



Woodsmith **PLANS**

# DRILL PRESS TABLE AND FENCE



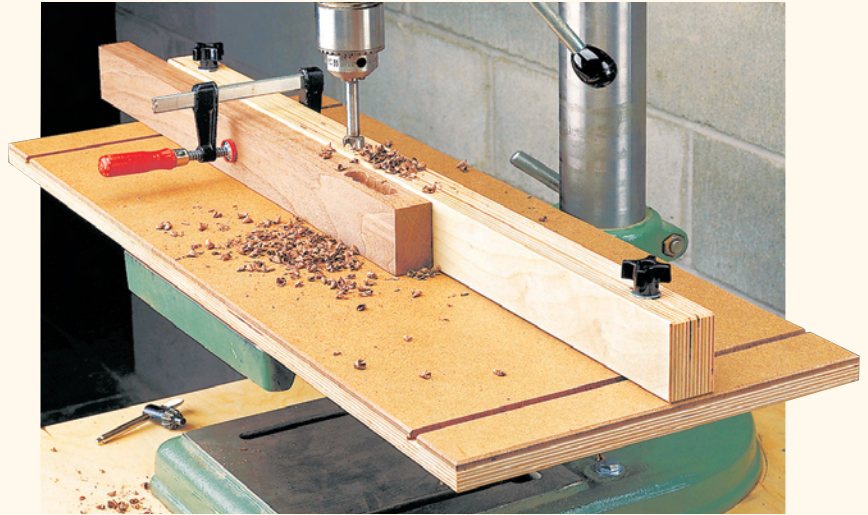
# DRILL PRESS TABLE & FENCE

*Sometimes simple is best. This drill press table with an adjustable fence is the perfect example.*

An auxiliary table and an adjustable fence. Those are the first two improvements I'd make to a "bare bones" drill press.

Take this table for instance. It's much larger than the metal drill press table it's attached to. So it offers plenty of support when working with long pieces.

The table also lays the groundwork for an adjustable fence. To position the fence quickly and accurately, it slides along two T-shaped slots in the table. And a built-in clamp locks it in place.



## TABLE

The table is made up of two layers. To add rigidity, there's a layer of

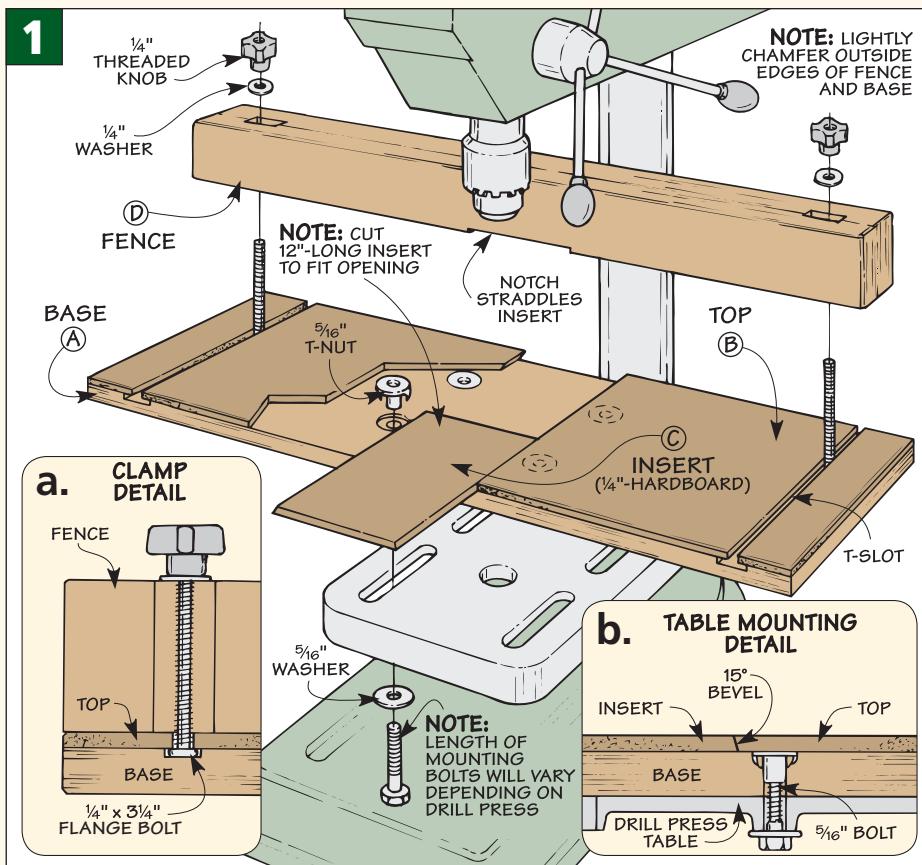
$\frac{3}{4}$ "-thick plywood on the bottom. And a top layer of  $\frac{1}{4}$ " hardboard creates a flat, durable worksurface.

There's also another advantage to this double-layered table. The top layer has a removable center insert, see Fig. 1. When this insert gets chewed up with use, simply slide it in or out to expose a "fresh" drilling surface. Or replace it with a new insert.

**BASE.** I started on the table by making the plywood base (A), as shown in Fig. 2. To form the first half of the T-slots, you'll need to cut two dados in the base, see Fig. 2a. Later, each of these dados will accept the head of a flange bolt that guides the fence in the slot.

**INSTALL T-NUTS.** The next step is to install a set of T-nuts that are used to attach the base to the metal drill press table. To locate the holes for these T-nuts, start by setting the base on the drill press table. Then, after marking the location of the holes from underneath the table, drill counterbored shank holes and tap the T-nuts into place.

**TOP.** Now you can concentrate on the top of the table. It consists of two top (B) pieces and the hardboard insert, see Figs. 1 and 2. Note: It's best to cut the top pieces oversize and trim them flush later.



The insert fits into a dovetail-shaped opening in the top of the table. This opening is formed by cutting a bevel on the inside edge only of the top pieces, see Fig. 2b.

To prevent the insert from binding, the beveled edges of the top pieces need to be parallel to each other. A simple solution is to use a spacer when gluing on the top pieces.

After trimming the edges flush, you can complete the second half of the T-slots. This is just a matter of cutting dados in the top pieces, as shown in Figs. 3 and 3a.

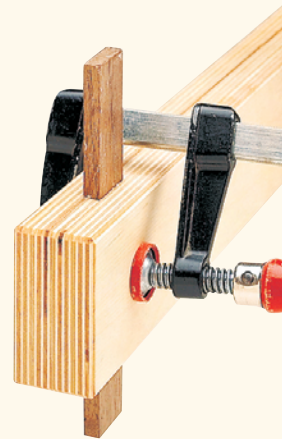
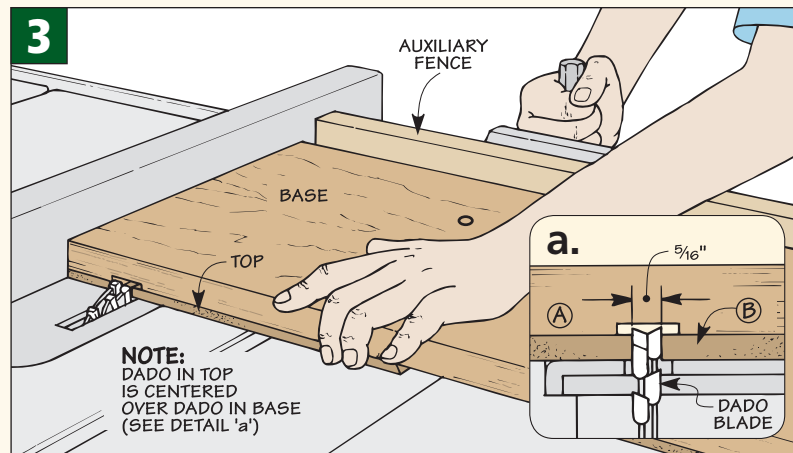
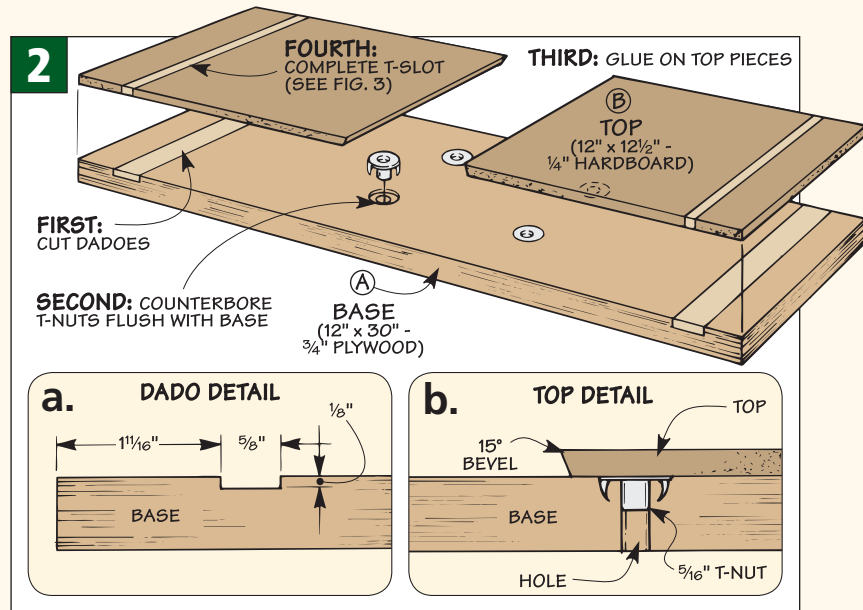
Now all that's left is to cut an insert (C) to fit the opening in the table. To do this, you'll need to bevel both edges of the insert. While you're at it, it's a good idea to make several inserts so you'll have a few spares.

### FENCE

After attaching the drill press table with bolts, the next step is to add the fence to the top of the table.

The thing I like best about this fence is you can adjust it without having to coax first one end and then the other. The reason has to do with a narrow slot in each end of the fence. These slots form openings for the flange bolts that guide the fence.

Why not just drill holes for the bolts? After all, it would be quicker. The only problem is if you don't move both ends of the fence the same amount when making an adjustment, the bolts would jam in the holes and cause the fence to bind.



▲ A waxed "key" ensures proper alignment when gluing up the fence pieces.

But there's clearance between the bolt and the ends of the slot. So even if both ends of the fence aren't perfectly aligned, it still slides nice and smooth into place.

**FENCE PIECES.** To make the fence, start by cutting two fence pieces (D),

see Fig. 4. The slot for the flange bolts is formed by first cutting a pair of dados in each fence piece, then gluing the pieces together, as shown in the margin.

**NOTCH.** Before installing the fence, I cut a shallow notch in the bottom edge. In use, this notch straddles the insert in the table, see Figs. 1 and 4. This way, when the fence is tightened down, it won't apply pressure on the insert. So you'll still be able to slide the insert in or out.

**ATTACH FENCE.** Now all that's left is to attach the fence to the table. After slipping the flange bolts in place, set the fence down over them. Tightening knobs on the ends of the bolts locks the fence securely in place.

### HARDWARE

- (2) 1/4" Threaded Knobs
- (2) 1/4" Washers
- (2) 1/4" x 3 1/4" Flange Bolts
- (4) 5/16" T-Nuts
- (4) 5/16" Washers
- (4) 1/4" Wing Nuts

**Note:** You'll also need (4) 1/4" bolts to mount table to drill press (length will vary)

