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Dave Campbell
Editorial Content Chief, *WOOD* magazine

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Safety-Gear Cabinet

Corral shop necessities in this high-style home.

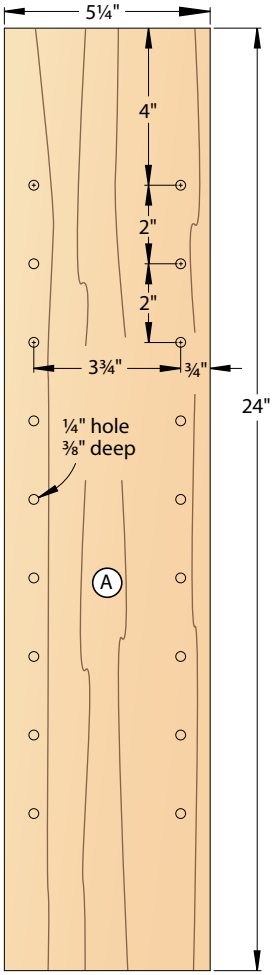
Dimensions: 25½"H x 16½"W x 7½"D
Approximate materials cost: $45

Your hearing muffs, safety glasses, and respirator never had it so good. This simple cabinet features handsome moldings above and below, making it attractive enough to hang in your house as a display or storage case. Our pine version keeps bandages, tweezers, and other first-aid supplies visible, dust-free, and instantly accessible. Choose oak, cherry, walnut, or another fine hardwood to dress it up for inside the house.

Create the carcase first

1 From ¾" stock, cut the sides (A) to size [**Drawing 1**]. Label the top end of each piece to help when drilling the shelf-pin holes as shown in the **Shop Tip**, on the *next page*.

1 SIDE (Inside face)



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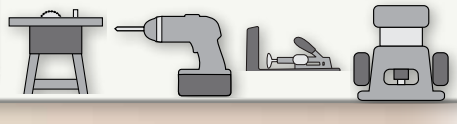
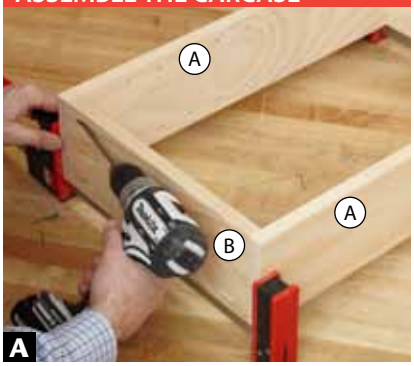
TOOLS NEEDED



2 Cut the top and bottom (B) to size [**Drawing 2**]. Drill the pocket holes; then finish-sand the inside faces of the top (B), bottom (B), and sides (A). Clamp the pieces together and drive the screws [**Photo A**].

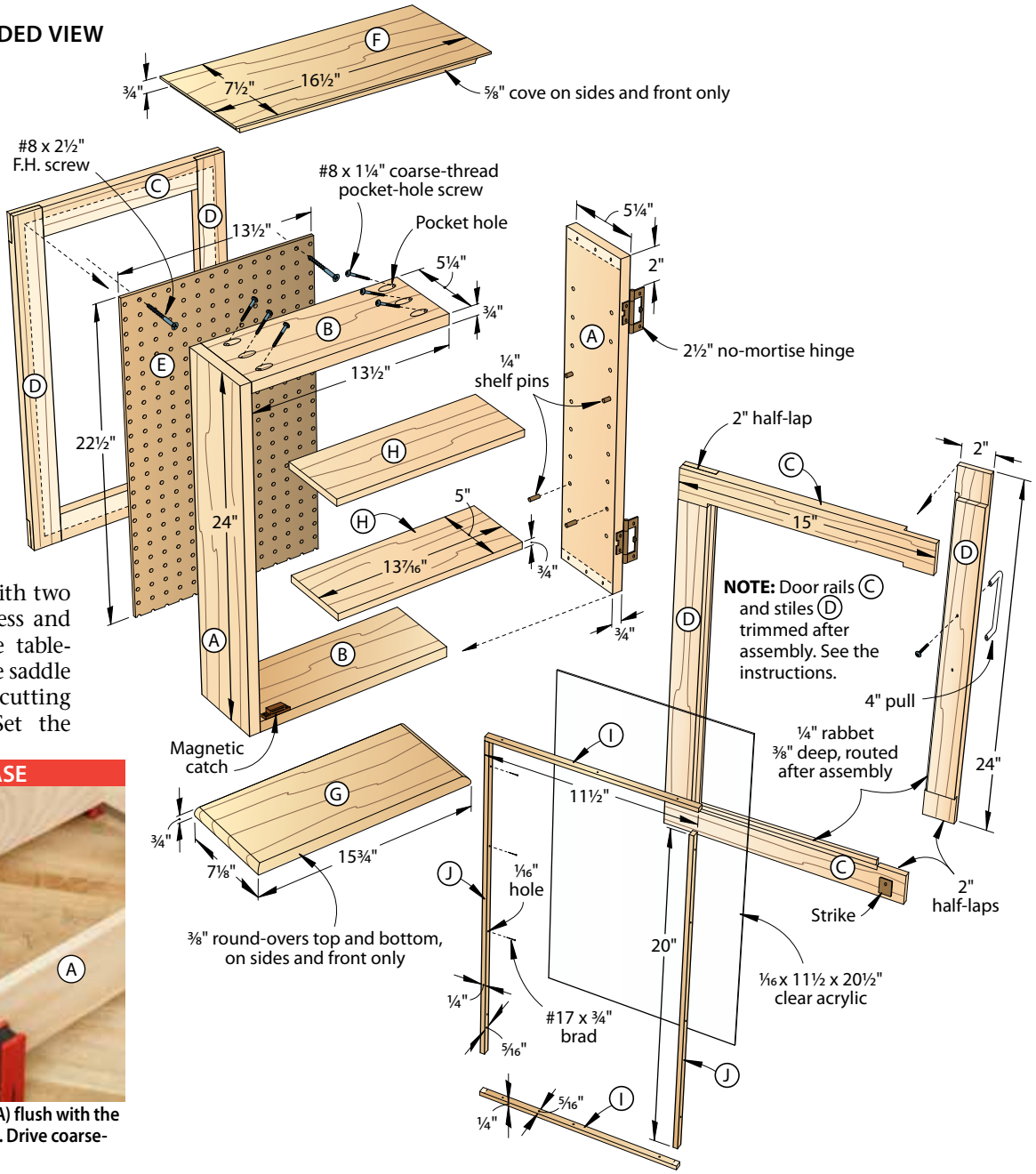
3 Cut the rails (C) and stiles (D) to size [**Drawing 2**] along with two scraps the same thickness and width for checking the table-saw setup later. Build the saddle jig shown on *page 16* for cutting the half-lap joinery. Set the

ASSEMBLE THE CARCASE



Position the ends of the sides (A) flush with the faces of the top and bottom (B). Drive coarse-thread pocket-hole screws.

2 EXPLODED VIEW



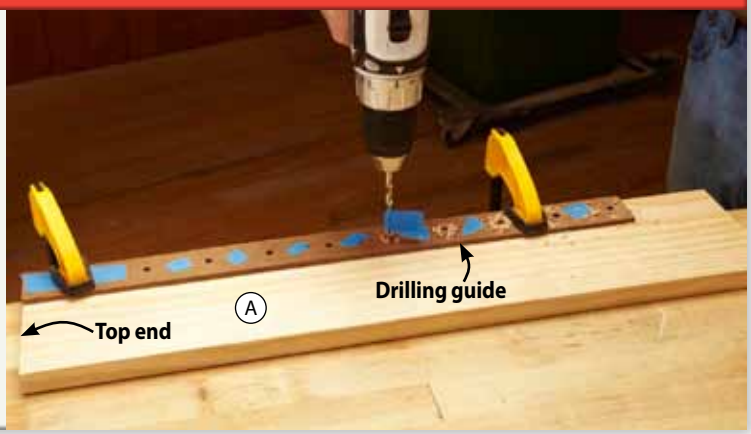
SHOP TIP

Superfast drilling guide

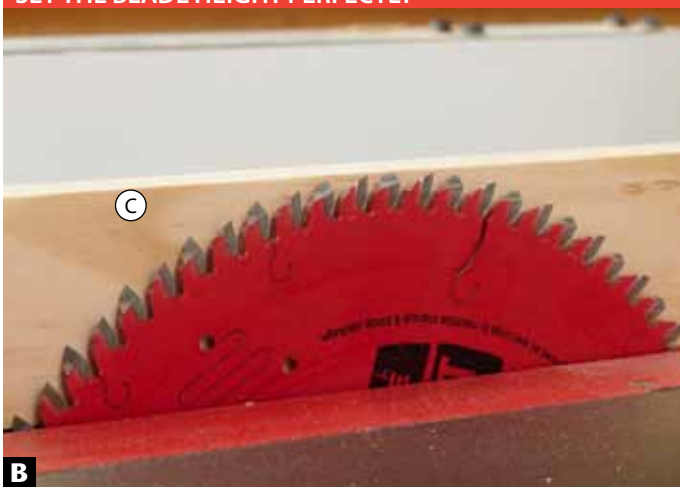
For a shelf to sit flat, all four shelf-pin holes must align perfectly. This guide makes that job simple.

Cut a 1½×21" strip of ¼" perforated hardboard, positioning the center of a hole 4" from one end and ¾" from an edge. Label this end the top. Place tape over the first three holes at the top end and every other hole after that [photo at *right*].

Chuck a ¼" bit in your drill and wrap a strip of tape around it ⅝" from the tip to mark the hole depth. Align the drilling guide with the edge and top end of a side (A); then drill through the exposed holes. Flip the guide over, align the edge with the opposite edge of the side, and drill the rear column of holes. When drilling the front column of holes in the opposite side, start with the taped face down.

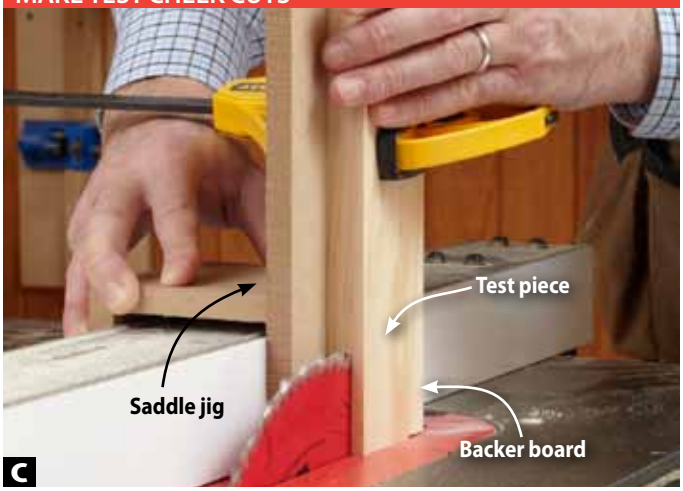


SET THE BLADE HEIGHT PERFECTLY



Raise the blade so the highest tooth matches the width of a rail (C). To get smooth cuts in pine, we used a crosscut blade; use a rip blade for hardwoods.

MAKE TEST CHEEK CUTS



Clamp each test piece to the jig, against the backer board. Slide the jig along the rip fence. Make a cut on each test piece.

IF THE CHEEKS ALIGN, IT'S FINE

With one test piece faceup and the other facedown on a flat surface, the cheeks of the test cuts should match up.

CUT SAFELY USING A STOPBLOCK

Butting the workpiece against a stopblock creates clearance for the waste to fall away when completing the half-lap joint.

blade height [**Photo B**]; then set the rip fence to position the face of the jig ⅜" from the inside face of the blade. Clamp each test piece in the jig in turn and make a cut [**Photo C**]. Flip one piece over and compare the two cuts [**Photo D**]. Make any needed adjustments to the rip-fence position; then cut the cheeks of the half-laps on each end of the rails and stiles.

4 Lower the saw blade to 5/16" above the table. Clamp a stopblock to the rip fence in front of the blade. Attach an extension to your miter gauge, place a rail (C) against it, and align the end of the cheek cut in the rail with the *outside* edge of the blade. Hold the rail against the extension, pull the miter gauge back, and lock the rip fence in place with the stopblock butted against the rail end. Complete the half-laps [**Photo E**].

5 Dry-fit the rails (C) and stiles (D) and check the assembly for square. Then apply glue and clamp the rails and stiles together [**Photo F**] to make two frames.

6 After the glue dries, remove the clamps and finish-sand the frames to 220 grit. Glue one frame (C/D) to the rear of the carcase (A/B). Plane or sand the frame if needed so it fits flush to the carcase on all edges. Cut a back (E) to fit inside the carcase [**Drawing 2**] and glue it to the rear frame.

Add a door, cap, and base

1 Retrieve the remaining frame (C/D) (the door) and rout a ¼" rabbet ⅜" deep around the inside of the back face [**Drawing 2**]. Then, square up the corners with a chisel.

2 Clamp the door (C/D) to the carcase (A–E) [**Photo G**] and drill the hinge screw holes in a side (A) and a stile (D).

Quick Tip! ***The door can swing either way. Mount the hinges on whichever side works best in your shop.***

Screw the hinges in place and test the swing and fit of the door, then remove the door. Drill the holes for the door pull [**Drawing 2**].

3 Cut the cap (F) and base (G) to size [**Drawing 2**]. Rout a ⅝" cove along the front and ends of the cap and ⅜" roundovers on both faces of the front and ends of the base. Finish-sand the cap and base to 220 grit; then glue them to the carcase (A–E), flush at the back and centered side-to-side. Retrieve the door (C/D) and trim the width of each rail (C) to create 1/16" clearance between the rails and the cap and base.

4 Cut the shelves (H) to size and finish-sand them. Cut the long and short glass stops (I, J) to size and sand them to 220 grit. Apply a finish to the shelves, glass stops, carcase (A–G), and door (C/D). (We wiped on three coats of satin-finish polyurethane.)

WELL-CUT HALF-LAPS SELF-SQUARE

Apply glue to one face of each half-lap and assemble the frames. Clamp each corner and check the assembly for square.

SPACERS CREATE THE PROPER GAP

Cut scraps the same thickness as the hinge barrel to help position the door. Drill the holes with a self-centering bit, *below*.

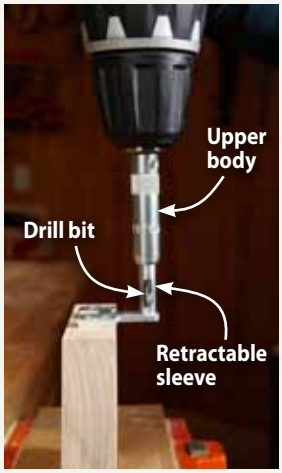
5 After the finish dries, cut a piece of 1/16"-thick acrylic to fit in the rabbet in the door. Place the acrylic in the door frame and the glass stops over it. Drill 1/16" holes through the stops and drive #17×3/4" brads to secure them. Install the hinges and door pull, and then mount the door on the carcase.

6 Install a magnetic catch on the bottom (B) and the strike on the lower door rail (C) [**Drawing 2**].

7 To hang the cabinet, position it on a wall and drive screws through the back (E) and top rear rail (C). Drive one screw into a wall stud, and use a hollow-wall hanger for the other screw.

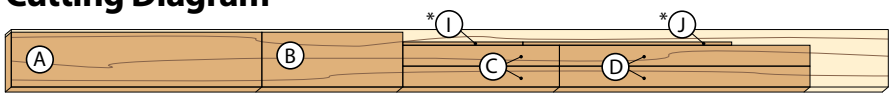
Center yourself

A self-centering drill bit makes it easy to install hinges without the worry of a misaligned screw hole forcing the hinge out of place. A retractable sleeve with a tapered tip surrounds the drill bit and automatically centers the bit in the hinge-leaf hole. A spring in the upper body holds the sleeve down until you press the bit down while drilling [*near right*]. This drives the bit forward while the sleeve slides up into the upper body [*far right*].

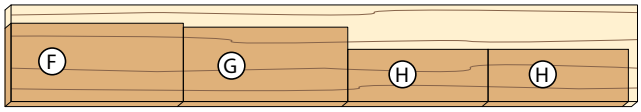


Produced by **Craig Ruegsegger** with **Kevin Boyle**
Project design: **Bill Krier**
Illustrations: **Lorna Johnson**

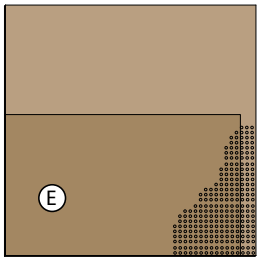
Cutting Diagram



¾ x 5½ x 84" Pine (3.5 bd. ft.) (2 needed) *Plane or resaw to the thickness listed in the Materials List.



¾ x 9¼ x 60" Pine (4.2 bd. ft.)



¼ x 24 x 24"
Perforated hardboard

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*Plans available for a small fee.

Materials List

Part		FINISHED SIZE T	W	L	Matl.	Qty.
A	sides	¾"	5¼"	24"	P	2
B	top/bottom	¾"	5¼"	13½"	P	2
C	rails	¾"	2"	15"	P	4
D	stiles	¾"	2"	24"	P	4
E	back	¼"	13½"	22½"	PHB	1
F	cap	¾"	7½"	16½"	P	1
G	base	¾"	7⅛"	15¾"	P	1
H	shelves	¾"	5"	13⅞"	P	2
I	short glass stops	¼"	5/16"	11½"	P	2
J	long glass stops	¼"	5/16"	20"	P	2

Materials key: P–pine, PHB–perforated hardboard.

Supplies: #8×2½" flathead screws (2), #8×1¼" coarse-thread pocket-hole screws (12), ¼" shelf pins (8), #17×¾" brads (14), 1/16×11½×20½" clear acrylic, magnetic cabinet catch and strike plate, 4" satin-finish door pull, 2½" no-mortise hinges (2).
Bits: ¼" drill bit, 9/64" self-centering drill bit, ⅝" cove, ⅜" round-over router bits.

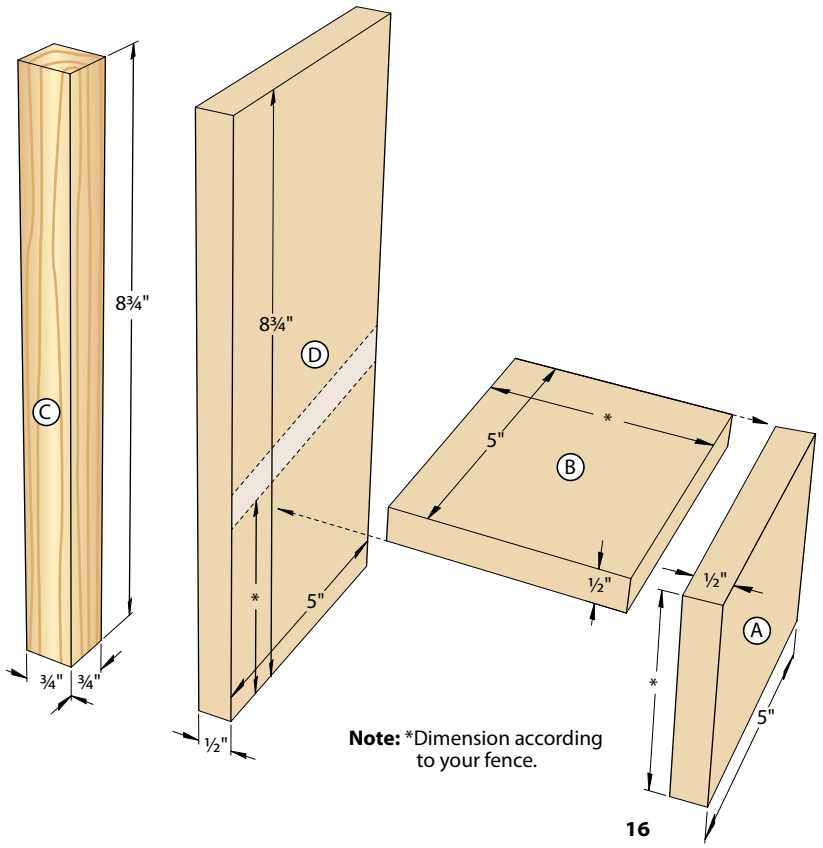
Supplies on Demand:
You can quickly and easily order the supplies and bits listed above at woodmagazine.com/214safety. Simply delete any supplies you already have on hand before checkout. Note: The acrylic sheet provided is 12x24".

Tall-Parts Tablesaw Saddle

This simple fence-riding jig makes safe and accurate work of cutting upright project parts. You can use it for the half-lap joints in the Satety-Gear Cabinet doors on *page 44*, and to machine tenons. We opted for MDF to minimize seasonal swelling and shrinking, which can make the jig pinch the rip fence or fit sloppily.

To build the jig, first size the outside face (A) to match your saw's fence height, plus ½"—the thickness of the top (B). (Add additional clearance if the top of your rip fence has bolt heads or other obstructions, as ours did.) Add 1/32" to the width of the rip fence to determine the width of the top. The scrapwood backer (C)—glued to the inside face (D)—keeps the workpiece standing square during machining and prevents blowout. Glue and screw MDF parts together.

To use, simply fit the saddle jig over your tablesaw's rip fence—backer to the rear. Clamp the workpiece snugly against the backer, adjust the fence location and blade height; then make the cut.



Note: *Dimension according to your fence.

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