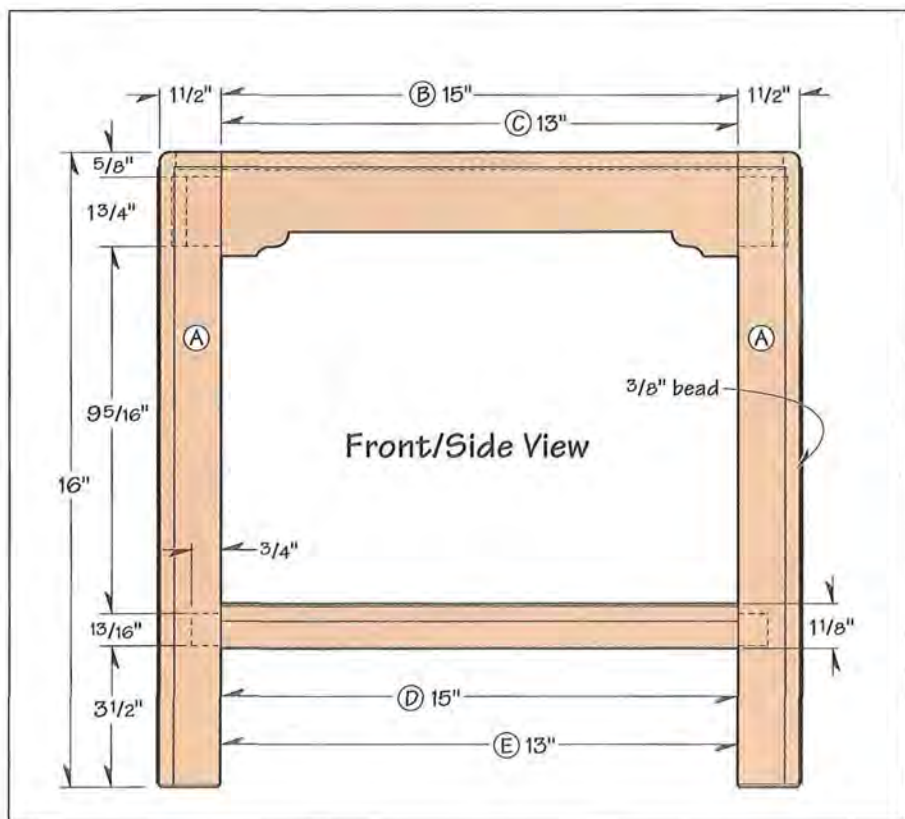
Step 5. Cut the tenons on the ends of the top and bottom stretchers as dimensioned on the Exploded View detail. (We made the cheek cuts using a tenoning jig on our tablesaw and the shoulder cuts using a spacer block and the tablesaw's miter gauge.) Note: When adjusting the saw's rip fence and jig, use same-sized scrap stock first to test the setup. Also, when cutting the tenon cheeks, always place the same face against the jig to ensure uniform cuts.

Step 6. Transfer the full-sized pattern shown above to both ends of the top stretchers. (See also the Front/Side View drawing below left.) Using a $\frac{1}{4}$ " blade on your bandsaw, carefully saw the parts to shape, cutting as straight as possible along the outside edge of the line. (We used the bandsaw's rip fence to guide the pieces while cutting the straight portion of the cutouts, then cleaned up the sawn edges with sandpaper and a file.)

Step 7. Using the tablesaw, cut a $\frac{3}{4}$ " rabbet $\frac{1}{2}$ " deep along the top inside edge of each top stretcher where shown on the Top Stretcher End View drawing on page 5. Then, finish-sand all eight stretchers.

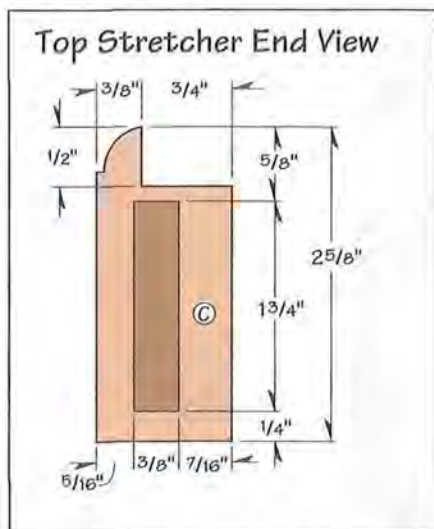
Assemble the Frame

Step 1. Dry-assemble the frame parts to test their fit. Make adjustments if necessary. Note: The outside faces of the stretchers should align flush with



Foot Stool

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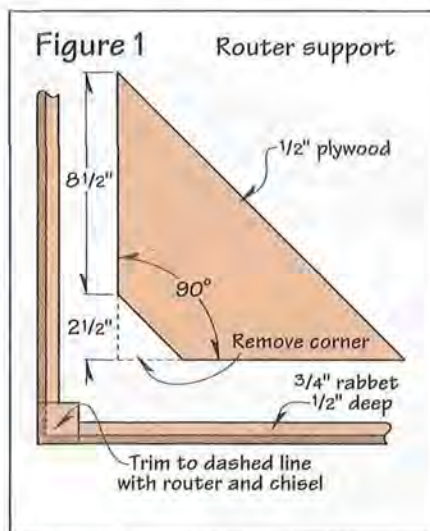


the outside edges of the legs. Then, disassemble the frame and arrange the parts in order for final assembly.

Step 2. Glue, assemble, and clamp one end (one short top and bottom stretcher and two legs). Check the assembly for square and flatness. Assemble the second end using the same procedure.

Step 3. To join the two ends, glue and insert the tenons of both top and bottom side rails into the mating mortises in one of the subassemblies, then into the mortises of the second assembled end. Place the assembly on a flat work surface, clamp it, and then check it for squareness, making sure that all legs sit flat on the work surface.

Step 4. To continue the rabbet into the corners, extend the rabbet lines across the top of the legs as shown in figure 1. (We used a sharp pencil to scribe these lines.)



Step 5. Machine away the rabbet waste from the top of each leg. To do this, first make the triangular router support dimensioned in figure 1. (We made our support from 1/2" plywood scrap, which sits flush with the top of the rabbet.)

Step 6. Clamp the router support across one corner of the frame. If necessary, you can shim the support to make it level with the top edge of the stretchers. Next, using a hand-held router and a 1/4" straight bit, rout away the waste on the top of the leg to the same depth as the rabbet. (We used a small laminate trimmer for this job because it was easy to control.) Be careful not to rout into or across the guide lines that you scribed earlier. Move the support to the remaining three corners and rout the rabbets the same way. Use a sharp chisel to square the corners.

Step 7. If necessary, sand all stretchers flush with the legs. Then,

using your table-mounted router and a 3/8" round-over bit, rout the outside corner of each leg.

Step 8. Switch to a 3/8" beading bit and clamp a guide fence to the router table. Note: Test the setup on scrap as you adjust the bit's elevation so the bottom of the radius will be cut flush with the tabletop. Then, rout along the outside edge of the stool top. Next, raise the bit 1/16", set the fence to cut equal shoulders, and rout the outside corner of each leg.

Step 9. Finish-sand the assembly starting with 120-grit sandpaper and working up to 220-grit. (We used a random-orbit disc sander, then finished with a light hand-sanding.)

Step 10. Apply stain and finish as desired, following the manufacturer's recommendations for the products. (We used Minwax Red Mahogany stain and Deft semi-gloss aerosol lacquer.)

Prepare the Cushion

Step 1. For the seat pad (F), measure the inside dimensions of the top rabbet. Cut a piece of 1/2"-thick plywood to these dimensions, subtracting 1/8" from the width and length to accommodate the upholstery fabric.

Step 2. Select fabric and foam (or padding) for the seat. Then, upholster the seat. Or, take the pad to an upholsterer for covering. (Our seat fits snugly without any attachment to the frame. You may want to use steel angle brackets and wood screws to secure yours.)

Designer/builder: Mark Ziobro

Drawings: Cad Art

Photographs: StudioAlex