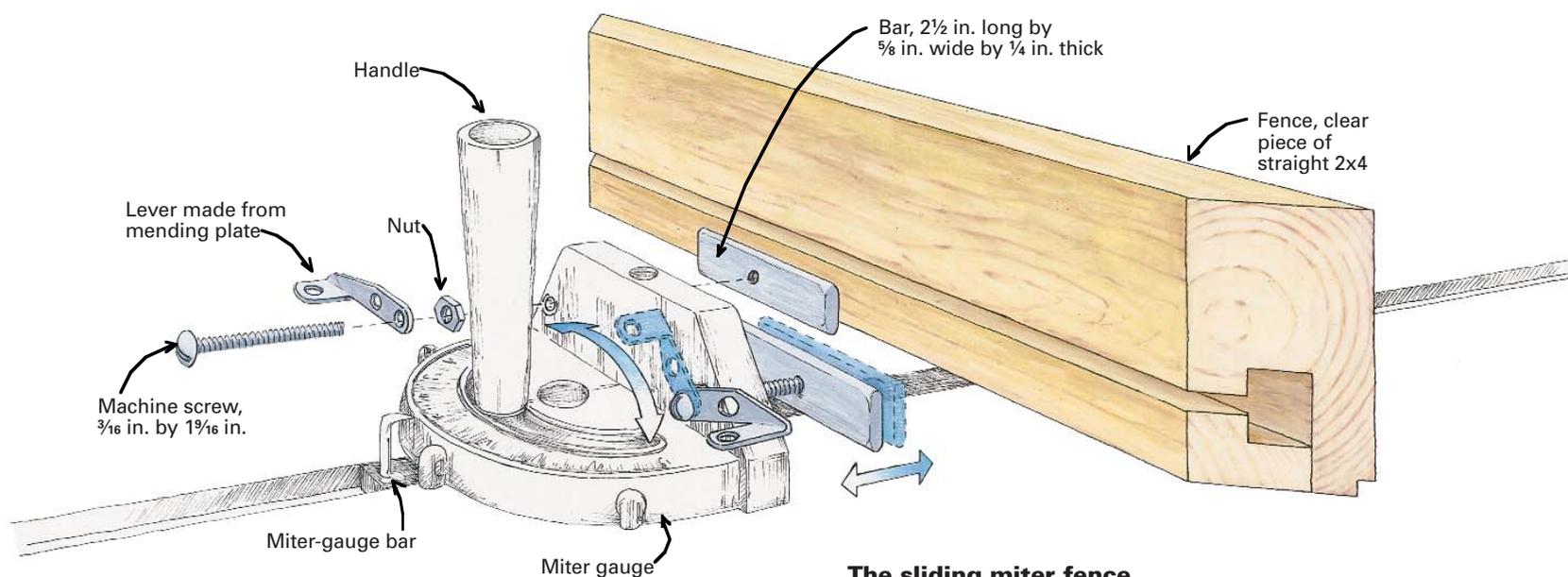


Sliding Fence for a Miter Gauge

Shop-built fence adjusts quickly for accurate cuts

by Tim Hanson



The sliding miter fence

Made from scrap lumber and easy-to-find hardware, this adjustable fence supports the work right up to the blade, no matter what the angle. It makes cross- and miter-cutting safer and more efficient.

The piece of scrap I kept bolted to my tablesaw miter gauge was a great improvement over the gauge alone, especially when making crosscuts. This extra fence made the gauge easier to grip, and it supported the workpiece right up to the blade. The problem came when making angled cuts. Each new angle made a new divot in the fence, and pretty soon, it looked like an old comb with missing teeth. I would try to save time by using one of the gaps as a point of reference when cutting, but sooner or later, I'd use the wrong one. Then I'd get ticked off and have to stop work to make a new fence, and the whole cycle would start again.

I finally took the time to make a fence that could be moved right or left and locked in place by simply flipping two little levers (see the photo at right). Now I can make minute adjustments in the position of a workpiece by releasing the levers and sliding the fence rather than unclamping and re-clamping. The fence makes using the tablesaw faster, safer and more accurate.



The lever-action adjustment on this shop-built fence lets you position the fence quickly.

How it works

The wooden fence is held to the miter gauge by a pair of machine screws. The screws go through the miter gauge and are tapped into 2½-in.-long metal bars that ride in T-slots in the back of the fence. When the machine screws are loosened, the fence can be adjusted right or left—exactly where you want it. Flip the levers up, and the fence slides right up to the blade (see the photo on the facing page). Flip them down, and the fence is locked in place.

The fence is made from a clear, straight piece of 2x4 construction lumber. I made it 20 in. long thinking I'd shorten it later, but I found the length useful when crosscutting long pieces.

I used a tablesaw to make the T-slot, but there are other ways to do it. The important thing is to make the slot larger than the bar stock by about 1/16 in. all around for easy sliding.

Fine-tuning the levers—I fashioned the levers from right-angle mending plates, which I purchased at the hardware store. The



This sliding fence is easy to grip with hands or clamps, and it supports the work right up to the blade.

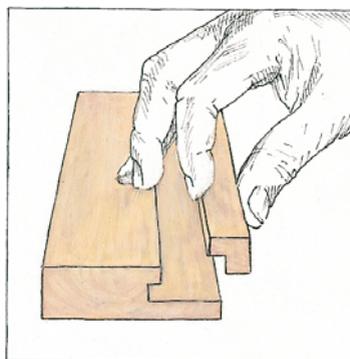
drawings at right show the parts and how they go together, but the system does need some fine-tuning. Secure the levers under the heads of the machine screws with a wrench-tight nut. Slide the machine-screw assemblies through the miter gauge, and turn the bars onto the screws so the ends of the screws are flush with the bars.

Now turn one lever all the way to the left (at the 9 o'clock position), and slide the bar into the T-slot. Flip the lever to the right. The fence should tighten up against the miter gauge at about the 2 o'clock position without much effort. If it rotates past that point and the fence still isn't tight, the lever has to be repositioned. Disassemble the fence, and remove the machine screw. Clamp the machine screw between two blocks of wood in the vise, and loosen the nut just enough to rotate the lever counterclockwise about one-quarter turn. Tighten the nut and reassemble. It may take a few tries to get the levers to grip and release in the correct position. Use the same procedures to adjust the second bar.

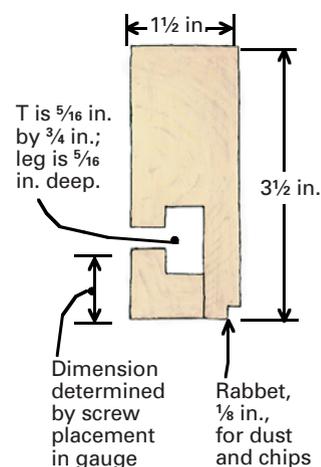
Precise cuts come from an accurate fence. My miter gauge's face wasn't perpendicular to the table, so I had to handplane the wooden sliding fence to make it square. □

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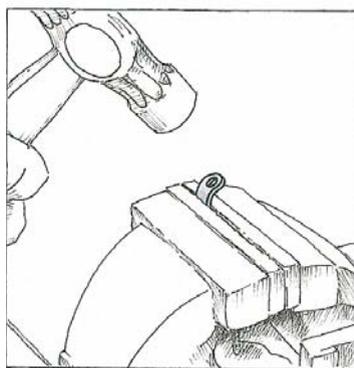
SLIDING FENCE



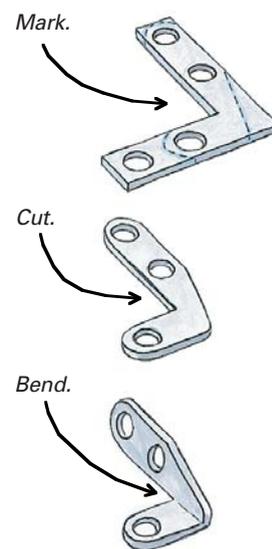
Make a T-shaped slot in the fence. Cut the pieces to the dimensions shown at right, and glue together. Make sure the bar stock moves freely in the slot. Miter the ends of the fence at 45°.



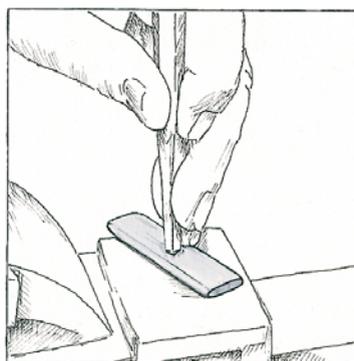
LEVERS



Make two levers from 2-in. by 2-in. mending plates. Cut one leg about 1/2 in. long, and round all the corners. Make the left lever by bending the short leg toward the back of the vise, as shown. For the right lever, bend the short leg toward the front.



BARS



Attaching screw to bar—A machine screw threads into the bar to lock the fence in position. If you don't have metal taps to make this connection, you can use a standard nut, as shown at right.

Drill a 7/32 in. hole through bar.

Counterbore a 1 3/32-in. hole two-thirds of the way through.

Press nut with vise; lock in place by dimpling bar with punch.

