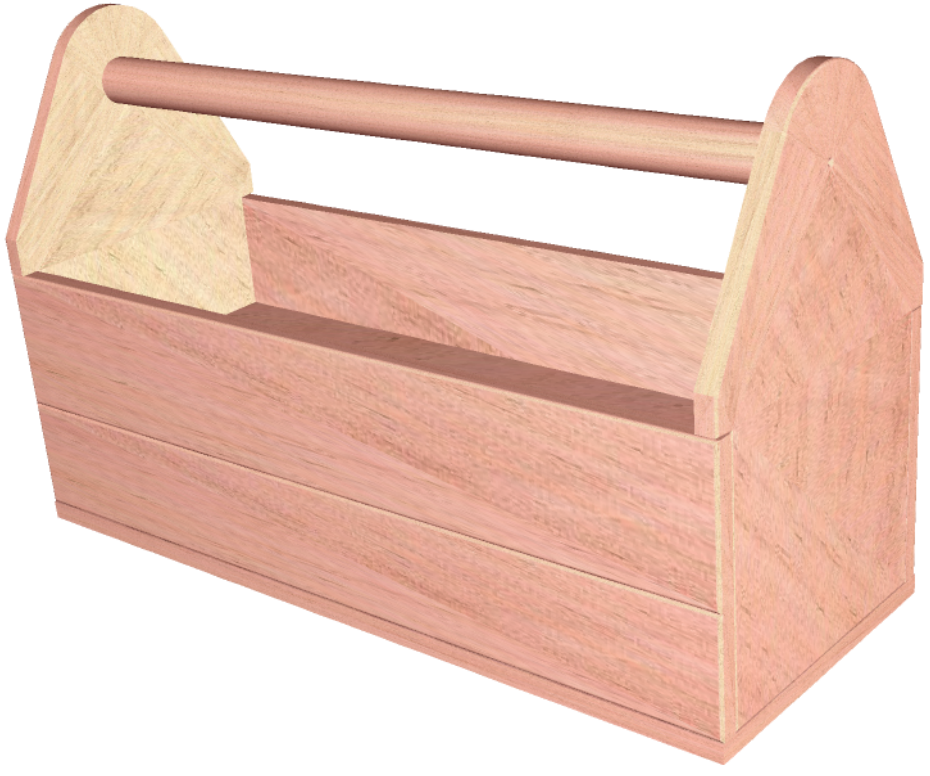
# Toolbox

Activate 3D



# TOOLBOX

**MATERIALS:** We built our toolbox out of ¾-in.-thick D-Select pine—a grade that's just about knotfree—and ¼-in. lauan plywood for the drawer bottom. Two 6-ft. lengths of 1 x 10 pine will do the job.

**TOOLS:** Use a table saw to cut stock to size, and a jigsaw to shape the ends. If you don't have a table saw, you can use a jigsaw for everything. Just make sure the blade is sharp and take care to follow your layout lines.

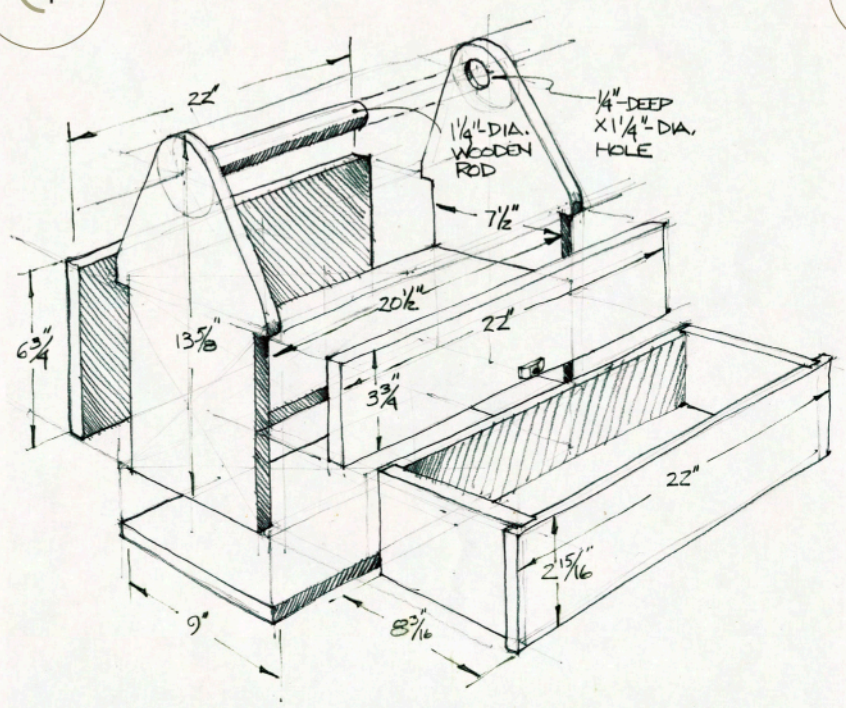
**SPECIAL LAYOUT TOOLS:** Plastic drafting triangles are handy tools in any shop. For this project, a 30/60° triangle makes end-panel layout simple. You'll also need a compass.

**OTHER ESSENTIALS:**
Router
Portable drill/driver
Orbital sander
Hand plane
Try square
Marking gauge
Screwdriver

**HARDWARE:**
2½-in. No. 10 fh woodscrews
1¼-in. No. 8 fh woodscrews
1¼-in. No. 8 rh woodscrew
1-in. nails

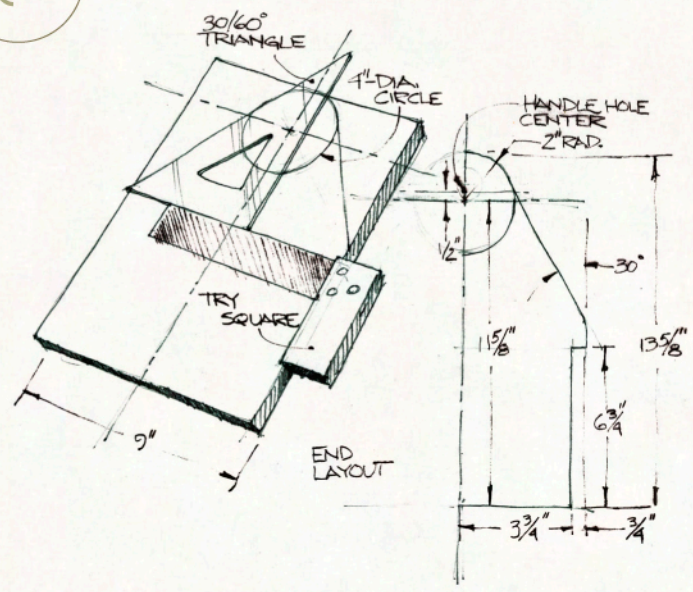
## Materials & Tools

1




The toolbox is designed to minimize fastening into endgrain—screws and nails grip much better when driven into the face or edge of a board. The handle is made of a length of full-round pine molding, sometimes called closet rod. It's held captive in blind holes, with long 2½-in. screws driven into the rod ends. To keep the drawer in place, we installed a ¼ x ⅝ x 1⅛-in. turn button on the front rail. Bevel the ends of the button and bore a hole so the button turns freely on the shank of a roundhead screw. To finish the toolbox, sand to 220 grit and lightly ease all of the corners. Then, apply two coats of tung oil.

2

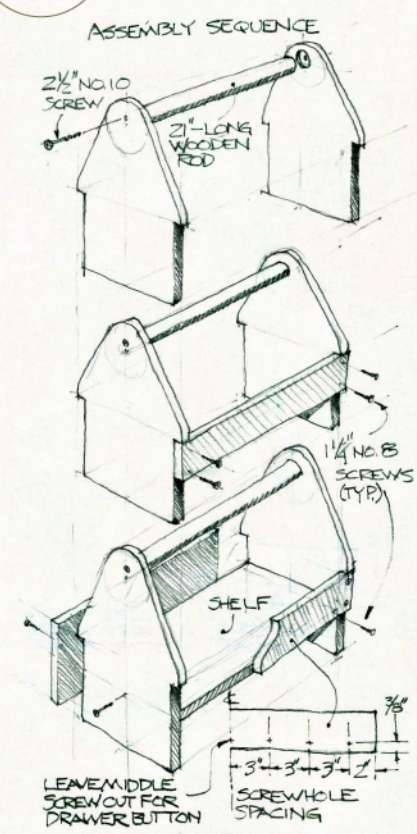



To make the ends, first crosscut 1 x 10 stock to about 30 in. long. Plane one edge straight, then rip and plane the opposite edge to finished width. Crosscut the board squarely in half—this cut makes the bottom edge of both end pieces. Mark centerlines and use a try square and marking gauge to lay out the notches on the side edges. Draw a 4-in.-dia. circle centered 11⅝ in. up from the bottom. Position the try square at the notch line, slide a 30/60° triangle along it until its angled edge is tangent to the circle and draw the angled line. Cut out the ends with a jigsaw, smooth the sawn edges and shape round shoulders above the notches. Mark the rod center ½ in. above the center of the 4-in.-dia. circle.

**Quick Tip**

It's better to fit the drawer on the loose side, rather than too tight. If it's too loose, fine-tune the fit by adding strips of transparent tape to the sides of the cavity. These also reduce friction for smooth sliding.

3

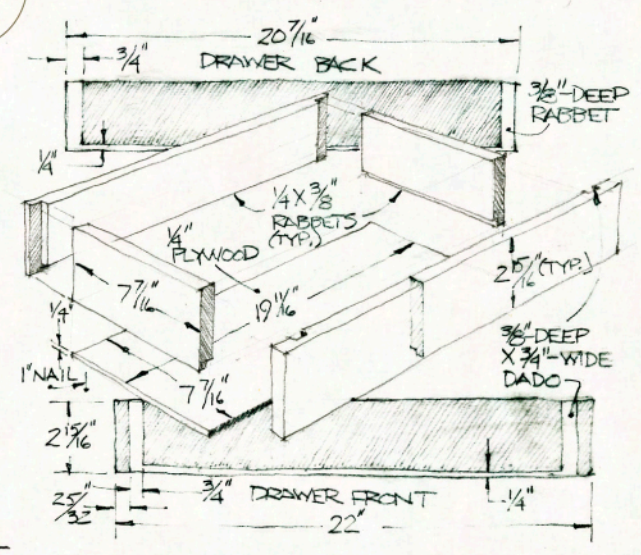



Next, join the end panels to the rod. Use a spade bit to bore the blind hole. To judge hole depth, stick a piece of masking tape on the bit ¼ in. from the cutting edge. The point on the bit will poke through the opposite side to make the screw pilot hole. Countersink the hole and screw the ends to the rod.

Next, rip the narrow front rail to width and cut it to length. From here on, take dimensions from the actual work rather than the drawings. To get the front rail length, for example, measure from end to end at the handle.

Screw the rail in place, making sure that the parts are square. Rip the shelf to match the ends and crosscut it to a length 1½ in. less than the front rail. Use a marking gauge to scribe the shelf position on the inside of each end so it's parallel to the end bottom edges. Then, screw the shelf to the rail and add one screw at the center of each end. Don't install a screw at the center of the rail—this is where the drawer button will be attached. With the shelf in place, secure the back panel.

4




Build the drawer before the toolbox bottom goes on—it's easier to fit the pieces when the cavity is accessible. Plan a 1/16-in. side-to-side clearance for the drawer. Wide, short drawers tend to jam if not pulled out evenly, and the problem gets worse as the clearance gets greater, so try to be precise. While you could make the drawer with butt joints, we opted for dadoes in the drawer front and rabbet joints elsewhere. If you have a table saw or a radial-arm saw, use a regular blade and make repetitive passes to reach the joint width. You also can make these cuts with a router, or by hand with a backsaw and chisel.

We moved to ¼-in. plywood for the drawer bottom to get more space. Rout the rabbets with a piloted rabbeting bit, screw the drawer sides, front and back together, and nail the bottom in place.

## MAKING THE PERFECT HOLE

Our wooden rod was actually just under 1¼ in., but it's easy to make the perfect hole with a spade bit. Simply grind the edges of a 1¼-in. bit until the size is right. Make the same number of uniform passes on each edge so an equal amount of material is removed from both sides. Don't forget to duplicate the bevel on the edges, and mark the bit with its new size so you won't accidentally make an undersize hole on the next job.