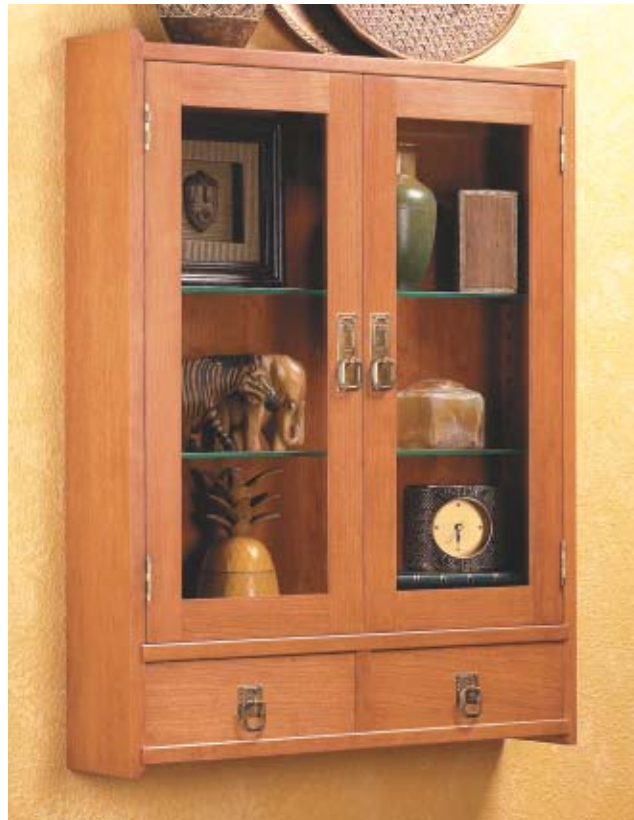


154
DISPLAY CABINET





▲ Though this case has some unique features, it's built with basic dado construction. For more on cutting dados and grooves, see our **Woodworking Basics** series at PlansNOW.com

Case

The basic case of this display cabinet is quite simple — just a pair of sides that trap a top, bottom and a single, fixed shelf, as you can see in Fig. 1. Later, you'll add a vertical divider to create the drawer openings, a cleat for hanging the cabinet, and a plywood back. But for now, you can focus on the basic case pieces.

SIDES, TOP, BOTTOM & SHELF.

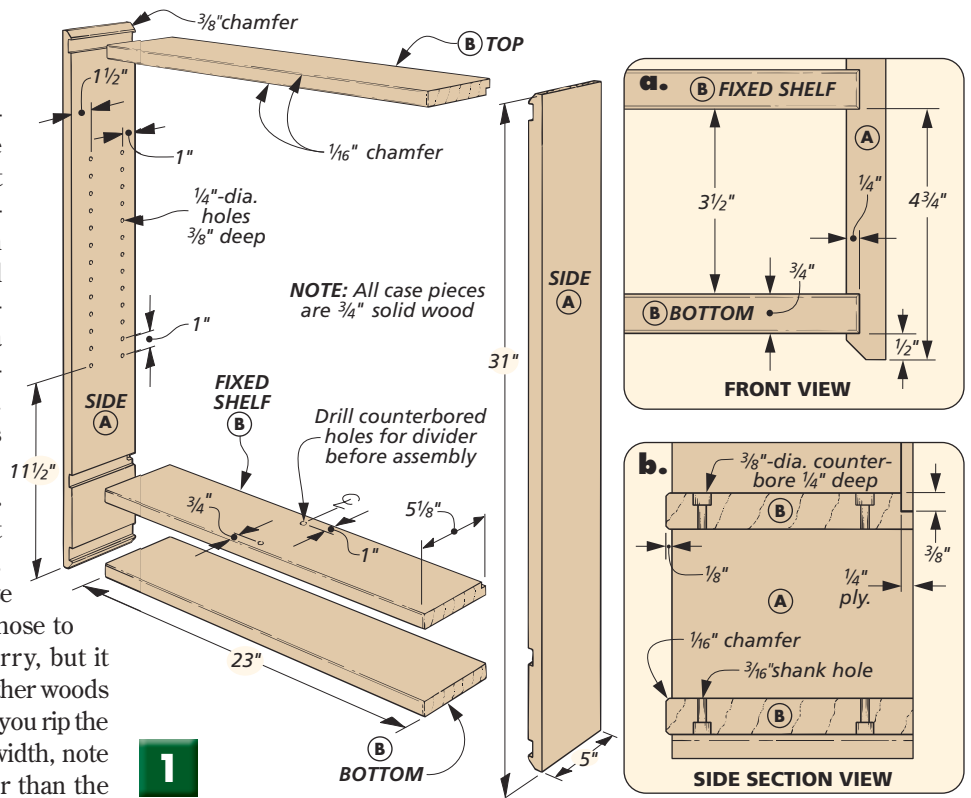
The first thing to do is cut the sides (A) and the top, bottom and shelf (B) to size from $\frac{3}{4}$ "-thick stock. (I chose to build this cabinet in cherry, but it would also look great in other woods like oak or maple.) Before you rip the top, bottom and shelf to width, note that they're slightly wider than the sides so they will stand $\frac{1}{8}$ " proud, as shown in the photo at left and Fig. 1b.

The sides require the most work, so I started with them. First, I cut a chamfer on both ends, as shown in Fig. 2. This is a fairly deep chamfer, so instead of cutting it in multiple passes with a router bit, I cut it on the table saw using an auxiliary miter gauge fence to support the piece.

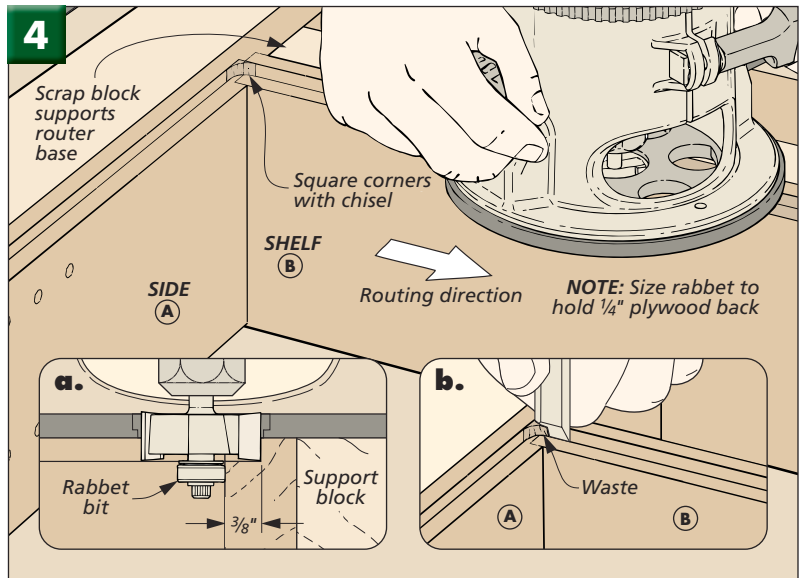
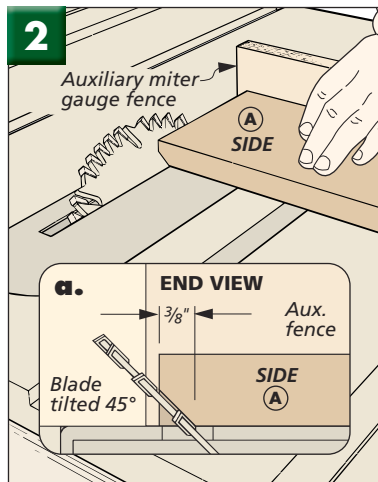
You can leave the auxiliary fence in place while you cut the dados to hold the top, bottom, and shelf, as shown in Figs. 1a and 3. And to make sure the dados line up across from each other, you'll want to either add a stop to the end of the auxiliary fence or use the rip fence as a stop, as I did in Fig. 3. (You can do this because the cuts don't go all the way through, so there are no waste pieces to kick back at you.)

The last thing to do on the side pieces is drill the series of $\frac{3}{8}$ "-deep holes for the L-shaped shelf supports that will hold the glass shelves.

Before the case can be assembled, you'll need to do a little work on the top, bottom and shelf. First, the front edge of each needs a $\frac{1}{16}$ " chamfer, as indicated in Fig. 1b. Then in the shelf and bottom pieces, you'll want to drill the two counterbored shank holes that will hold the drawer divider.



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(It would be a bit awkward to do this after assembly.)

Gluing this case together isn't hard. Just remember the top, bottom and shelf stand proud in front of the case and are flush in back.

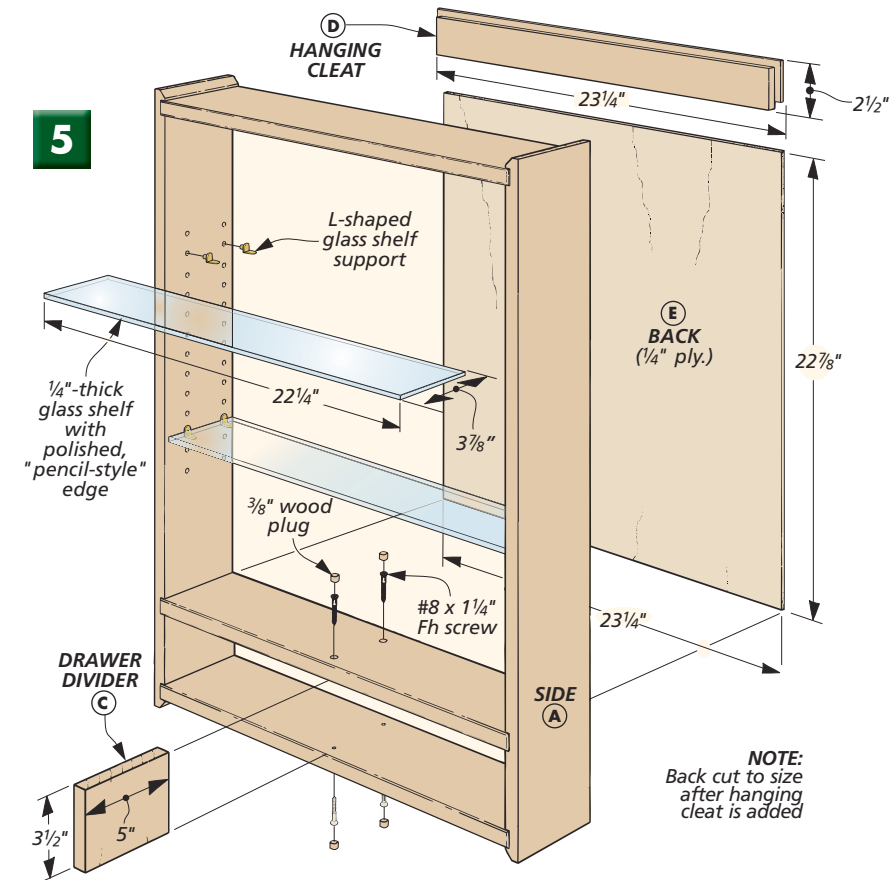
After the glue on the case is dry, the next thing to do is rout the rabbet for the 1/4" plywood back panel. As you can see in Figs. 4 and 4a, I did this with a hand-held router, using scrap blocks to help support the router base so it wouldn't tip. Then I came back and cleaned up the corners with a chisel (Fig. 4b).

DRAWER DIVIDER. Before you cut the back to size, there are two other pieces to make. First I cut a *drawer divider* (C) to fit between the shelf and bottom, as shown in Fig. 5. But note that the front of the divider sets back 1/8", just like the sides (Fig. 5a).

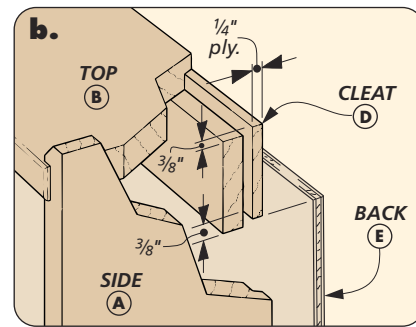
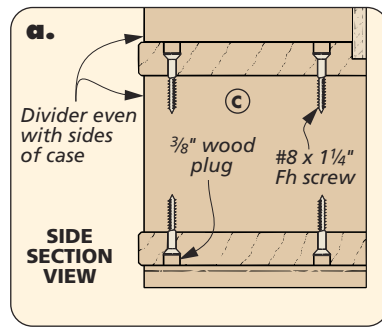
After screwing the divider in place (Fig. 5a), the screws can be covered with 3/8"-dia. wood plugs. (I'd recommend you use face grain plugs here so they'll be less noticeable.)

HANGING CLEAT. The next piece I added was a *hanging cleat* (D), as you can see in Fig. 5. This way, when hanging the cabinet on the wall later, I had a 3/4"-thick solid-wood piece to screw through, instead of the 1/4" plywood back.

Making the cleat is a two-step process. It's cut to fit between the rabbets for the back, but to get it to fit flush with the back, you'll need to cut a rabbet around three edges of its front face, as shown in Figs. 5b and 6. The second step is just cutting another rabbet — this time, to match



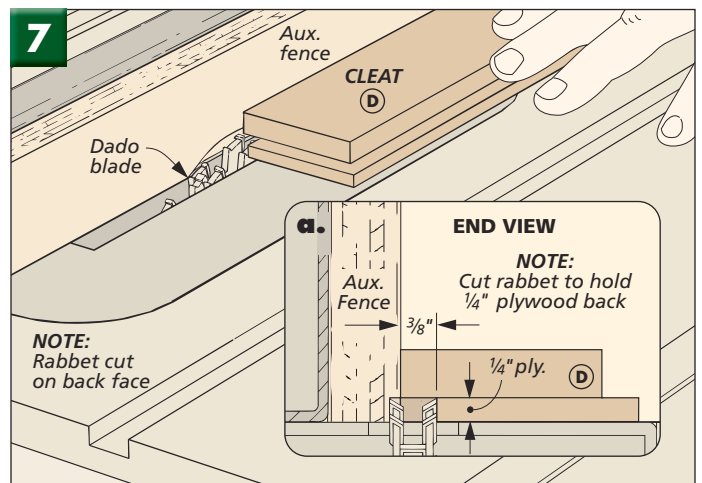
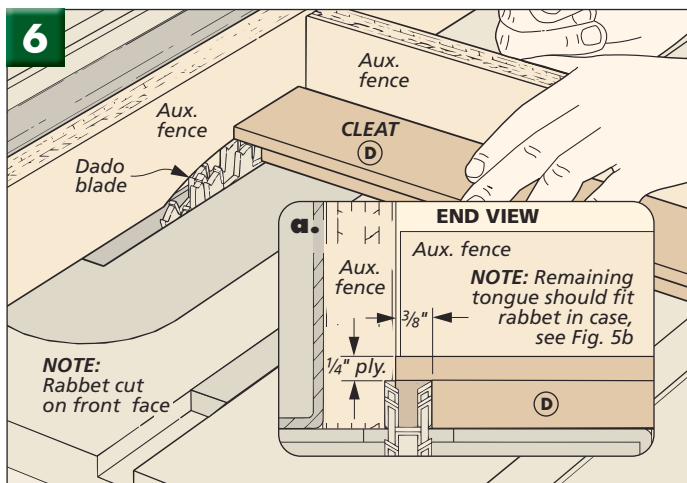
NOTE: Back cut to size after hanging cleat is added



the rabbets in the case for the back, as you can see in Fig. 7.

BACK. When the cleat has been glued in place, you can cut the plywood back (E) to size and glue it into the rabbet (Fig. 5b).

GLASS SHELVES. You really don't need to order the glass for the shelves until you order the glass for the doors later. But I'll just mention here that I used 1/4"-thick glass that had polished, "pencil-style" edges.



Doors

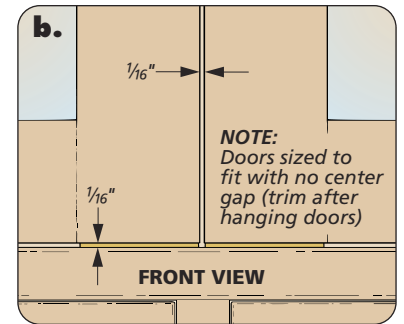
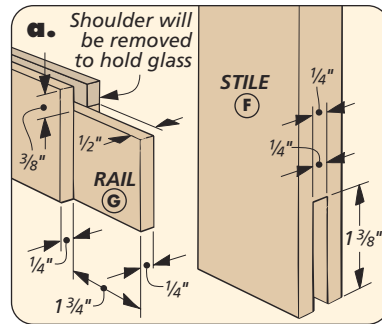
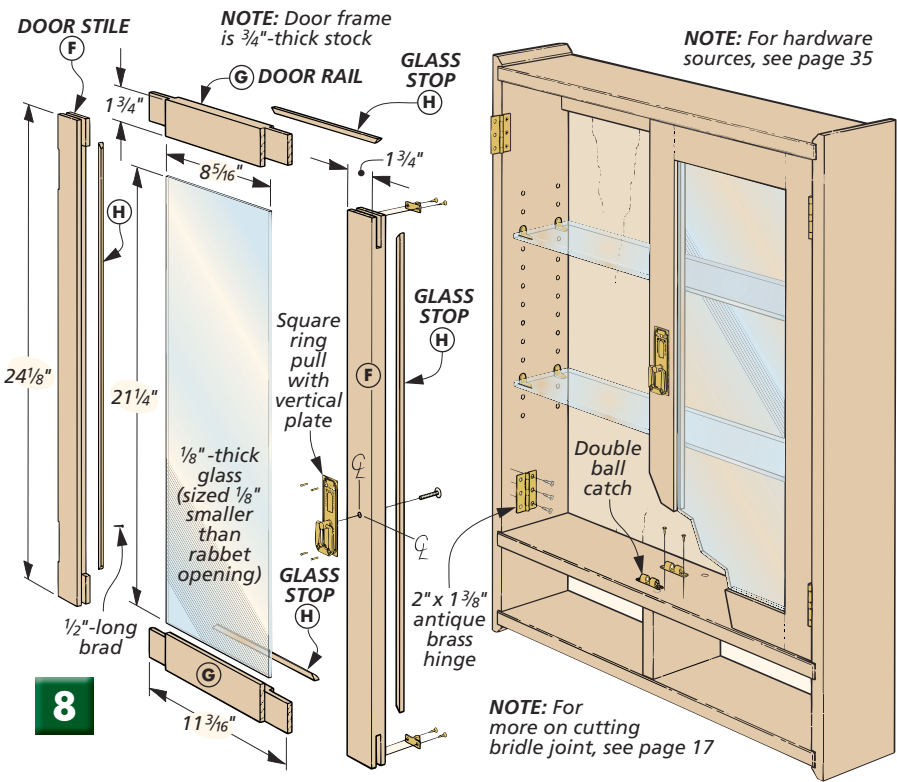
At this point, the case is ready for the doors, and whether you build them with glass or wood panels, the procedure starts out the same. The door frames are built with a grooved bridge joint. But more on that in a minute.

CUT TO SIZE. Before cutting the door stiles (F) and rails (G) to size (Fig. 8), measure your case so the door pieces can be cut to fit its opening. The stiles are sized so there will be a $\frac{1}{16}$ " gap at the top and bottom of each door. The rails are a bit more work, but at least with a bridge joint, they're the full width of the door. Here, I allowed for a $\frac{1}{16}$ " gap on the sides of the case but no gap between the two doors. (Later, you'll trim the edges where the doors meet, as in Fig. 8b.)

BRIDLE JOINT. With the pieces cut to size, you're ready to cut the bridge joint, see Fig. 8a. I came up with a quick jig (shown in the margin photo) that eliminates one of the setups. And I've described the jig (and how to cut the bridge joint) on page 8 and 9.

DOOR PANELS. If you're building the doors with wood panels, you'll need to make them *before* you glue up the frame, see bottom of page 6. For glass doors, you can glue up the frames now. (Later, you'll rout a rabbet for the glass to fit into.)

HINGE MORTISES. With the door frames glued up, I cut the mortises for the hinges next, as shown in Fig. 9. This can be done at the table saw, and I sized the mortises to match the full depth of the hinge barrel, minus $\frac{1}{16}$ "

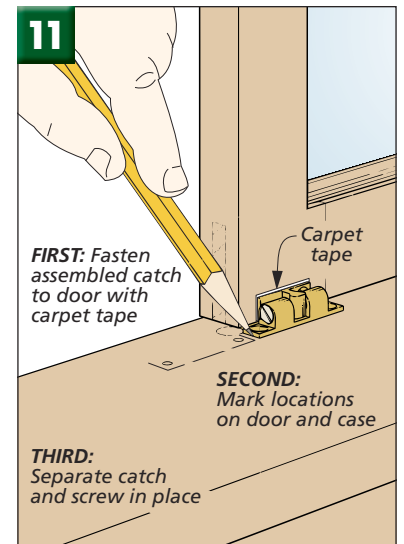
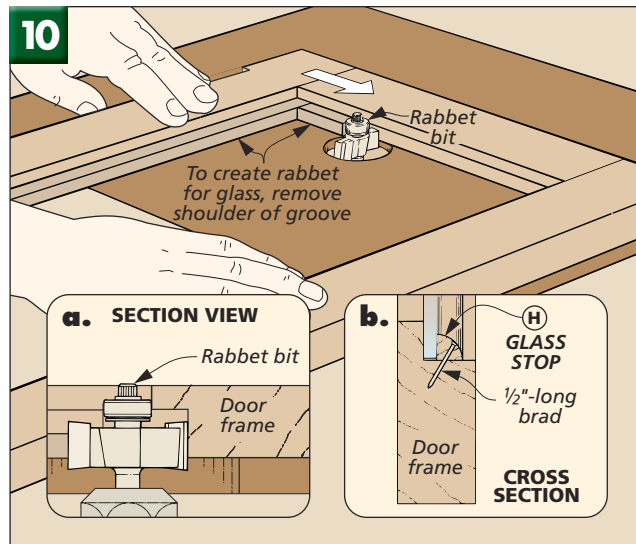
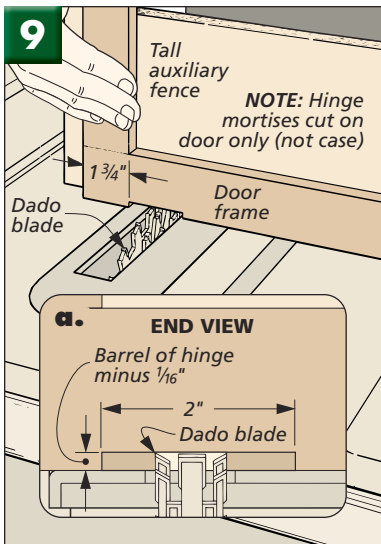


for the gap. (The hinges are simply screwed to the inside of the case.)

Now you can rout the back edges of the doors to hold the glass, as in Fig. 10. I used $\frac{1}{4}$ " glass stop (H) to mount the glass (Fig. 10b). And on page 8, there's a "miter box" I used to

cut the stops to length. (But you don't want to add the glass until the finish has been applied to the project.)

HANG DOORS. At this point, the doors can be hung in the case. Then you can trim their inside edges to create the $\frac{1}{16}$ " gap (Fig. 8a) and add the pulls



and catches. The double ball catches I used can't be adjusted after they're screwed in place, so for an accurate installation, I positioned them with carpet tape, as described in Fig. 11.

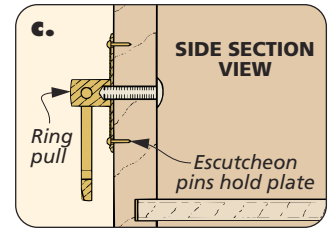
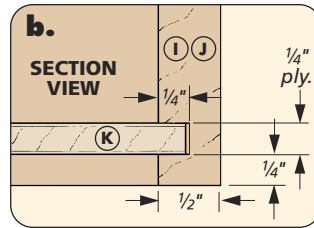
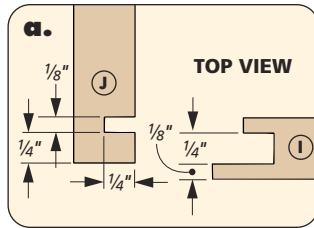
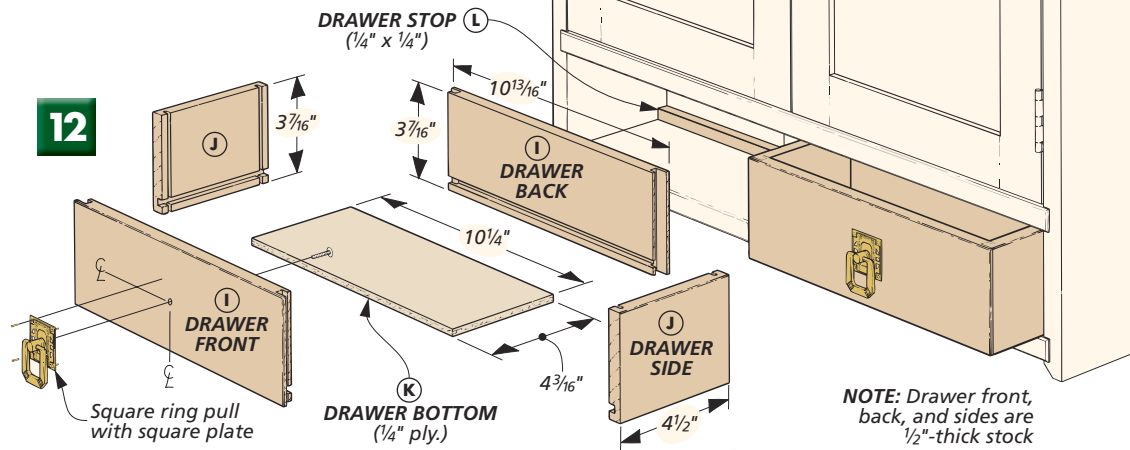
DRAWERS

All that's left now is to build the two small drawers, as shown in Fig. 12. I sized the $\frac{1}{2}$ "-thick *fronts* (I) and *backs* (I) so the drawers would be $\frac{1}{16}$ " smaller than the openings in height and width. And the *sides* (J) are sized so the drawers would stop $\frac{1}{4}$ " short of the back of the case.

LOCKING RABBET. To create a strong drawer without a lot of fuss, I decided to use a locking rabbet joint (Fig. 12a). It looks more complicated than it really is. In fact it can be cut in three quick steps on the table saw.

First, a centered groove is cut on the ends of the front and back pieces, as shown in Fig. 13. The key here is that the height of the blade matches the thickness of the drawer sides.

Next, I trimmed the inside face of the front and back pieces to create a



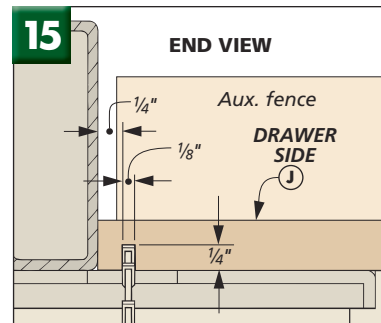
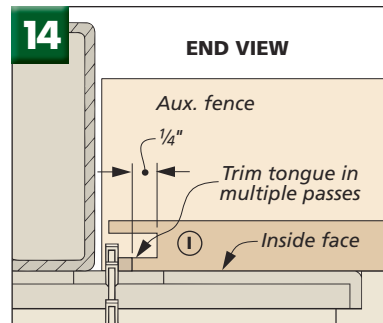
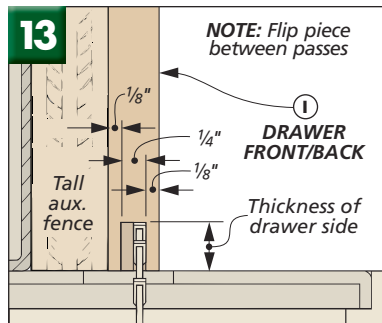
$\frac{1}{4}$ "-long tongue, as shown in Fig. 14.

The last step is to cut dados on the sides (Fig. 15). Just position the dados to line up with the tongues cut in the fronts and backs (Fig. 12a).

BOTTOM. Now each drawer piece is ready for a groove that will hold the $\frac{1}{4}$ " plywood *bottom* (K), as in Fig.

12b. Then when the bottoms are cut to size, you can glue the drawers together and add the pulls (Fig. 12c).

STOP. All that's left now is to cut two *stops* (L) for the back of the case. They're sized so the drawer will end up flush with the *sides* of the case. (Mine were $\frac{1}{4}$ " wide.)



WOOD PANEL DOOR



For an elegant *storage* cabinet, you can build the doors with wood panels instead of glass. (You can also add wood shelves inside.)

Each panel is sized so it'll fit in the grooves when the door is glued together. (Be sure to allow a small gap on each side so the panel can expand and contract.) To create the tongue, all you need to do is rabbet each face, see drawing. And when assembling the frame and panel, remember *not* to glue the panel into the frame.

