

# building the CASE

My first goal here was to put together a solidly built plywood case. If you just take a look at the drawing above, you'll have a good idea of what's involved.

**LAYOUT.** As I said before, the bookcase is designed so that the main case parts and shelves can all be cut from one sheet of 3/4" plywood. So before I started cutting, I took a minute to lay out the parts on my

plywood and made sure everything fit the way I wanted it to.

**THE SIDES.** The major part of the work on the case involves making the two plywood sides. So once I completed the layout, I started by cutting the two *case sides* (A) to size.

Now you can start on the joinery. As you can see in detail 'a,' the case sides are joined to the top and bottom with a tongue and dado. This joint gives you good gluing surface and "racking" resistance.

Cutting the dadoes in the long case sides on the table saw would be pretty awkward. So the solution is to use a hand-held router and a simple edge guide, as shown in the box on the opposite page.

With this task complete, the next step is to cut a rabbet along the

back, inside edge of each side. This holds the 1/4" plywood back.

And to complete work on the sides, you'll need to drill some shelf pin holes. To do this quickly and accurately, I used a simple plywood drilling jig (detail 'b'). You'll find more about this on page 23.

**TOP AND BOTTOM.** That's it for the sides. Next up are the identical case top and bottom and there are just a couple things to mention here. First, since the back panel simply laps over the top and bottom, they're sized 1/4" narrower than the sides. And then a dado blade on the table saw will take care of cutting the tongues on the ends of the top and bottom (detail 'a').

At this point, I got out the glue bottle and a few clamps and

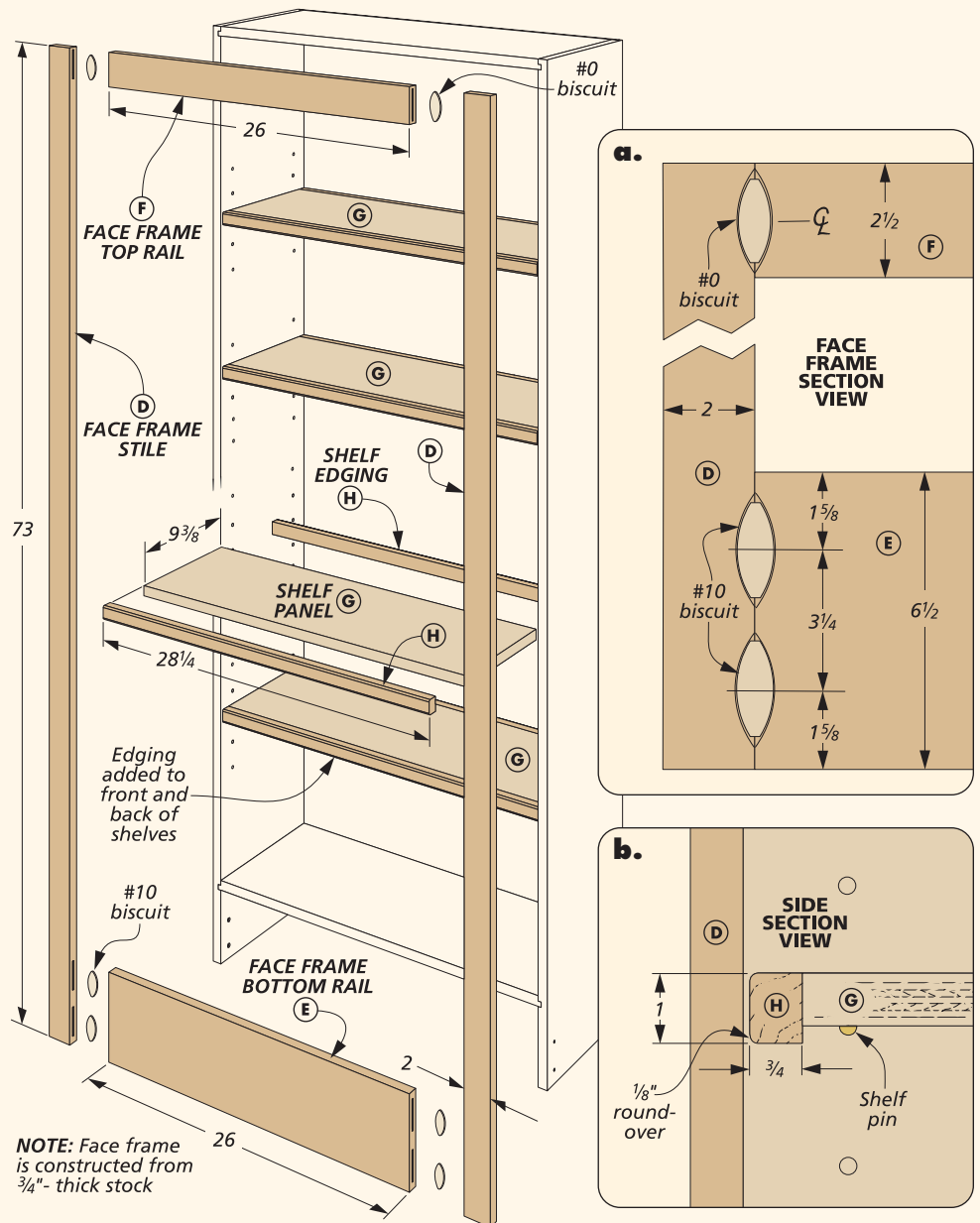
assembled the case. And then once the clamps come off, you'll want to cut the plywood back panel to size and glue it in place. This will help keep the case square and rigid while you add the face frame.

**FACE FRAME.** The face frame does more than just hide the plywood edges. It provides one more way to strengthen the case. So to make sure the face frame I added was up to the task, I did a couple things.

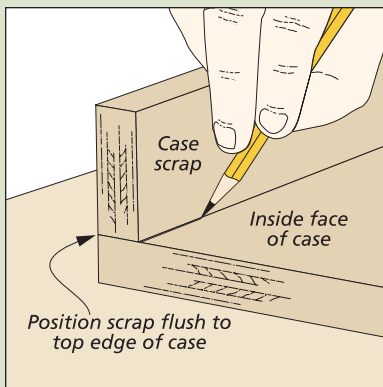
First, for added strength, I made the parts of the face frame pretty substantial — 2"-wide stiles, a 2½"-wide top rail, and a 6½"-wide bottom rail. And second, as you can see in detail 'a,' I got out my biscuit joiner to handle all the joinery. It makes the work go quickly and the face frame plenty rigid.

You'll have plenty of room for two #10 biscuits between the bottom rail and the stiles. But smaller #0 biscuits are a better fit in the top rail, as you can see in detail 'a.' Once the biscuit slots are cut, the face frame can be assembled and glued in place on the case.

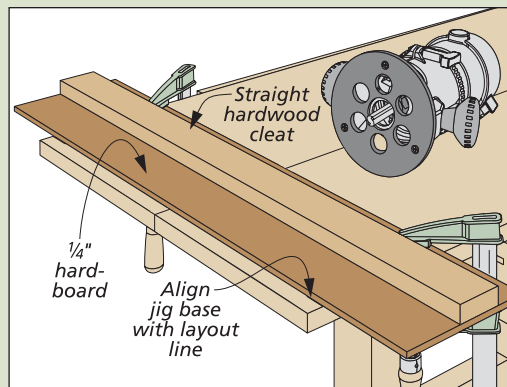
**FOUR SHELVES.** I had two goals in mind when I made the plywood shelves. I wanted them to look pretty stout and to be "sag proof." I accomplished this by reinforcing both the front and back of the shelf panels with a sturdy, 1"-wide piece of edging (detail 'b').



## How-To: Routing Dadoes



**Layout.** To ensure the case is flush across the top, use a scrap of plywood to lay out the dadoes in the sides.



**A Simple Guide.** The two case sides are lined up and clamped edge-to-edge. Then a shop-made edge guide is used to accurately rout the dadoes.



▲ As you can see, the hardboard base of the guide has been trimmed so that the router cut falls right along its edge.