

# Adjustable L-Fence

Improved design makes setting the height easy

BY BOB VAN DYKE



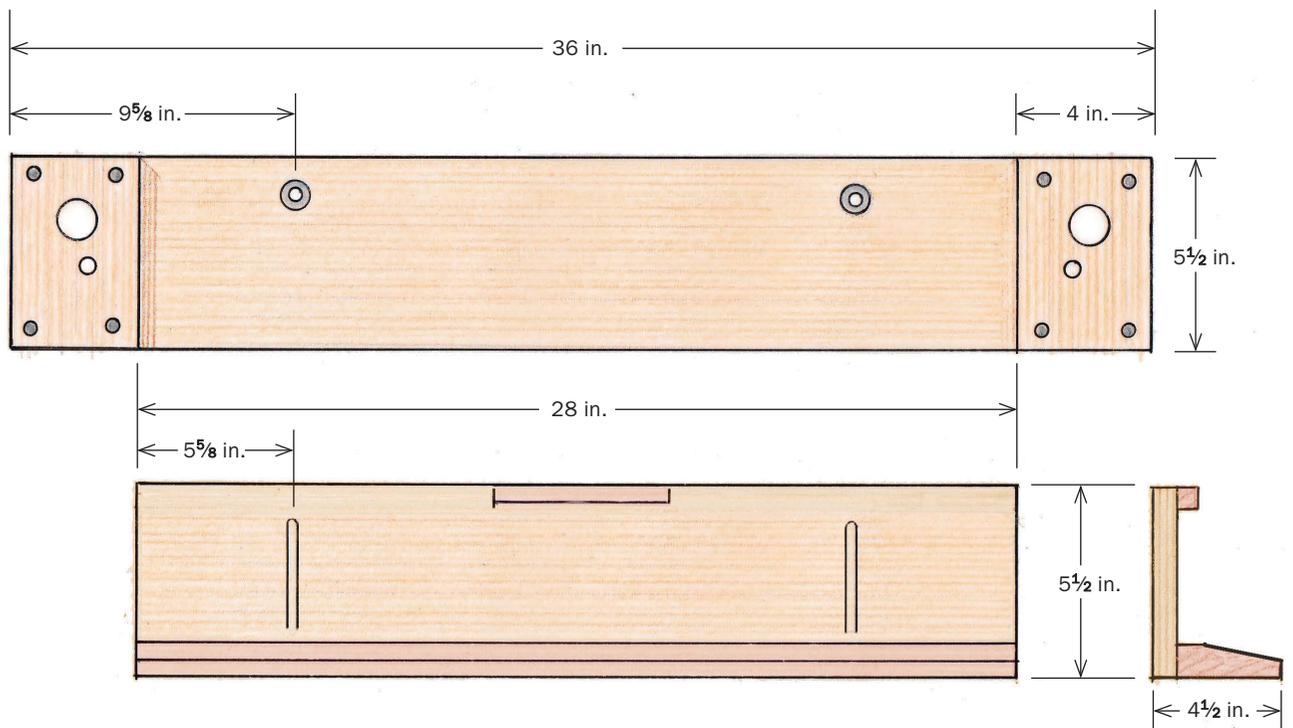
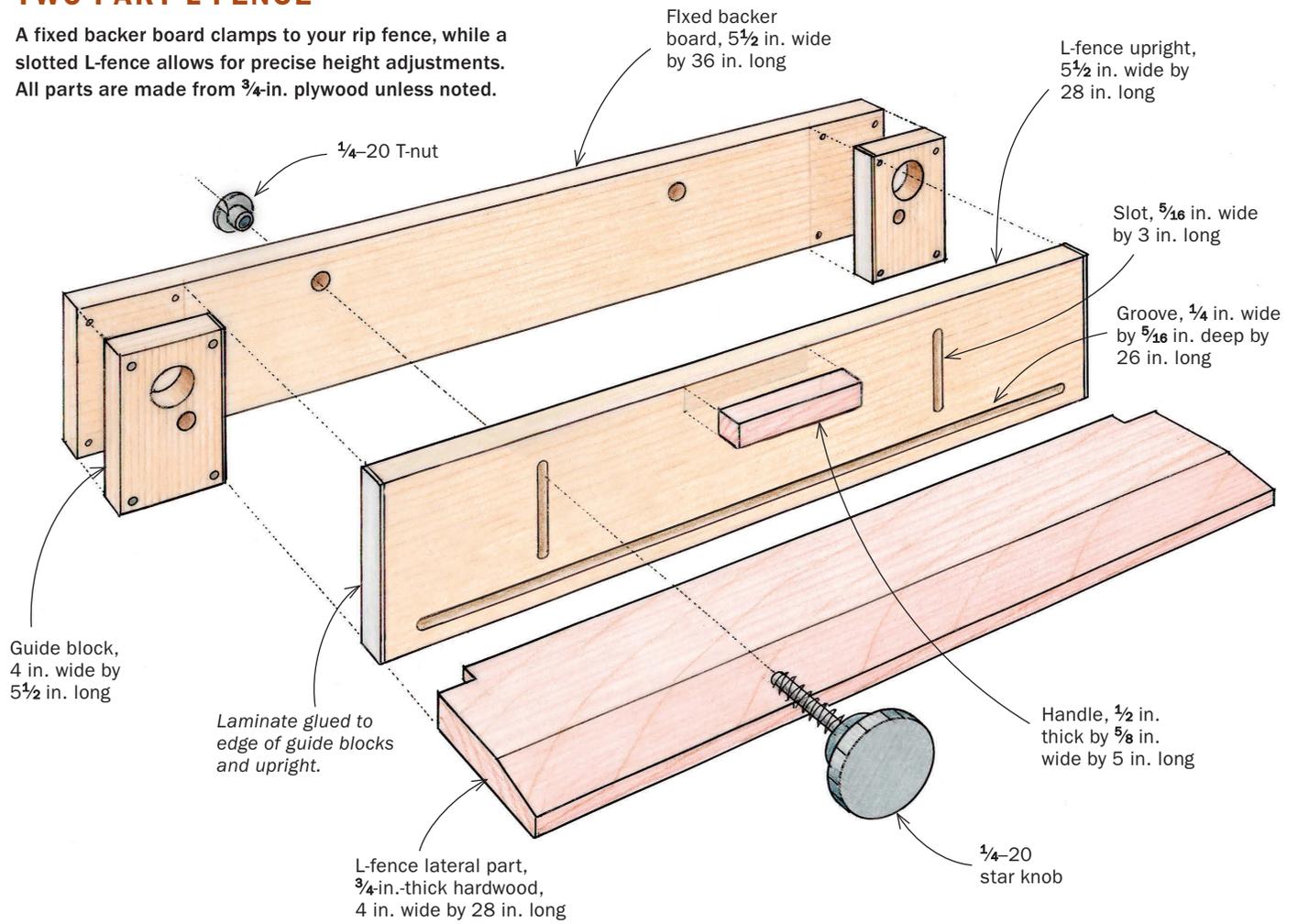
The L-fence in its simplest form is a board that clamps horizontally onto your table saw's rip fence. The bearing surface of the L-fence can be positioned right over the blade, and that opens up a wide range of powerful possibilities. I wrote about it in "The Incredible L-Fence" (*FWW* #237). I used my original fence for a long time, but after years of putting up with the fussiness of positioning it at the correct height and parallel to the saw table, I made some improvements and built what a *FWW* editor dubbed my "high tech L-fence." This vastly improved version has a stationary base with a height-adjustable L-fence attached to it.

The new version is superior to my first because it's far easier to manage adjustments. The L-fence, which travels between guide blocks on the backer board, stays perfectly parallel to the table as you move it up and down, and it tightens in place firmly with threaded knobs.

You can use an L-fence as a guide to flush-cut to an exact line or pattern, cut off parts that would otherwise get caught between the fence and the spinning blade, cut very accurate burn-free miters, and say goodbye to those sacrificial pieces of plywood used to cut rabbets.

## TWO-PART L-FENCE

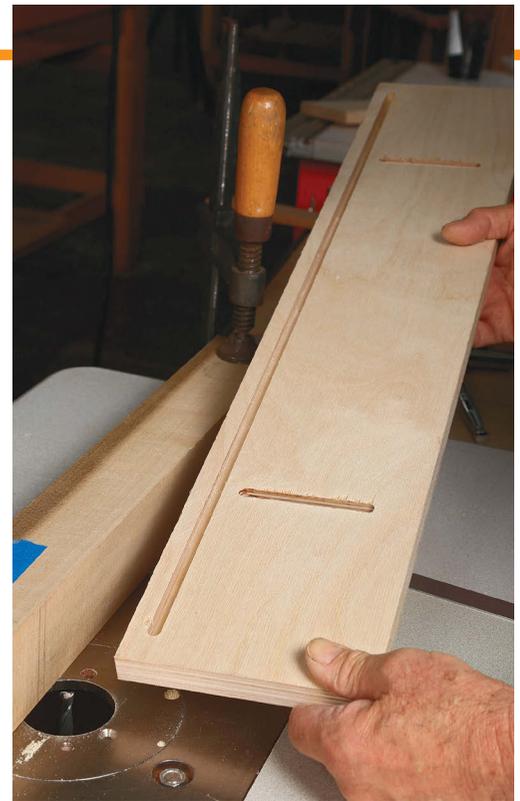
A fixed backer board clamps to your rip fence, while a slotted L-fence allows for precise height adjustments. All parts are made from  $\frac{3}{4}$ -in. plywood unless noted.



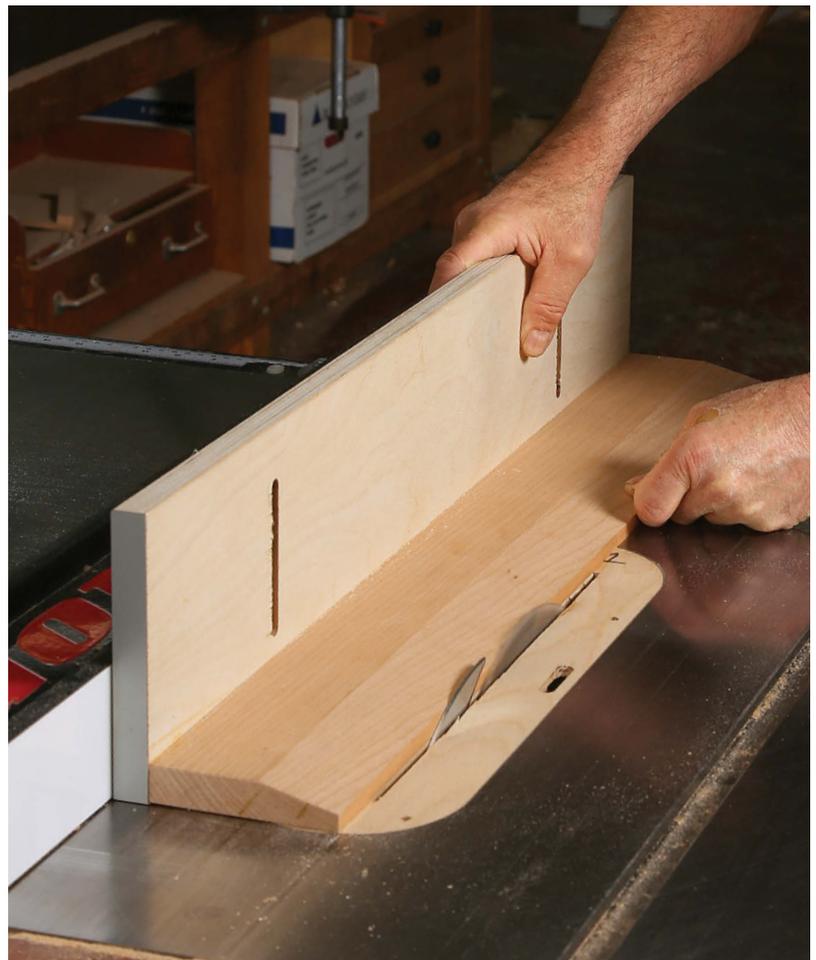
# Making the fence

Threaded knobs connect the movable fence to the fixed backer board. The slots in the L-fence upright correspond to T-nuts in the backer board.

**Two slots and a groove.** At the router table, cut the through-slots for the adjustment knobs and the groove that will hold the tongue of the L. Rout the slots in several passes between two stops clamped to the fence. When cutting the groove, use start and stop marks penciled on the fence.



**Tongue and glue.** Two cuts on the tablesaw create the tongue on the lateral portion of the fence. You will have to trim off the ends of the tongue to fit the groove. Van Dyke also rips a bevel on the front edge of the L.



**Trim it parallel.** Once the glue cures, trim the leading edge of the lateral part of the L so it's parallel with the upright.



# Stationary backer board

This board allows you to clamp the L-fence directly to your tablesaw fence or bolt it to your shopmade supercharged rip fence. Its guide blocks and T-nuts help with the L-fence height adjustments.

## Install the T-nuts.

To locate the T-nuts, Van Dyke centers the L-fence on the backer board, then uses a punch to mark the top of the slots on the backer board. He drills two holes for the T-nut, and taps it into place.



**Add the guide blocks.** For a smooth surface between the movable fence and the guide blocks, apply plastic laminate to the edges with contact cement. Trim the laminate flush, then glue and nail the guide blocks onto the backer board.



One basic principle of working with an L-fence is that, unlike with a regular tablesaw cut, you plan things so your waste piece is between the blade and the rip fence. Sounds dangerous? It's not, because the L-fence is raised off the saw table—usually higher than the blade—and its width provides a few inches of space so the waste cannot get caught between the blade and the rip fence.

Building my new L-fence is straightforward. I use Baltic-birch plywood for most of the parts because it is structurally stable, holds fasteners well, and is readily available. Solid wood or cabinet-grade plywood can also be used. The plastic knobs and T-nuts are available from any woodworking-supply store or from McMaster-Carr ([mcmaster.com](http://mcmaster.com)). I make the lateral part of the L from hardwood. The few hours it takes to make this jig will be paid back tenfold in the number of times you will use it going forward.

## Start with the upright of the L

The threaded knobs that attach the movable L-fence to the fixed base go through slots in the fence and into T-nuts in the backer board. The precise location of the slots is unimportant, but the T-nuts must be lined up exactly to them.

On the upright part of the L you'll rout these two through-slots and a groove to accept the tongue on the lateral part of the L.



**Final touches.** Crosscut the ends of the guide blocks flush with the backer board, and glue a small tab to the L-fence so you can easily move it up and down.

# Two ways to mount the fence

The L-fence can clamp directly to a tablesaw's rip fence or attach to Van Dyke's shopmade fence.

## CLAMP AND GO

Use the guide blocks as your clamping surface. Because the L projects well past the rip fence, the clamps will not get in the way of your work.



The slots are made by plunging the workpiece onto the bit. Set a fence on the router table about 2 in. back from a  $\frac{5}{16}$ -in. router bit. Because these cuts are made in several passes, it is helpful to set stops to begin and end the cuts. The slots are symmetrical, so you can use one fence setting and make cuts on both ends of the workpiece before raising the bit for the next deeper cuts.

While you're still at the router table, cut the groove that will hold the tongue on the L. This cut is stopped on both ends. Mark starting and stopping points on the fence, and pivot the workpiece down into the cut and up out of it.

## Attach the upright to the base

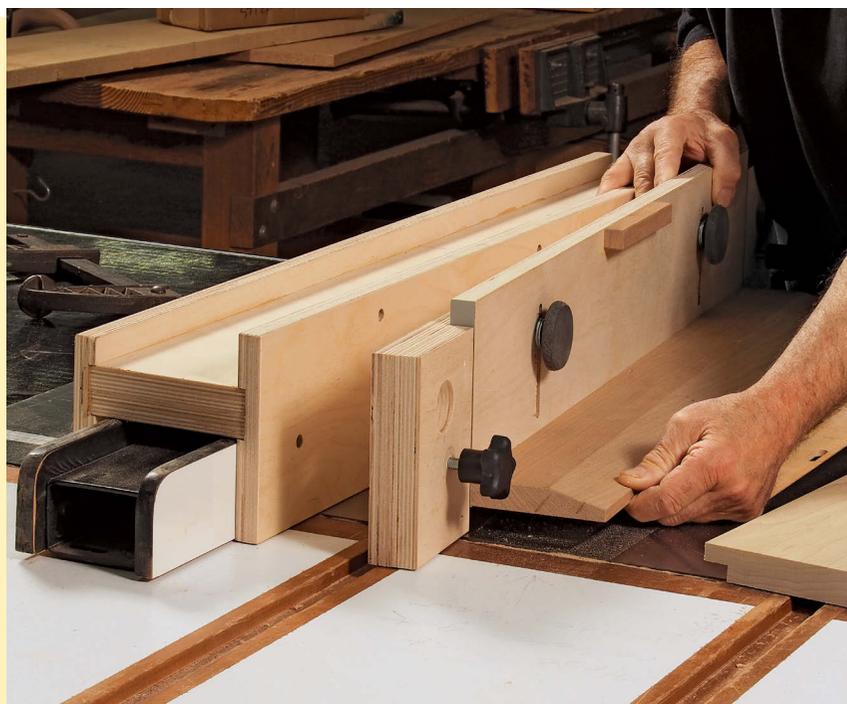
With the groove and slots finished, it's time to drill for the T-nuts. Lay the upright of the L on the backer board, centering it from end to end, and use a transfer punch or a brad-point drill bit to mark the exact location of the top of the slots on the backer board.

Using a Forstner bit in the drill press, counterbore a hole deep enough to allow you to recess the T-nuts below the surface. Then, using the dimple left from the Forstner bit to locate the center, drill a through-hole for the barrel of the T-nut. Drive the T-nuts into the recessed holes. The face with the T-nuts will be on the back of the backer board.

## Online Extra

### ATTACH IT TO A SHOPMADE FENCE

A clamp-on rip fence makes it easy to mount the L-fence. Van Dyke drilled additional holes in his L-fence that allow him to quickly bolt it in place when needed. The clamp-on fence is good for other tasks as well. To see how to build it, go to [FineWoodworking.com/290](http://FineWoodworking.com/290).



# Using the L-fence



**Adjust the height.** The tab and threaded knobs make it easy to hold, lift, lower, and lock in the height of the fence.

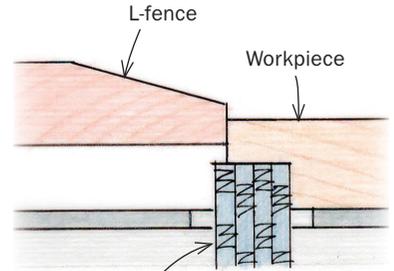
**Cover the blade.** To cut rabbets and tenons, set the L-fence to expose enough of the dado blade to equal the length of the tenon or width of the rabbet. Then ride the workpiece on the fence. It's easy, safe, and repeatable.



From cutting rabbets, tenons, dados, and miters to pattern sawing, and much more, the L-fence will change the way you think about using your tablesaw.

## RABBETS

It is common practice to clamp a sacrificial board to the rip fence and then bury a portion of the dado blade in it. The problem is that the clamps are always in the way and you end up wasting lumber or plywood every time. By setting the L-fence above the height of the dado blade and setting the fence so the correct amount of dado blade is exposed, you accomplish the same task without wasting wood and without clamps in the way.

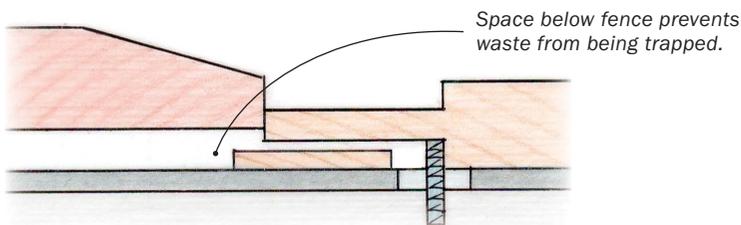


Stack dado blade for wider cut and overlap a portion with the L-fence.



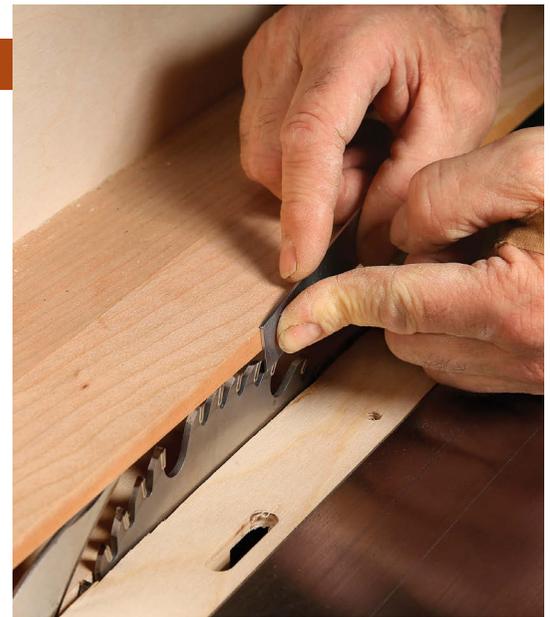
## TRIMMING TENON SHOULDERS

Making this cut with a table saw's rip fence as a stop creates a potential for kickback because the offcut gets trapped between the fence and the spinning blade. The L-fence solves that problem. Simply raise it so the top half of the tenon runs against it, set the fence distance to the length of the tenon, and run the end of the board against the fence. The extra space below the L-fence prevents the offcut from getting trapped. For narrow boards, support the workpiece with a miter gauge or a square pusher block. Wider pieces like the one in the photo at right can simply be run against the fence by themselves.

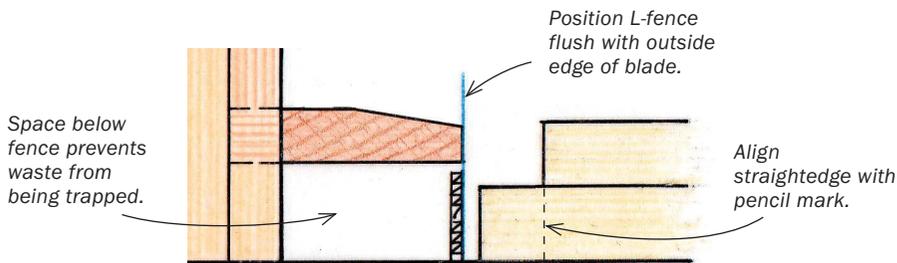


## FLUSH TRIMMING

An L-fence can be a good solution when crosscutting wide panels or ripping a straight edge on a wavy board. Set the L-fence slightly higher than the blade and set the edge of the fence flush with the outside edge of the blade. For flush sawing, lay out the cut line on the workpiece. Then saw away the waste, either on the bandsaw or with a jigsaw, leaving about  $\frac{1}{8}$  in. of wood on the waste side. Temporarily attach a straight piece of wood right on that line using tacks, double-sided tape, or even coarse adhesive-backed sandpaper. Now run your workpiece—with its temporary fence attached—against the L-fence. You should be cutting right on your layout line. Any waste falls away under the L-fence and does not get caught between the blade and the rip fence. If you are cutting a lot of parts, turn off the saw and check periodically for waste buildup under the fence.



**Flush the blade to the fence.** Make sure the blade is above the height of the workpiece, but just below the height of the L-fence, and use a straightedge to make sure the blade is flush with the edge of the fence.



**Crosscut a panel end.** Draw a line square to one edge. Use a straightedge backed with sandpaper for grip and place it along the line. Run the piece so the straightedge rides on the L fence, and the panel is cut along the line.



**Straighten a wonky edge.** After drawing the line you want, place a sandpaper-backed straightedge right along it. Van Dyke's straightedge has a lip at the trailing end and a handle, helping keep the straightedge stationary and the workpiece moving.



### Add a stationary base and the L piece

When it's finished, this L-fence can either be clamped directly to your table saw's rip fence, or bolted to a fence-straddling jig I wrote about in "Supercharge Your Rip Fence" (*FWW* #231). If you plan to use the jig from that article, drill mounting holes now through the L-fence's backer board, using the hole location template from that project. If you'll be clamping the L-fence directly to your table saw fence, you don't need to drill the mounting holes.

Glue plastic laminate to the edges of the movable fence and the fence guide blocks. The laminate gives a smooth surface for

the fence to slide against. Trim any overhanging laminate flush.

To make the tongue on the lateral part of the L, cut a rabbet on the bottom edge of the workpiece so the remaining wood will fit in the groove. I notch back the ends of the tongue by hand. Before dry-fitting the tongue and gluing it into its groove, I cut a bevel on the top surface of the part. This is mostly for aesthetics, but if you ever need to flush-cut something with material that overhangs both faces, the bevel allows the overhanging parts to straddle the L.

With the threaded knobs holding the movable fence in place on the backer board, glue and nail the guides tight to the edges of the L. Make it tight enough that the fence will not rack as it is moved up and down in use.

Glue and tack a small handle to the top edge of the movable fence to make it easy to raise and lower.

Now you can attach your new L-fence to its base and run wild with its uses. □

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**Cut patterns on the tablesaw.** Start with an MDF pattern you want to replicate. Secure the pattern to the workpiece using double-sided tape or finish nails. Push the assembly through the saw with the pattern on top, riding against the L-fence. You can cut all four sides.

## PATTERN SAWING

You do not usually think of a tablesaw when you have a bunch of oddly shaped parts to cut, but if you use the flush-sawing capabilities of an L-fence the tablesaw can easily duplicate any straight-sided shape. Make a pattern out of any material—plywood, MDF, solid stock. You can cut the pattern to any shape you need. When you are happy with the pattern, trace it onto the workpiece. Remove most of the waste at the bandsaw, leaving about  $\frac{1}{8}$  in. outside the lines. Now attach the pattern to your workpiece with tacks, double-sided tape, or with coarse adhesive-backed sandpaper attached to the underside of the pattern. With the L-fence flush with the outside edge of the blade, cut the parts, running the edges of the pattern against the L-fence. If you set the L-fence carefully, your workpiece should be exactly the same as your pattern.

## MITERS

Think about cutting a long miter on a case side. Cutting one edge cleanly is hard enough, as there is always some burning and frequently a scar mark from the blade. If you need to miter the opposite edge parallel, you have nothing except the knife edge of the first miter to run against the fence. This is a no-win situation. But if you cut the part to its final size while the edges are still square, you can add the miters in a second step and get very clean and accurate cuts on stock of any width.



**Miter exactly to an edge.** Set up the saw with the fence on the left side of the blade (if your blade tilts left) and the blade tilted 45°. The case pieces should be cut to final width. Use double-sided tape to attach a straightedge perfectly flush with the edge that will be mitered. The L-fence should be set higher than the workpiece and the blade should cut through the workpiece. After cutting the miters, Van Dyke leaves the straightedges taped on. With their inside edges cut to 45°, they serve as clamping cauls to glue the mitered case together.