Pine garden hutch

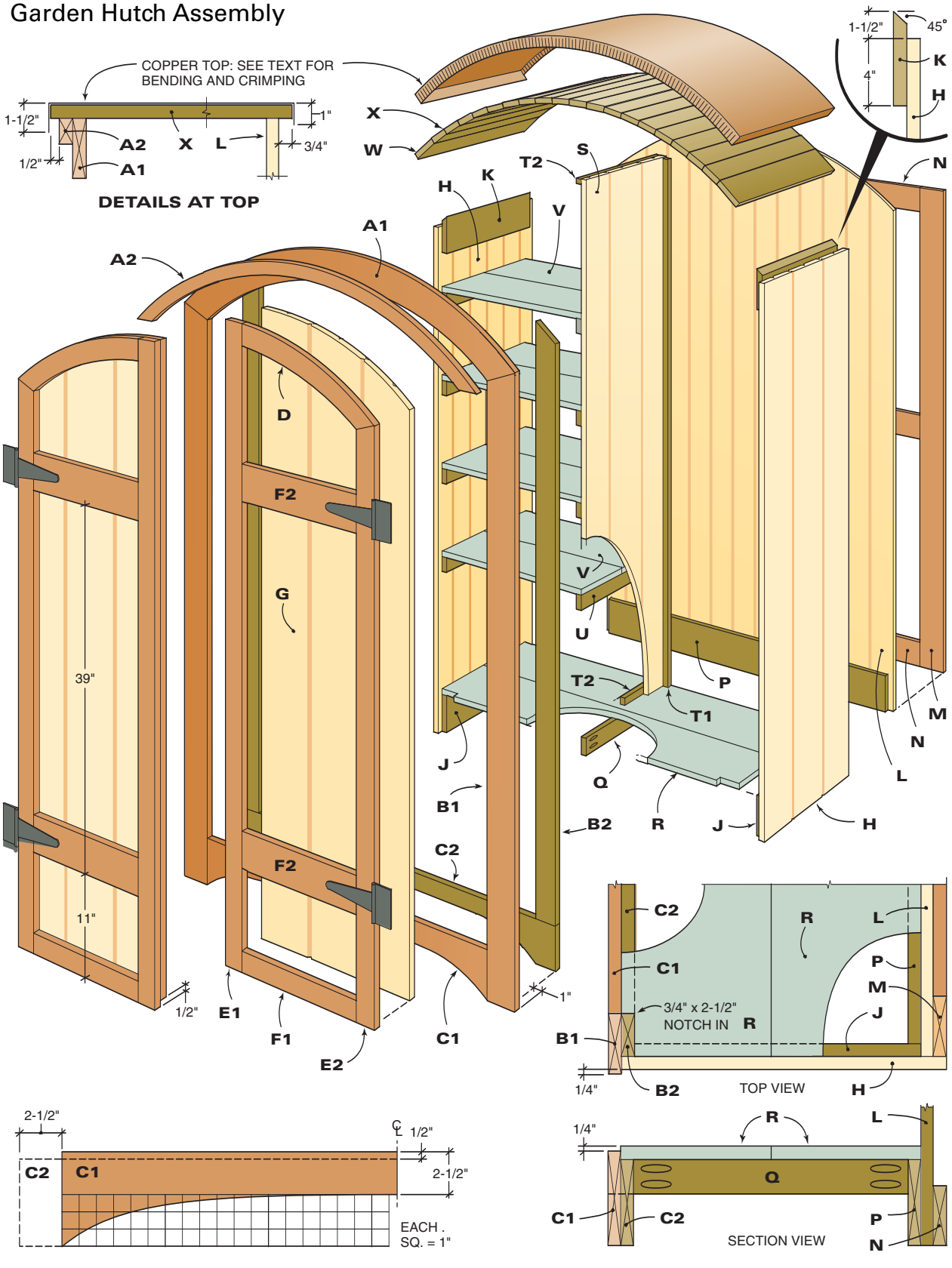
Keep all your gardening tools close at hand in this solid pine cabinet

Wouldn't it be nice to have all your gardening tools and supplies in one handy location? This pine hutch holds long-handled tools like shovels, rakes and hoes on one side, and smaller tools and supplies on shelves on the other side.

We designed this hutch for sturdy, functional storage. The copper roof keeps the interior dry, so you can put it outside. The panels that make up the front, sides, back and doors are tongue-and-groove 1x8s glued together for rigidity. The curved parts for the front frame, doors and trim are simply cut from 1x12 pine boards with a jigsaw. The rest of the cabinet is constructed of standard inexpensive knotty pine boards.

In this article, we'll walk you through the assembly process, including a slick pocket screw technique for joining the door and face frames. The rustic nature of this hutch makes it a good project for an ambitious woodworker, but it's not for beginners. You'll need experience working with

Figure A
Garden Hutch Assembly



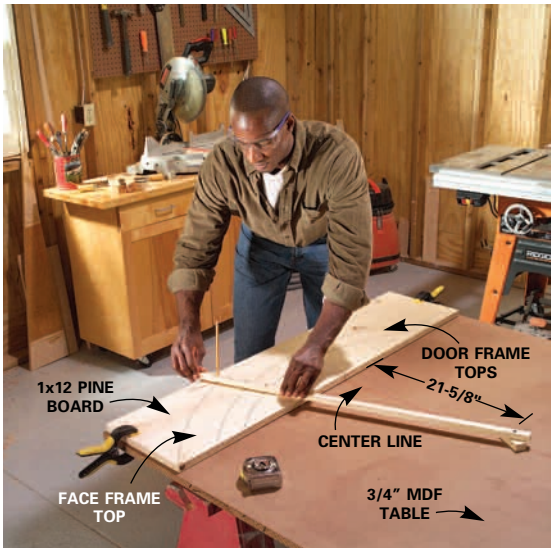
power tools, including a table saw, power miter saw and jigsaw. You'll also need a full set of basic hand tools as well as a pocket hole jig (**Photo 4**) to assemble the frames, and air nailers to assemble the cabinet. Allow a few full days to build the cabinet and several more hours to apply a durable finish.

It takes a surprising amount of pine to build this cabinet. You'll have to round up a pickup truck, a minivan or an SUV to get the lumber home. Be choosy when selecting the boards. Pick straight boards that look nice on both sides. You can get by with some defects on the boards that face the back of the cabinet, though. Buy a few extra boards so you'll have a better selection when you start building. We purchased all the lumber at our local home center for about $250. We found the copper sheet (about $45) at a sheet metal shop that specializes in gutters and exterior metal. See the Buyer's Guide on p. 102 for information on buying the copper and the door hardware.

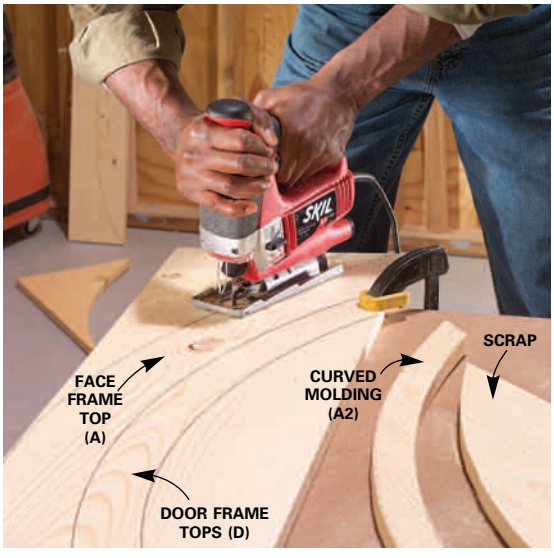
Start by building the face frame

Build the face frame (**Photo 3**) first and use it as a guide for assembling the doors and cutting the curve on the back panel.

A full sheet of 3/4-in. MDF or particleboard set on sawhorses makes a good workbench for this project. Set up for

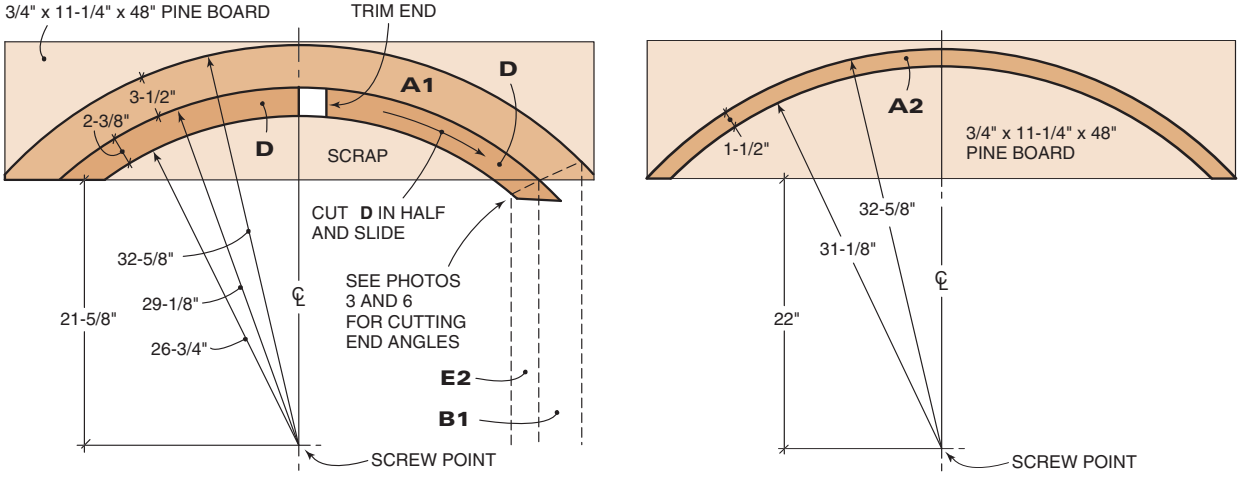


1 **Build a large compass by drilling holes in a 36-in. long stick using Figure B as a guide. Draw arcs for the face frame top (A1) and door frame tops (D) on a 4-ft. 1x12. On a second 4-ft. 1x12, draw arcs for the curved molding (A2) under the front roof (Figure B below).**

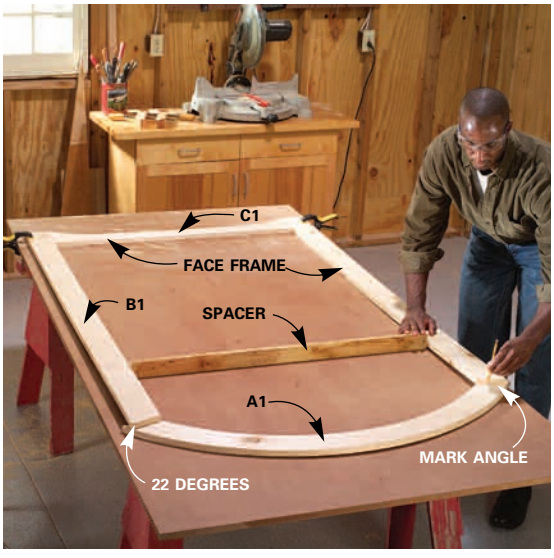


2 **Saw out the curved pieces with a jigsaw. Use the pattern on p. 94 to draw the curve on the face frame bottom (C1) and saw it out as well.**

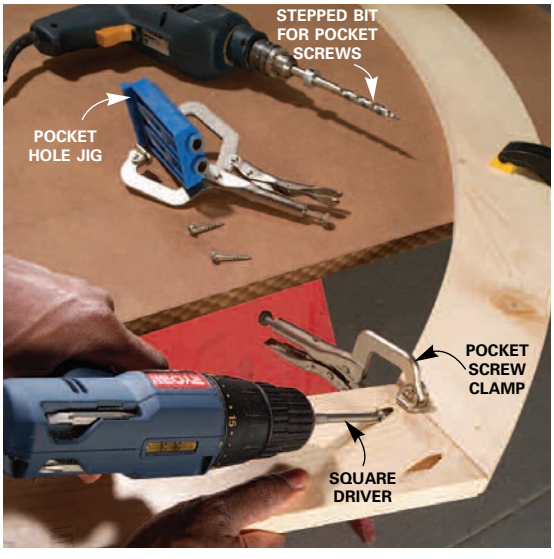
Figure B
Arc Patterns



3 **Cut the side pieces (B1) to length with 22-degree angles on the tops. Snug the face frame sides to the bottom (C1) and to a 39-in. long spacer and clamp them to the table. Scribe lines on the curved top (A1) and cut off the ends.**



4 **Drill pocket holes on the backside of the face frame pieces with a pocket hole jig. Glue the joints and connect them with pocket screws.**



5 **Cut backing cleats (B2 and C2) that overlap the face frame joints (Figure A, parts A1, B1 and C1). Predrill and screw them to the back of the face frame.**

marking the arcs (for the curved pieces) by drawing a center line parallel to the long edge of the sheet. Center a 4-ft. length of 1x12 on the line. Line up the top edge with the edge of the workbench and clamp it. Screw the point of the homemade compass in the center line 21-5/8 in. below the bottom edge of the 1x12 (**Photo 1**). Draw three arcs for the face frame top and door top pieces (**Figure B**, p. 95). Then replace the 1x12 with another 48-in. 1x12 and relocate the screw point (see **Figure B**). Draw two arcs to outline the 1-1/2 in. wide curved roof trim molding. Cut out the curves (**Photo 2**).

Even with careful jigsaw work, you'll have to sand the curves for a smooth arch. Use 80-grit sandpaper on a sanding block to even out the curve and remove saw marks. Then sand again with 100- and 120-grit paper. For the best-looking finish, sand all the boards before assembly. Use a random orbital sander or hand-sand with the grain of the wood.

When you're done cutting and sanding the curved pieces, rip the remaining face frame and door trim pieces to width and cut them to length according to **Figure A** and the Cutting List. Use the pattern on p. 94 to cut the curve on the 39-in. long 1x6 bottom frame piece (C1). Cut the same curve on the 44-in. long x 5-in. wide piece (C2). Use this for the bottom cleat (**Photo 5**). Assemble the face frames and door frames and back frame with pocket screws. (See "Using Tools," Feb. '03, p. 23. To order a copy, see p. 9.) **Photos 3 and 6** show how to mark for the angle cuts where the curved pieces join the straight ones.

You can use your miter box to cut angles on the ends of the curved pieces, but you'll have to steady them by supporting them with one of the scrap concave corners cut from the 1x12. Place the straight edge of the concave scrap against the fence and nestle the curves. Then sight along the blade and adjust the angle to cut along the line. Use this same technique for cutting the angles on the ends of the curved door frame tops (D) as shown in **Photo 6**.

After assembling the face frame, flip it

over and screw on the cleats (B2 and C2; **Photo 5**). The cleats overlap the joints to add strength and serve as a nailing surface for the floorboards and side panels.

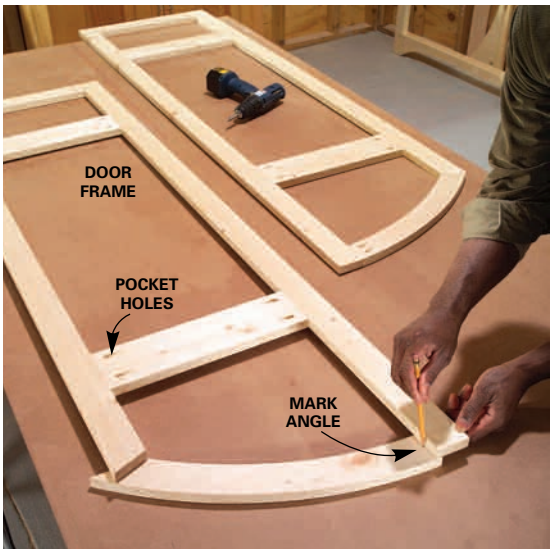
Take your time building the doors

Use the completed face frame as a guide to check the fit of the doors as you build them. The goal is to end up with a 1/8-in. space between the doors and the face frame and between the two doors. Sand or plane them as needed to create an even gap. Build and fit the door frames first. Then use them as a guide to cut out the tongue-and-groove boards that make up the door panels (**Photo 7**). Rip the groove off the first board in each door panel and then rip the last board to fit. Glue and nail the boards to the frames and then sand the edges flush. A belt sander works great for this task.

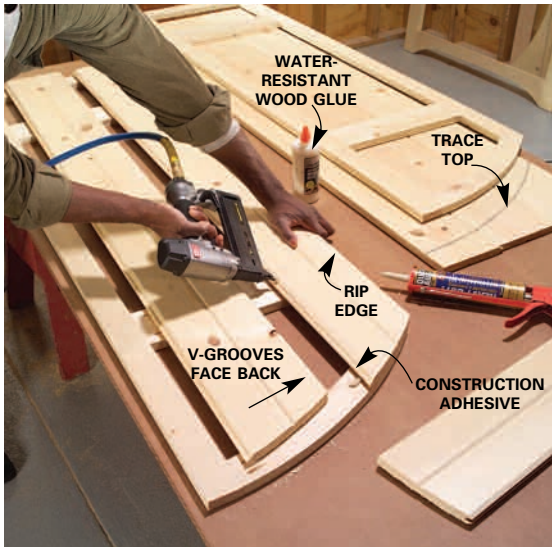
Next build the side and back panels

The panels for the sides and back are constructed just like the door panels. You'll have to rip the tongues and grooves from the outermost boards after figuring out how wide they should be (**Photo 8**). We can't give you the exact ripping widths because your boards will probably vary from the ones we used. The easiest approach is to temporarily assemble the tongue-and-groove boards, using clamps if needed to draw them tight together. Then mark the panel widths on them, making sure to center the tape so you'll remove an equal amount from the outside boards. Rip the outside boards to width. Then assemble the panels. Run a small bead of water-resistant wood glue along the tongue of each board before sliding it into the groove. Clean up any squeezed-out glue right away with a damp cloth. When the glue hardens, the panels will be rigid and strengthen the cabinet. Use construction adhesive to glue the panels to the frames and/or cleats.

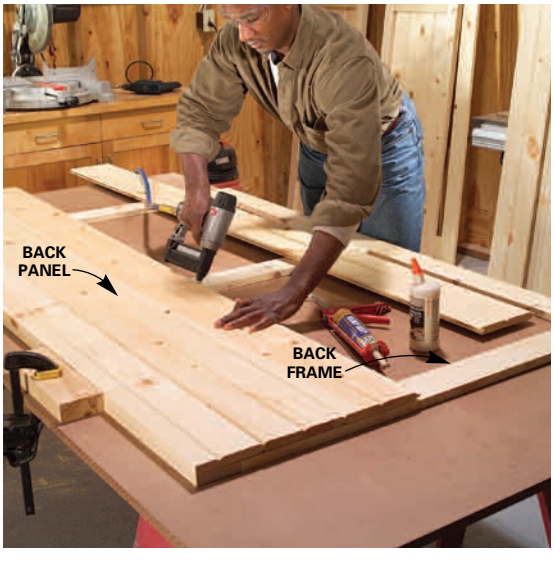
Here are a few special considerations for building the panels. First, use a framing square to make sure the panels are perfectly square before the glue dries. Cut the curve



6 **Assemble the door frame with pocket screws as shown. Then cut the curved top (D) in half and cut angles on the ends to fit. Attach them with pocket screws as well. Place the assembled door frames in the face frame to check the fit. Plane and sand as needed to allow a 1/8-in. space around and between the door frames.**



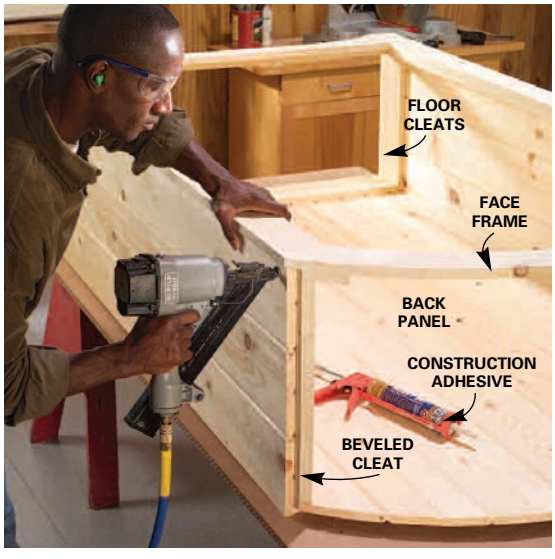
7 **Temporarily assemble the door panels and center the frames over them. Mark the bottom, sides and top. Rip the sides and cut the top curve. Cut the bottoms 1/4 in. shorter than marked. Then glue and nail the boards together with wood glue and fasten them to the frame with construction adhesive.**



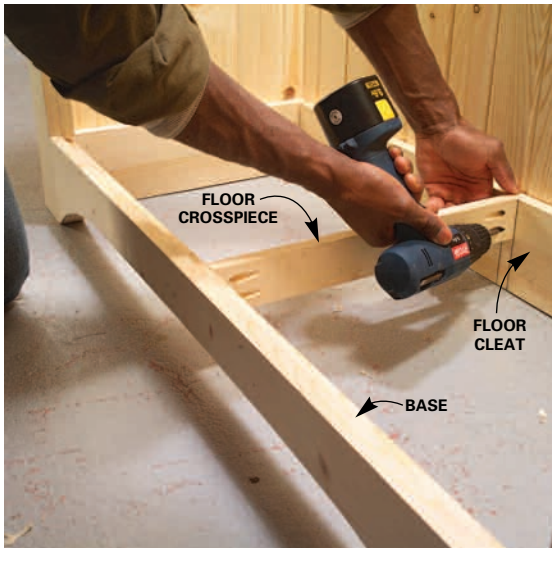
8 **Assemble the back frame (M and N) with pocket screws. Glue and nail tongue-and-groove boards to it to form the cabinet back. Rip the first and last boards to fit.**

9 **Center the face frame over the back panel and line up the bottoms. Mark the top curve. Saw it out with a jigsaw.**

10 **Assemble the side panels (Figure A). Then glue and nail the side panels to the back panel and the face frame.**



11 **Screw in the crosspiece (Q) with pocket screws to support the floorboards. Notch the first floorboard (R) to fit around the face frame and glue and nail it down. Cut the back floorboard to fit and nail it in.**



on the back panel after it's constructed (**Photo 9**). The beveled top cleat on the side panels (K) is a little tricky. Study **Photos 10 and 13** and **Figure A** to see its location and orientation.

Assemble the cabinet, then mount the doors

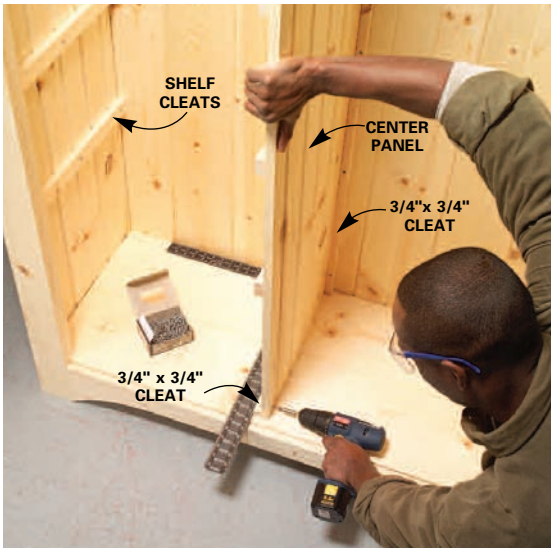
Glue and nail the completed panels and face frame together (**Photo 10**). Then add the floorboards and center panel (**Photo 12**). Center the curved molding (A2) and nail it to the top of the face frame. Finally, glue and nail the roof boards along the curve (**Photo 13**). Start with 1x4s aligned with the ends of the curved molding. Then complete the roof with 1x3s, working from both sides to the center. To make sure you're off to a square start, temporarily tack the 1x4 in place. Then set four of the 1x3s on the roof with their ends perfectly aligned and measure the front overhang to make sure it's consistent. If the overhang is getting larger or smaller, move the back end of the 1x4 down or up, respectively, to correct the problem.

When the cabinet is complete, tip it on its back to install the doors (**Photo 14**). You can use any strong, gate-type hinge. Just make sure to leave an even space around the perimeter of the doors and between them. Use a belt sander to trim tight spots.

Crimping tool simplifies curve of the metal roof

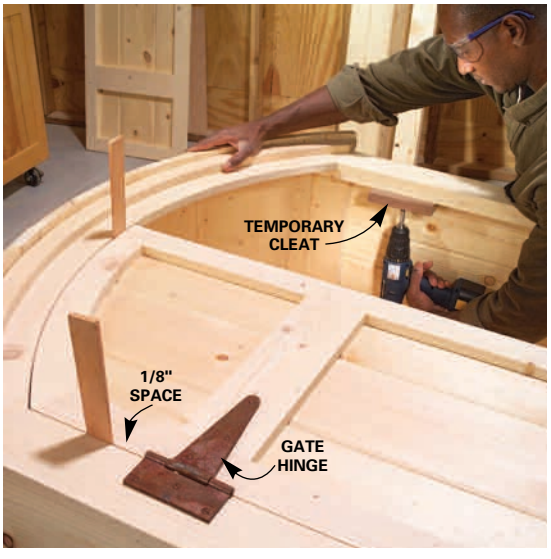
Start with a 24-in. x 60-in. piece of 16-oz. copper sheeting. Screw down a 2x4 frame on your bench top to provide clearance for bending down the edges. Start by snipping the corners of the copper with a tin snips (**Photo 15**). Then hand-bend the edges of the sheet down over the 2x4s (**Photo 15**). The last step is to crimp the edges with the crimping tool (see Buyer's Guide, p. 102) to curve the sheet (**Photo 16**). Keep the crimps parallel by aligning one of the crimping blades in the previously made crimp before squeezing it. Crimp about 12 in. on the front. Then crimp 24 in. on the back to even up the curve. Continue alternating until you reach the end. You can adjust the arch for an exact fit once the cop-

12 Glue and nail together the center divider and attach it to the bottom and back with cleats (T1 and T2) and screws. Attach the top to the ceiling boards after they're installed (Photo 13).



13 Nail the curved molding (A2) to the face frame. Then glue and nail the ceiling boards to the top of the cabinet. Start by overhanging the 1x4s as shown and work from both sides to the center with the 1x3 boards. Cut the last piece to fit.

14 Screw temporary cleats to the back of the face frame to support the doors. Set the doors in place and trim them if necessary to allow 1/8-in. clearance all around. Predrill for hinge screws and screw on the door hinges and hardware.

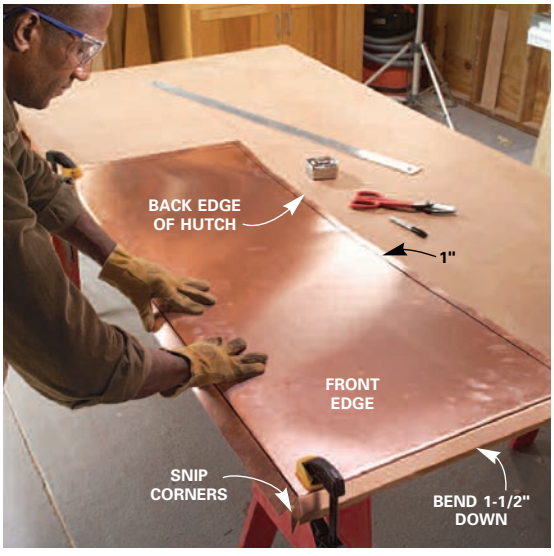


Cutting List

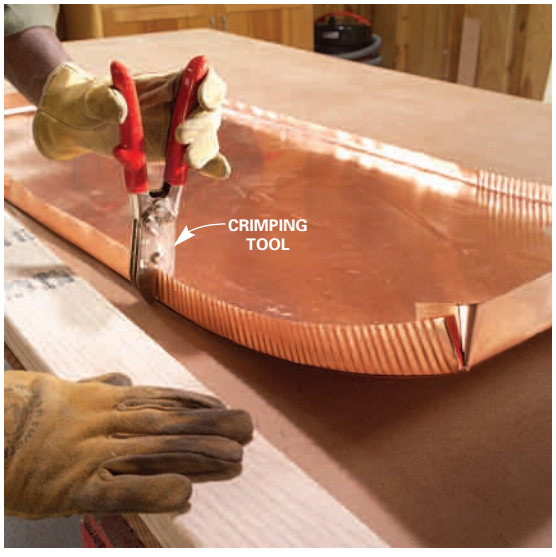
KEY	PCS.	SIZE & DESCRIPTION
Face frame		
A1, D	1	48" x 3/4" x 11-1/4" (curved frame and door tops)
A2	1	48" x 3/4" x 11-1/4" (curved molding; cut curve and ends)
B1	2	68" x 3/4" x 3-1/2" (sides)*
B2	2	66" x 3/4" x 2-1/2" (side cleats)*
C1	1	39" x 3/4" x 5-1/2" (bottom; cut curve to pattern)
C2	1	44" x 3/4" x 5" (bottom cleat; cut curve to pattern)
Doors		
D	2	Curved tops (cut from "door top" above)
E1	2	68-5/8" x 3/4" x 2-1/4" (door sides)*
E2	2	61" x 3/4" x 2-1/4" (door sides)*
F1	2	14-13/16" x 3/4" x 2-1/4" (door bottom rail); see Figure B
F2	4	14-13/16" x 3/4" x 4" (intermediate rails)
G	6	72" t&g 1x8 (door panels); cut to fit
Sides		
H	6	68-1/4" t&g 1x8 (19-1/2" x 68-1/4" side panels)
J	2	5" x 3/4" x 17-1/4" (bottom cleats)
K	2	5-1/2" x 3/4" x 17-1/4" (top cleats; bevel top to 45 degrees)
Back		
L	7	78" t&g 1x8 (44" x 78" back panel; cut top curve)
M	2	3-1/2" x 3/4" x 68" (frame sides)
N	3	3-1/2" x 3/4" x 37" (frame crosspiece)
P	1	5" x 3/4" x 42-1/2" (bottom cleat)
Interior Parts		
Q	1	2" x 3/4" x 16-1/2" (floor crosspiece)
R	2	9" x 3/4" x 44" (floorboards)
S	3	72" t&g 1x8 (17-1/4" x 72" center panel)
T1	1	3/4" x 3/4" x 72" (center panel cleats)
T2	2	3/4" x 3/4" x 17-1/4" (center panel cleats)
U	8	1-1/2" x 3/4" x 17-1/4" (shelf cleats)
V	8	8-5/8" x 3/4" x 21-5/8" (shelf boards)
W	3	3-1/2" x 3/4" x 21-1/2" (roof boards)
X	18	2-1/2" x 3/4" x 21-1/2" (roof boards)

* Cut top angles at 22 degrees

15 **Center the 24-in. wide copper sheet over the cabinet top with a 1-1/2 in. overhang in front. Mark along the back, front and ends with a permanent marker. Add 1-1/2 in. to the ends and cut the copper sheet to length with a tin snips. Snip the corners as shown. Bend the front, back and ends down over the 2x4 frame.**



16 **Crimp the front and back edges to form the curved top using a special sheet metal crimping tool. Alternate between the front and back until you reach the end.**



17 **Drill 1/16-in. pilot holes (through the copper only) about every 12 in. along the edges. Drive small copper or brass weatherstrip nails through the copper into the wood slats to hold the copper roofing in place.**

per is back on top of the cabinet. Hold off, however, on nailing the copper in place (**Photo 17**) until you've applied a finish to the hutch.

Since the hutch is pine and will rot quickly if left unprotected outdoors, we recommend applying a durable finish. We used oil stain and three coats of spar varnish. Be sure to seal the bottom edges thoroughly. If you're going to put the hutch in a wet location, install metal or plastic feet on all four corners to elevate it slightly. Setting the hutch on an uneven surface can cause the doors to bind or fit poorly. You may have to shim under the cabinet to level it.

Buyer's Guide

Malco C4 5 blade downspout crimper is available online from www.amazon.com ($20.99 plus shipping), or call Seven Corners Hardware (651) 224-4859 to order one by mail.

The Kreg Rocket R2 pocket hole system is available on-line at www.kregtool.com ($64.99), or call (800) 447-8638 to find a retailer near you.

The hinges (CK-02010642; $6.99) and primitive latch (CK-02006027; $3.89) are available from Van Dyke's Restorers, (800) 787-3355, www.vandykes.com.

The 16-oz. copper sheet is available from Sheridan Sheet Metal Co., (763) 537-3686. Call for the current price and shipping cost.

Shopping List

DESCRIPTION	QTY.
1x2 x 8' pine	3
1x3 x 8' pine	9
1x4 x 6' pine	4
1x4 x 8' pine	3
1x6 x 6' pine	4
1x10 x 8' pine	3
1x12 x 8' pine	1
1x8 x 6' t&g pine	15
1x8 x 8' t&g pine	7
8" gate hinges	4
Latch	1
Tubes of construction adhesive	2
Magnetic catches	4
Water-resistant wood glue	
1-1/4" finish nails	
Copper or brass weatherstrip nails	
Pocket screws and jig	
2' x 5' 16-oz. copper sheet	