Table to Go

Build a foldable, portable, storable table for four

by Dan Cary

This table is designed to handle the rigors of outdoor use and travel, but it is equally at home indoors.

If you've ever had a barbeque, hosted a card game or planned a picnic, you've probably needed an extra table. The small folding tables available at most stores are serviceable, but they're typically unattractive and require a tablecloth to cover the plastic or metal frame. As an alternative, I designed a table that seats four and folds up for storage, but it looks so good that you won't want to put it away.

The table is the size of a card table and folds in half like a suitcase. It's made of mahogany with brass hardware and a rope handle. The materials give the table a nautical style that is further reflected in the tabletop slats, which are reminiscent of the decking on a classic wooden boat.

This project will put your whole shop to work, including your table saw, band saw, drill press and surface planer. In case you don't have all of the tools I used, I've included alternative methods for some of the techniques. Of course, you could use this project as an excuse to pick up a new tool or two.

Assembling the tabletop frame

The rail pieces are 3 in. wide except for the inside and cross rails, which are 2-15/16 in. to create a recess for the hinge. You'll need to rip surfaced 3/4-in.-thick stock to the correct widths for the rail pieces and then cut them to length. Crosscut 1/4-in.-deep x 3/4-in.-wide dadoes and rabbets in the side, middle and inside rails using a table saw or router.

I fastened all of the table frame joints with glue and brass screws. I used brass countersunk washers under all exposed screwheads (see "Countersunk Washers," p. 19), but they are not required — you can simply countersink the screws without washers.

Use a drill press equipped with a 3/8-in.-dia. Forstner bit to bore the 3/16-in.-deep counterbores for the washers (photo 1, p. 19). A good alternative to a drill press is a portable drill guide attachment (available at most woodworking stores).

Attach the inside rail and middle rail to the cross rail first; then attach the side rails and front rail. Use a ratcheting screwdriver to help prevent stripping the slotted brass screws. Next, glue and clamp the leg cleats to the front rail, middle rail and side rail (photo 2).

Milling slats and trim rails

The top slats are thin (5/16 in.) to help reduce the overall weight of the table. You can mill the slats yourself, have them milled for you at a full-service lumberyard or substitute 1/2- or 3/4-in.-thick stock, which is easier to find. If you substitute thicker stock, remember to add the extra thickness to the trim rail width.

To create the 5/16-in.-thick stock for the top and trim rails, I resawed 3/4-in.-thick stock using a band saw.

PHOTOS BY DAN CARY

FOLDING TABLE

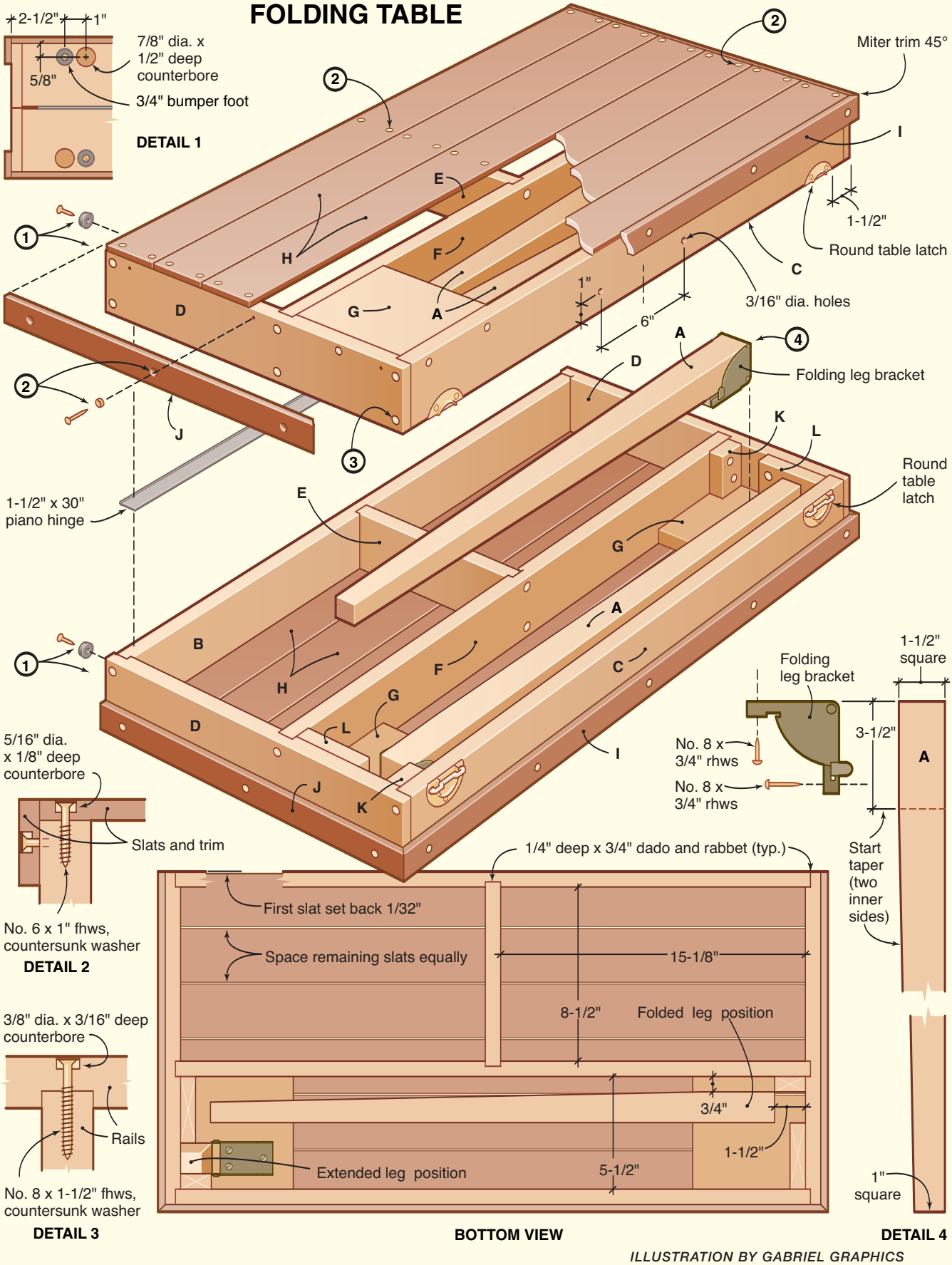


ILLUSTRATION BY GABRIEL GRAPHICS

Bore 3/8-in.-dia. x 3/16-in.-deep counterbores for the No. 8 countersunk washers. Mark the position of the Forstner bit's center on a fence to position the rails.

Glue and clamp the rails together. Drill a 1/8-in.-dia. pilot hole in the center of each counterbore, and fasten each joint with a No. 8 x 1-1/2-in. brass screw and countersunk washer.

Resawing is simply cutting a board on edge to create thinner pieces, a technique commonly used to cut veneers. The key to successful resawing is using a blade that is appropriate and sharp. I used a 1/2-in.-wide hook-tooth blade with three teeth per inch.

Band saws often cut at a slight angle to the direction of feed, a characteristic known as "drift" or "lead." This means that you can't simply clamp a fence perpendicular to the front of the table and expect the saw to cut parallel to the fence. There are two ways to compensate for this problem. The first is to adjust the band saw fence to match the angle of blade lead. The second is to use a guide or single-pivot point known as a resaw guide. I used a manufactured resaw guide, but you can easily make one (see "Make a Resaw Guide," p. 20).

Cut seven boards to 3/4 x 2-5/8 x 34 in. and then draw a line down the center of one long edge of each board. Position the resaw guide so that the blade will track down the center of the line. Use the resaw guide as a pivot, steering each board through the cut by moving the tail or back of the board (photo 3, p. 20). Move to the front of

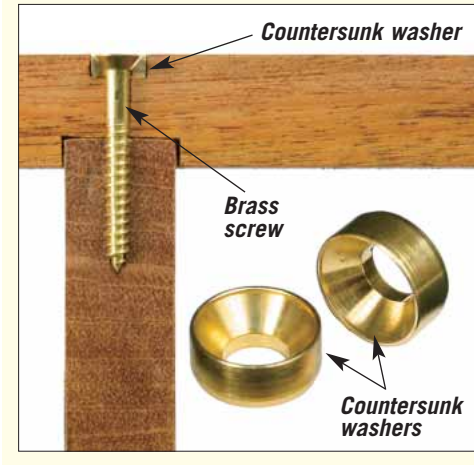
MATERIALS AND CUTTING LIST

Key	No.	Description	Size
A	4	Legs	1-1/2 x 1-1/2 x 28-1/2 in.
B	2	Inside rails	3/4 x 2-15/16 x 31-1/2 in.
C	2	Front rails	3/4 x 3 x 31-1/2 in.
D	4	Side rails	3/4 x 3 x 16-1/4 in.
E	2	Cross rails	3/4 x 2-15/16 x 9 in.
F	2	Middle rails	3/4 x 3 x 31-1/2 in.
G	4	Leg cleats	3/4 x 5-1/2 x 5-1/2 in.
H	12	Top slats	5/16 x 2-5/8 x 32-1/2 in.
I	2	Front trim rails	5/16 x 1-1/4 x 33 in.
J	4	Side trim rails	5/16 x 1-1/4 x 16-1/2 in.
K	4	Small leg brace	3/4 x 1-1/2 x 2-1/4 in.
L	4	Large leg brace	3/4 x 2-1/4 x 3-1/4 in.

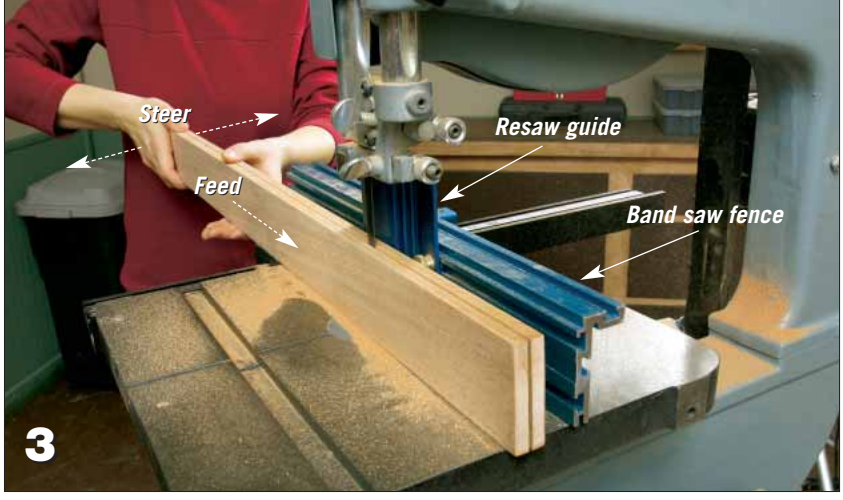
SHOPPING LIST

3/4 x 6 x 96-in. mahogany (3)
1-1/2 x 1-1/2 x 120-in. mahogany (1)
Folding leg brackets, No. 00T16.01 (2 pairs)
1-1/2 x 36-in. piano hinge (1)
Round table latches, No. 00A51.04 (2)
No. 6 countersunk washers, No. 01K70.01 (86)
No. 8 countersunk washers, No. 01K70.02 (48)
No. 6 x 1-in. brass screws (86)
No. 8 x 1-1/2-in. brass screws (48)
No. 8 x 1-1/4-in. brass screws (12)
No. 8 x 3/4-in. panhead screws (24)
3/4-in. bumper feet, No. 00S51.03 (4)
1/2-in.-dia. x 4-ft. white nylon rope
Exterior-grade wood glue
5/16-in. Forstner bit, No. 06J71.05
3/8-in. Forstner bit, No. 06J71.06
7/8-in. Forstner bit, No. 06J71.14
*Part Nos. for Lee Valley Tools (see p. 24)

Countersunk washers



Countersunk washers are thick and tapered on the inside to mate with flathead screws. The flat bottom helps prevent thin stock from splitting, and the perimeter of the washer is visible around the screwhead, adding a decorative touch. — *DC*



Resaw 3/4-in.-thick stock in half to create the top slat and trim rail stock. Position the resaw guide so that the blade is centered on the workpiece. Move the back end of the workpiece, pivoting on the resaw guide, to guide the stock.

Attach the top slats and trim rails with No. 6 x 1-in. brass screws and countersunk washers. A ratcheting screwdriver works well for driving the slotted screws.

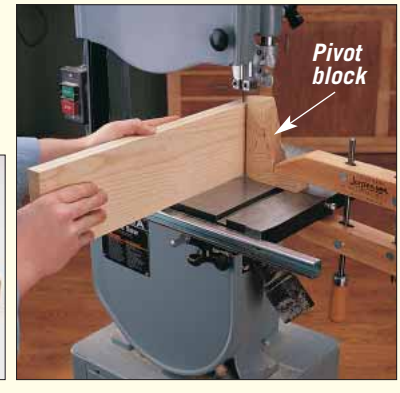
the board and pull the board through to finish the cut. If this is your first time resawing, practice cutting scrap pieces to get the hang of it.

After resawing all of the boards, run them through a thickness planer to remove the blade marks and bring them to the final thickness, which should be about 1/4 to 5/16 in. Then cut the 12 top slats to final length and mark the screw positions on the top faces.

Rip the two remaining pieces of thin stock into 1-1/4-in.-wide strips for the trim rails. Miter-cut two of the pieces to a final length of 33 in. Next, cut the four side trim rails to 16-1/2 in. with miters on one end only (see "Bottom View" detail, p. 18).

Make a resaw guide

A resaw guide is simply a pivot block that acts as a fence, establishing the thickness of the resaw cut. To make one, all you need is a 5-in.-long scrap of 2x6 lumber. Taper the leading edges of the stock and cut away some of the back edge, leaving a clamping surface for securing the guide to the band saw table. — *DC*



Set up a drill press fence so that the bit centers 3/8 in. from the fence. Bore 5/16-in.-dia. x 1/8-in.-deep counterbores for No. 6 countersunk washers in the top slats and trim rails. Sand the faces and ease the edges of each piece; then attach them to the tabletop frame (photo 4). Once all of the pieces are secure, sand the surfaces and countersunk washers flush.

Making the table legs

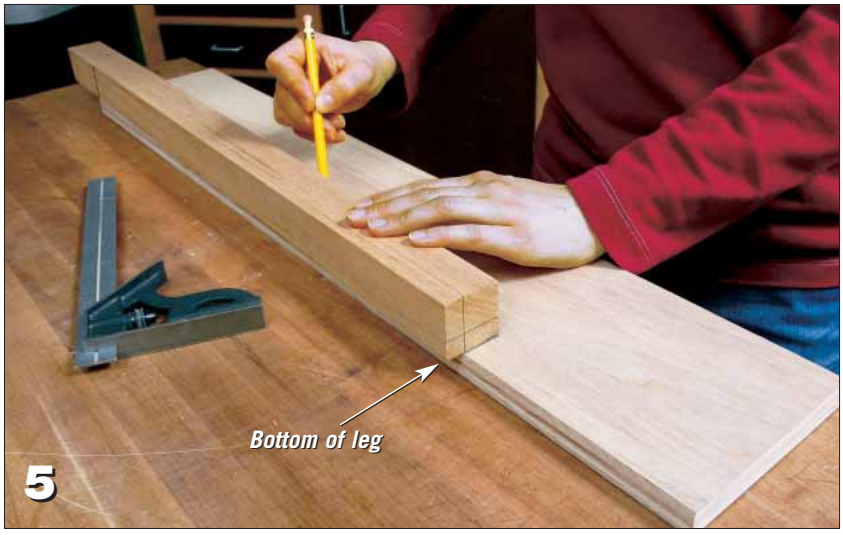
I tapered the legs using a table saw and a tapering jig. A tapering jig securely holds the leg blank at an angle as it is cut. If you plan to do more projects with tapered legs, consider buying an adjustable tapering jig. I chose to make a simple tapering jig for this project. It requires a small flat scrap of plywood and takes only a few minutes.

To make the jig, first mark the end points of the taper on one of the leg blanks. Measure down 3-1/2 in. from the top on the side of the leg, and measure in 1/2 in. from the same side on the bottom. Position the leg blank on top of a 3/4 x 6 x 30-in. piece of plywood so that the two lines intersect the left edge of the plywood. Trace the outline of the leg blank on the plywood (photo 5, p. 22). Next, cut along the traced lines, removing the portion of the plywood that was overlapped by the leg blank. Attach the cutoff piece flush with the long cut edge of the main plywood jig. Finally, attach a small scrap near the front of the jig to act as a hold-down.

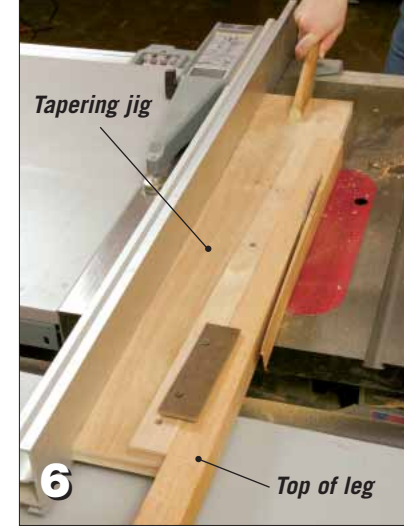
Position the table saw fence so its distance from the blade matches the width of the tapering jig. Put the leg blank into the jig and make the first taper cut, using a push stick for safety. Taper one side of the leg (photo 6); then turn the leg to taper one of the adjacent sides. Scrape or sand away the blade marks when you're done.

Fastening the hardware

Before attaching the hardware, sand and apply the finish of your choice (I used a wipe-on oil) to the tabletop and legs. For the folding mechanism, I bought a 1-1/2- x 36-in. piano hinge (available at most home centers) and cut it to 30 in.



Build the taper jig. Align the leg taper layout marks on the edge of the plywood. Trace the leg profile on the plywood.



Position the leg in the taper jig and cut the first taper. Use a push stick to guide the jig through the cut. Turn the leg one-quarter turn so that the first tapered side faces up, and cut the second taper.

long with a hacksaw.

Place the two tabletop halves face-down on a flat surface with the inside rails butted together. Fasten the piano hinge to both rails with 3/4-in. flathead brass screws.

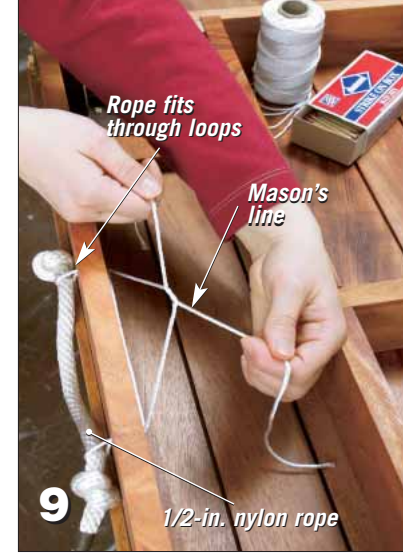
Next, fasten one folding leg bracket to each leg with No. 8 x 3/4-in. panhead screws. Fasten the small and large leg braces to the front and side rails using No. 8 x 1-1/4-in. screws. Then fasten the folding leg brackets to the leg cleats using No. 8 x 3/4-in. panhead screws (photo 7, p. 24).

Two 2-1/4-in. round brass table latches hold the table closed. These table latches are normally concealed underneath a tabletop and used to hold table leaves together, but they also work for this application, and I like the decorative appearance. Close the tabletop and fasten the front latches.

Attach four rubber feet to the inside rail, and drill 7/8-in.-dia. x 1/2-in.-deep counterbores for the feet to fit into when the table opens (photo 8 and detail 1 in the illustration).

Fasten the legs and leg brackets with the tapered sides facing toward the inside. Then fasten the brackets to the leg cleats. The legs should fit snugly between the leg braces.

Offset the four rubber feet and counterbores so that when the table is opened each foot will fit into a counterbored recess. Use a 7/8-in.-dia. Forstner bit to bore the recesses.



Secure the rope handles to the front rails with mason's line. Feed a loop of the mason's line through each hole and then fit the rope handle through the loops. Snug the loops and tie the line tightly. Singe the ends of the line to prevent fraying.

The final step is to attach the rope handles. Tie two knots 8 in. apart in two 20-in.-long pieces of 1/2-in. braided nylon rope. Trim the loose ends to 1 in. long. Singe each end with a match or lighter to keep it from fraying. Next, drill two 3/16-in.-dia. holes 6-in. apart in each front rail. Feed mason's line through each hole from the inside of the rail, wrap the line around the rope and then feed the line back through the hole. Repeat this process to create two loops over the rope. Snug the loops of mason's line down next to the knots (photo 9) and tie the loose ends of the line together inside the front rail. The table is ready for entertaining, so start making plans. ◆

SOURCES ONLINE
For online information, go to www.HandymanClub.com and click on SOURCES ONLINE.

Kreg Tool Co. (band saw resaw guide)
800-447-8638

Lee Valley Tools Ltd. (see Shopping List, p. 19)
800-871-8158