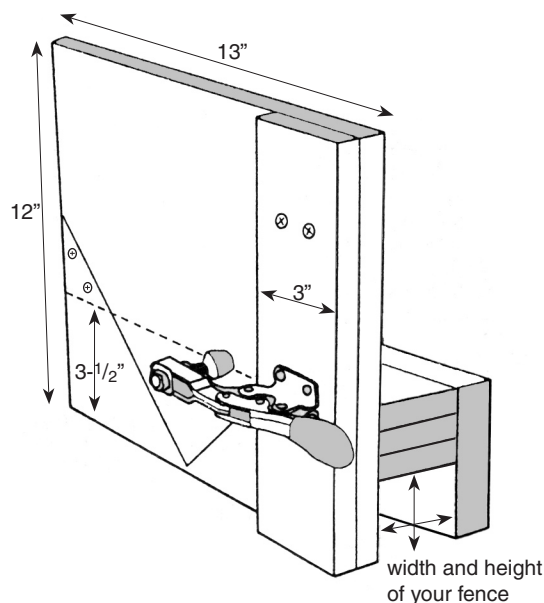


A Shop-Built Tablesaw Tenon Jig



A tablesaw tenon jig like the one shown here is easy to build and easy to use on any saw with a plain, unencumbered rip fence. The jig is designed to ride along the fence, offering sliding movement accurately parallel to blade as well as easy positioning for cutting centered or offset tenons, lap joints and bridle joints. If you choose, the vertical tenoning fence can be replaced with a 90° cradle for splining miters, cutting either individual components or assembled frames. A toggle clamp secures stock quickly and releases it instantly after cutting.

3/4" hardwood plywood is a good choice of material for the jig and its fences. A triple layer for the bridge piece provides plenty of wall surface for strong and rigid attachment to both vertical faces. The width of the bridge must match your fence thickness very precisely to insure the jig's smooth action with no loose play at all. Rip a piece of plywood 40" long and a little wider than your fence. Cut it into three 13" pieces and glue them together to form the bridge blank. Joint or rip one edge of the blank straight and square.



Now thickness plane or rip the piece to fit snugly between two pieces of stock clamped to your fence faces. The other dimensions shown in the drawing may be varied as needed to suit your work. I've used the jig on workpieces four feet long with no trouble controlling the stock. If you regularly need to cut tenons on large, long or heavy stock, consider adding another layer to the bridge and extra vertical pieces to widen the jig's footprint.

This jig won't be worth using if it doesn't hold your work very precisely perpendicular to the saw table. Build the jig carefully, and then finish the job on your jointer or on the tablesaw to be certain the high face is perpendicular to the two bottom edges. The tenoning fence must also be mounted (and remountable) very carefully to hold your workpiece precisely vertical. Be finicky; this part of the job will determine if your next hundred tenons fit right or not. Drill mounting screw holes in the fence, then clamp the fence to the jig and mark where to drill pilot holes in the jig face. Don't attach the fence yet; first you'll use it as

a template to mark identical screw holes in the miter cradle.

The miter cradle is an optional add-on. You can make it now, later, or never—whatever suits you. Cut the cradle from a piece of 3/4" plywood roughly 13" x 8". About 7" from one end (the back), mark a spot 1/2" above the bottom edge. With a miter square or combination square, mark 45° lines that intersect at that spot, making a 90° V. Saw to the lines with bandsaw or handsaw, then use the tenon fence to mark screw holes along the back edge. Also drill a couple of screw holes to secure the front half of the cradle. Now both fences can be mounted using the same screw holes in the jig, and the toggle clamp works with either fence. (I used 1-1/2" screws to mount the toggle clamp so they also secure the fence.) Note that screws used to mount the tenon fence (and the toggle clamp or any other hardware mounted on the fence) must be positioned at least 3-1/2" from the bottom of the jig, to be absolutely sure you can't damage your saw blade. The dotted line drawn on the jig serves as a constant reminder of where the danger zone begins.

A handle or knob mounted on the bridge makes the jig easy to handle. A bit of work with bandsaw and rasp produced a custom plane handle which works like a charm on my prototype. For easy sliding action, wax and buff the bottom edges of the jig and the inside faces that bear against the fence.

Zach Etheridge