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Bill Krier
Editor in Chief, WOOD magazine

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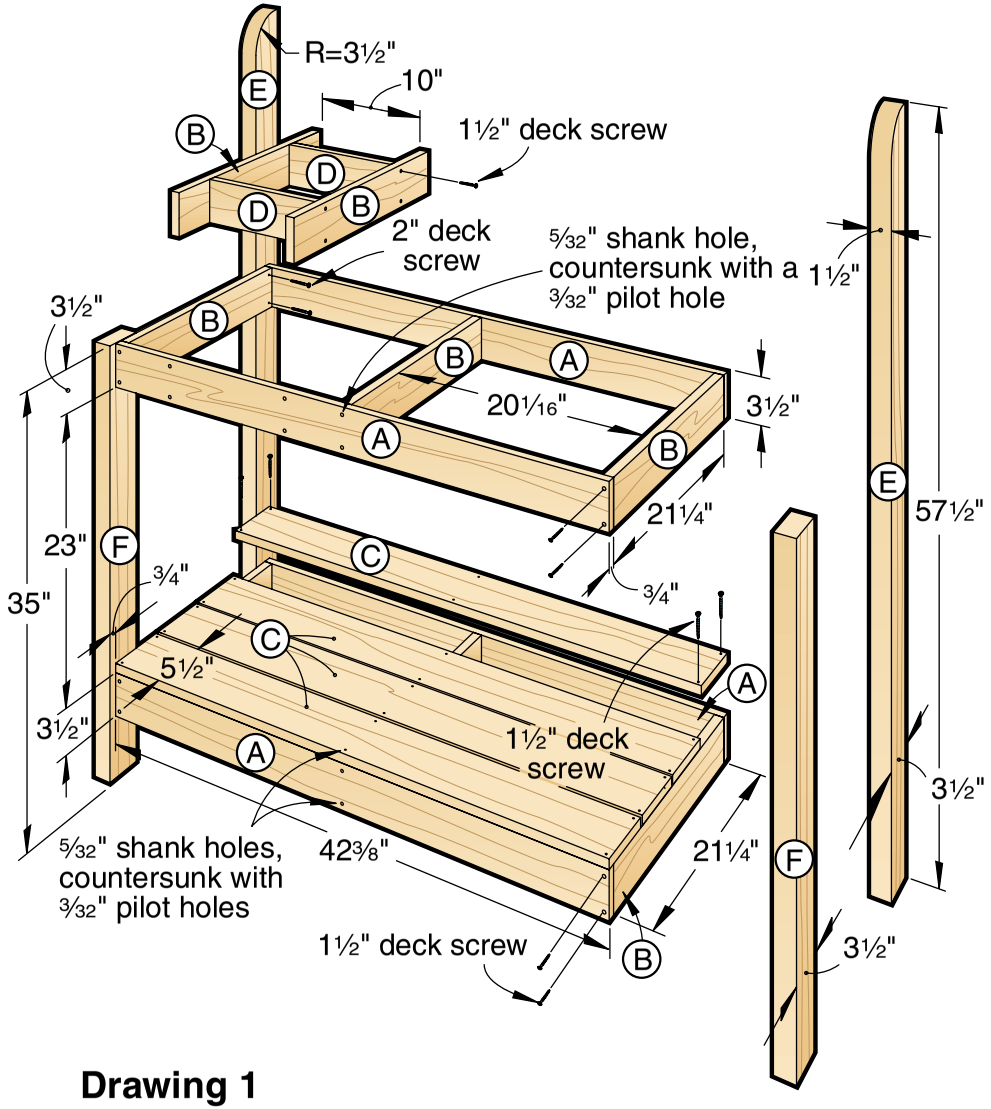
Potting Bench

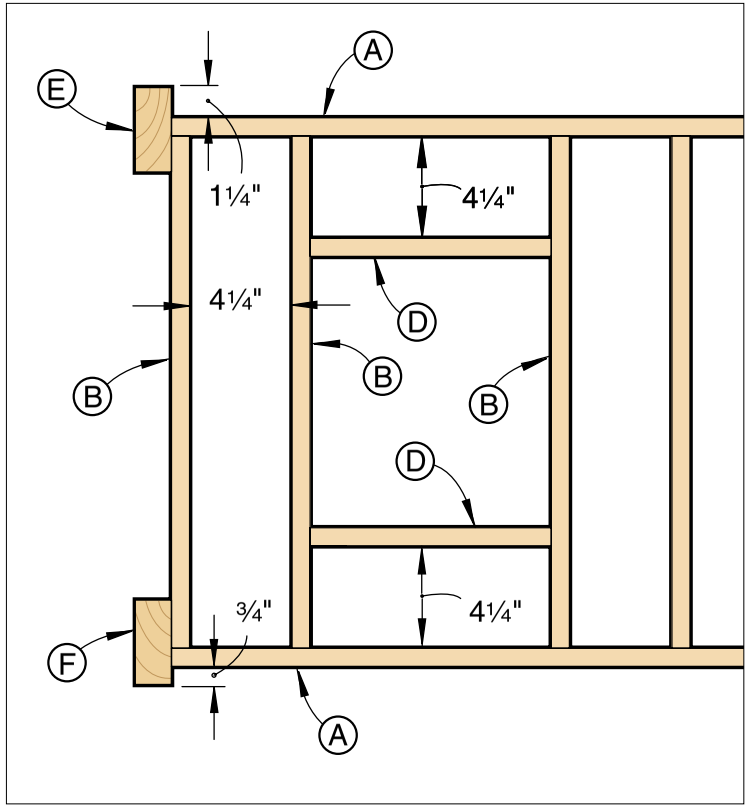
Before designing this project, we turned to the horticulture experts at our sister publication, Better Homes and Gardens® magazine. They told us what gardener-friendly features to build into the potting bench. A tough top and easy waste disposal were priorities, so we incorporated a galvanized-metal work surface with a handy waste disposal opening over a plastic garbage can. We also added plastic storage bins concealed by doors, a tool rack and overhead shelf, plus wheels and a handle to make the whole setup mobile.

We built our bench from rot-resistant cypress, purchasing random-width 4/4 and 8/4 boards and cutting them to the sizes listed. We chose cypress because we found clear, defect-free boards at our local lumber supplier for about the same price as western red cedar. But, to give you options, we sized the parts so you can build the bench from cedar or pressure-treated lumber available in standard dimensional sizes (1× and 2× stock).



Drawing 1
CARCASE ASSEMBLY

Drawing 1a
CARCASE DETAIL TOP VIEW



materials list

Part	FINISHED SIZE T	W	L	Matl.	Qty.
A frame fronts/backs	¾"	3½"	42⅜"	C	4
B frame cross members	¾"	3½"	21¼"	C	8
C frame decking	¾"	5½"	42⅜"	C	4
D supports	¾"	3½"	10"	C	2
E back legs	1½"	3½"	57½"	C	2
F front legs	1½"	3½"	35"	C	2
G back	½"	42⅜"	30"	P	1
H end boards	¾"	3½"	30"	C	10
I bottom skirt	¾"	5½"	42⅜"	C	1
J corner blocks	¾"	¾"	5"	C	2
K divider panel	½"	21¼"	25¾"	P	1
L cleats	¾"	¾"	21¼"	C	4
M drawer guides	¾"	2⅜"	21¼"	C	8
N top	½"	24"	45⅜"	P	1
O side skirts	¾"	3½"	20¾"	C	2
P back skirt	¾"	7¼"	42⅜"	C	1
Q shelf back	¾"	7¼"	42⅜"	C	1
R shelf boards	¾"	5½"	45⅜"	C	2
S shelf supports	¾"	3½"	10¾"	C	3
T front filler	¾"	3"	42⅜"	C	1

Part	FINISHED SIZE T	W	L	Matl.	Qty.
U end fillers	¾"	3"	17¾"	C	2
V front/back trim	¾"	3½"	56"	C	2
W end trim	¾"	3½"	24¾"	C	2
X handle	1¼"	1¼"	25½"	F	1
Y door boards	¾"	3½"	26¼"	C	12
Z door battens	¾"	3½"	19½"	C	4
AA tool rack	¾"	3½"	18"	C	1
BB mounting plate	¾"	3½"	17"	C	1

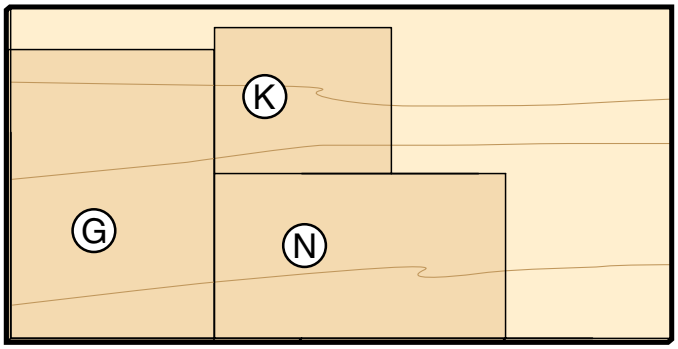
Materials Key: C–cypress; P–plywood, C/D exterior grade; F–fir closet pole.

Supplies: 1" deck screws; 1¼" deck screws; 1½" deck screws; 2" deck screws; tube of clear silicone caulk; 28-gauge galvanized steel 26x47⅜"; 20" plastic trash can; 7-gal. plastic bins (2) (Rubbermaid no. 2221); exterior glue; exterior finish.

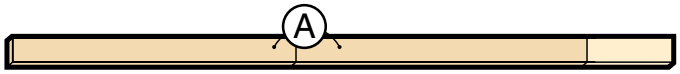
Buying Guide

Hardware: 6"-dia. wide metal-rimmed wheels with rubber tires, 1⅜" wide with ½" axle bore (2); 4" T-hinges (black) with screws (4); double roller catches (2); 6" black door pulls (2); ½" lag screws 4" long (4); ½" flat washers (4). Order kit WDPB2, $41.99 from Miller's Hardware Inc., 1300 M.L. King Jr. Pkwy, Des Moines, IA 50314, or call 515/283-1724.

CUTTING DIAGRAM



½ x 48 x 96" Exterior plywood

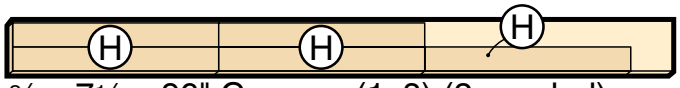


¾ x 3½ x 96" Cypress (1x4) (2 needed)

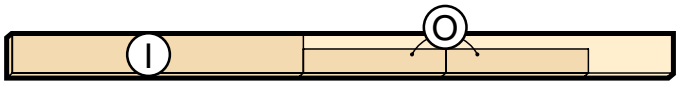
¾ x 3½ x 96" Cypress (1x4) (2 needed)

¾ x 5½ x 96" Cypress (1x6) (2 needed)

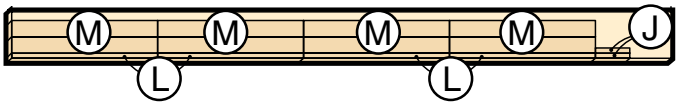
1½ x 3½ x 96" Cypress (2x4) (2 needed)



¾ x 7¼ x 96" Cypress (1x8) (2 needed)

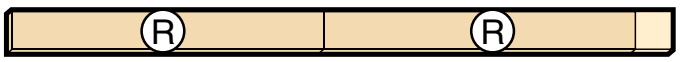


¾ x 5½ x 96" Cypress (1x6)



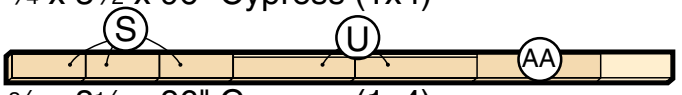
¾ x 7¼ x 96" Cypress (1x6)

¾ x 7¼ x 96" Cypress (1x8)



¾ x 5½ x 96" Cypress (1x6)

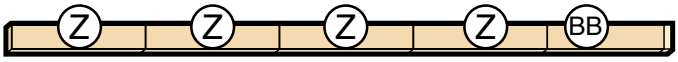
¾ x 3½ x 96" Cypress (1x4)



¾ x 3½ x 96" Cypress (1x4)

¾ x 3½ x 96" Cypress (1x4) (2 needed)

¾ x 3½ x 96" Cypress (1x4) (4 needed)



¾ x 3½ x 96" Cypress (1x4)

1¼"-dia. x 36" Fir closet pole

Begin by building two frame assemblies

1 Cut the four frame fronts/backs (A) and the eight frame cross members (B) to the lengths listed in the Materials List and shown on **Drawing 1.**

Note: *If you use dimensional lumber, crosscut these pieces to length. Otherwise, you'll need to rip pieces to width, as well. To avoid splitting the lumber, drill holes for all screws.*

2 Form two frame assemblies (A/B) by driving 1½" deck screws through the frame fronts/backs (A) into the cross members (B), where shown in **Drawing 1.** Set aside one of the assemblies and the two extra frame cross members for now.

3 Cut four pieces of frame decking (C) to the size shown in the Materials List. Then align two pieces of the decking (C) with the front and back edges and the ends of one frame assembly (A/B), and screw the pieces in place. Add the remaining two pieces of frame decking with equal gaps between their edges. This assembly (A/B/C) will become the lower carcase frame.

4 The upper carcase frame gets additional bracing around the waste disposal opening. Cut two supports (D) to size. Screw the two remaining frame cross members (B) to the supports, where shown in **Drawing 1a**. Don't mount this assembly (B/D) to the upper frame (A/B) yet.

Make some sturdy legs

1 Mark the length of the back legs (E), and use a compass to lay out the 3½" radius at the upper end of each leg, where shown in **Drawing 1**. Cut the radius on each leg using a jigsaw, and then sand to the line. Then cut the front legs (F) to length.

2 Mark the vertical and horizontal location of the upper and lower frame assemblies on the legs, where shown on **Drawing 1**. Referring to **Drawing 1a**, you'll see that the edge of the back legs extends 1¼" past the rear of the frames and that the front legs are ¾" forward of the frames.

Drill countersunk shank and pilot holes, then drive 2" deck screws through the frame assemblies into the legs.

3 To make assembly easier, cut two scrapwood spacers to ¾×1¼×36". Lay the spacers on edge on the floor so they support the upper and lower frames (A/B). Align frames with the marks on the legs, and clamp them into place. Attach the legs as shown in **Photo A** to make the carcase assembly.

Add the back, ends, and bottom skirt

1 Cut the plywood back (G) to size. Place the carcase assembly facedown on the floor, and align the edge of the back (G) with the edge of the frame back (A) in the upper frame assembly. Using 1" deck screws spaced about 6" apart, attach the back to the frame assemblies, where shown in **Drawing 2**.

2 Cut the 10 end boards (H) to size, then ease their outer edges with sandpaper or a ⅛" round-over bit. Align the end boards' upper ends with the top of the upper frame assembly (A/B), and leave equal spaces between them. Attach the end boards, as shown in **Drawing 2** and **Photo B**. Rest the carcase on its end to drive screws into the lower ends.

3 Attach the support assembly (B/D) you set aside earlier to the upper frame, where shown in **Drawing 1a**.

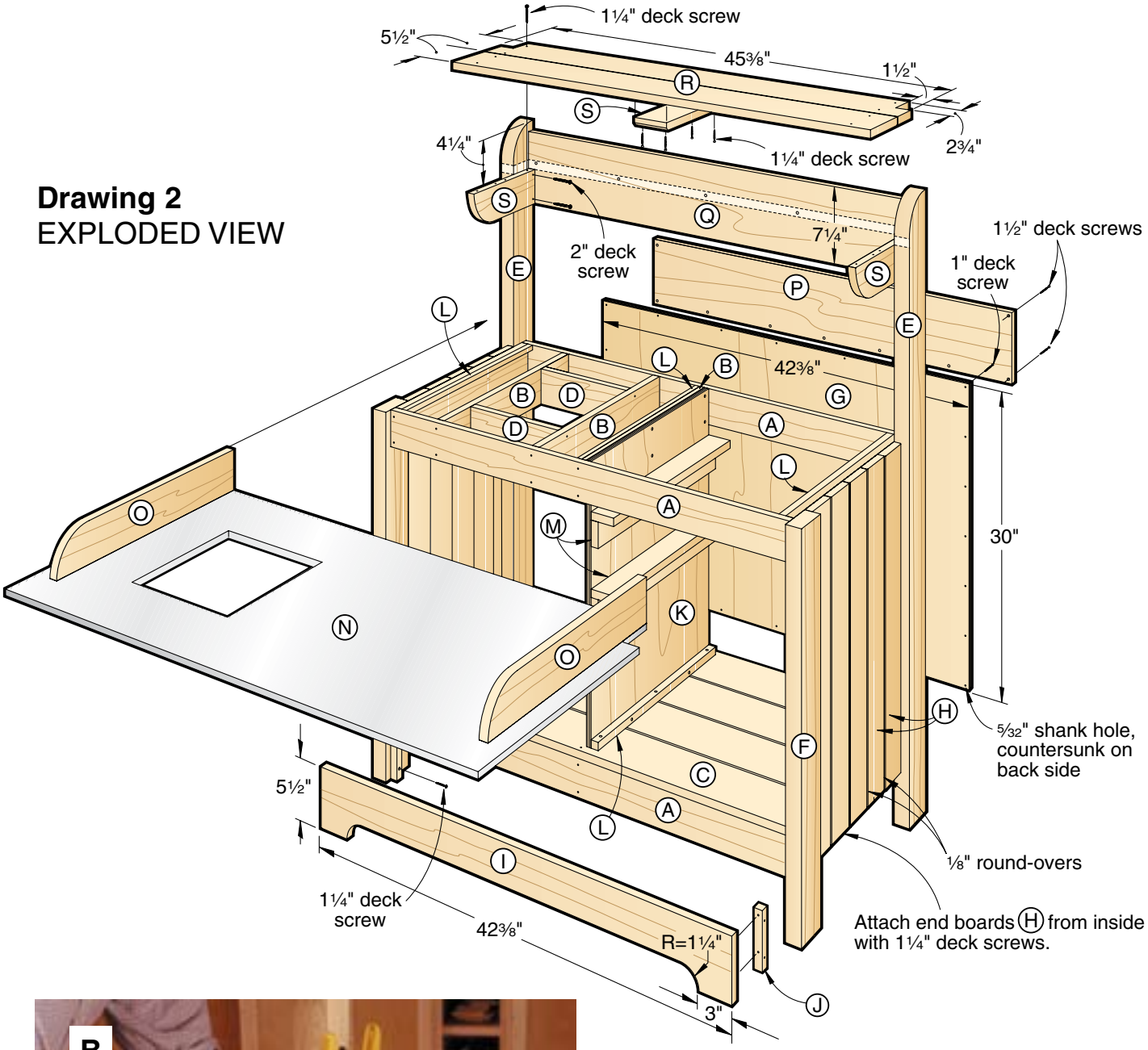
4 Cut the bottom skirt (I) to size, and mark the radius near each end, where shown on **Drawing 2.** Connect the tops of the radii with a straight line. Cut the opening, staying just to the waste side of the line, then sand it smooth.

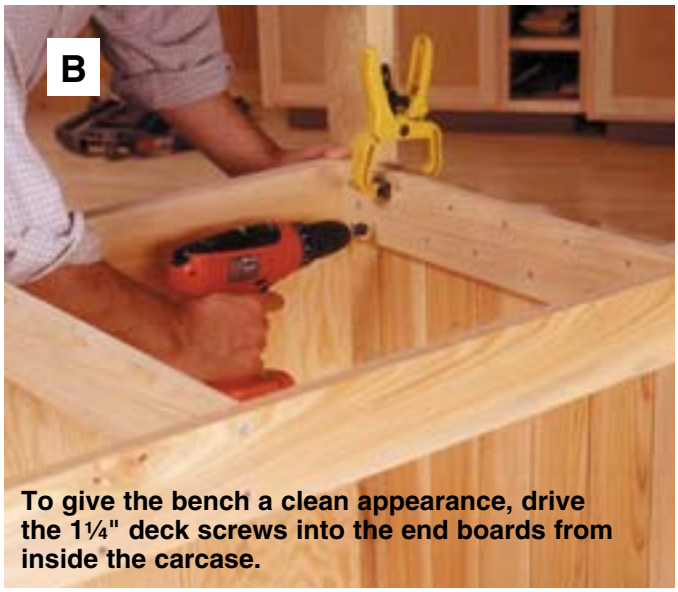
5 Cut the two corner blocks (J) to size. Screw the corner blocks to the front legs (F) where shown. Next, screw the bottom skirt (I) to the corner blocks.

Next, the divider panel and drawer guides

1 Cut the plywood divider panel (K) to size. Rip and crosscut the

Drawing 2
EXPLODED VIEW





To give the bench a clean appearance, drive the 1¼" deck screws into the end boards from inside the carcase.

four cleats (L). Screw three of the cleats to the top frame assembly (A/B) where shown on **Drawing 2**. (They provide a mounting surface for the top assembly that you'll add later.) Now drill countersunk holes for 1¼" deck screws through one of the cleats, and mount it flush with the edges and bottom end of the divider panel (K), where shown in **Drawing 3**.

2 Cut the eight drawer guides (M). Glue pairs of the drawer guides together to make four L-shaped drawer guide assemblies, as shown in **Drawing 3**. Screw two drawer guide assemblies to the divider panel (K).

3 Place the divider panel assembly (K/L/M) inside the carcase and screw it into the center frame cross member (B), where shown in **Drawing 2**. Use a framing square to position the divider on the frame decking (C), and drive screws through the cleat (L) into

the decking. Now fasten the two remaining drawer guide assemblies inside the carcase, aligning them with the drawer guide assemblies on the divider.

Craft a metal-clad top

1 Cut the plywood top (N) to size, and notch the back corners, where shown on **Drawing 4**. Test-fit the top onto the carcase assembly, and use a pencil to trace the perimeter of the supports (B/D) onto the underside of the top. Drill ½" holes near the corners of the layout, and cut the opening with a jigsaw.

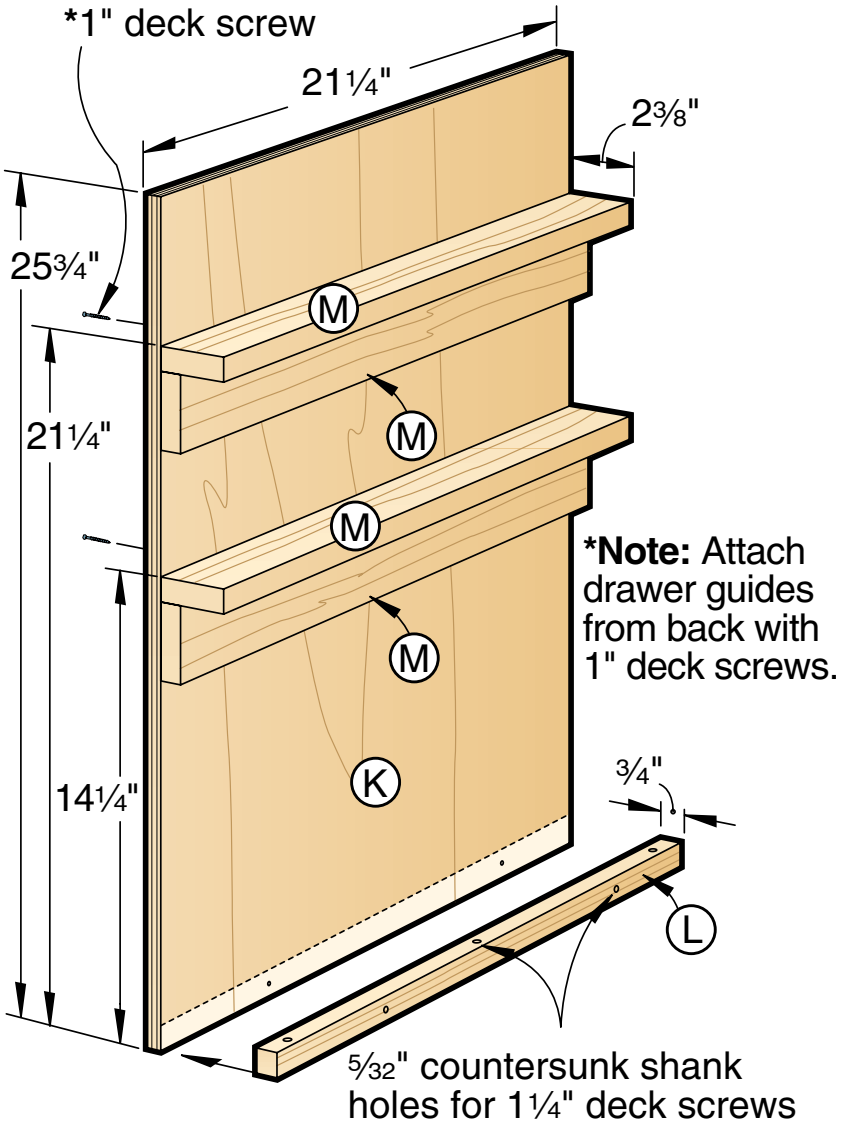
2 Go to a local heating contractor or sheet-metal supplier, and purchase a sheet of 28-gauge galvanized steel cut to 26×47⅜". This size is 2" larger than the top (N) to allow 1" of metal to wrap around the edges and ends of the top.

3 Lay the sheet of steel facedown on your workbench, and center the top (N) on it. Mark the notches for the back legs (E) and the perimeter of the waste opening using a permanent marker. Lift off the plywood top, and set it aside. Draw another rectangle on the steel whose sides are 1" inside the perimeter of the opening you just marked.

Now drill ½" holes within the inner rectangle, where shown in **Photo C**, to serve as starting points for your tin snips. Drill ⅛" holes in the corners of the outer rectangle. Wear heavy gloves as you cut the perimeter of the inner rectangle, and make diagonal cuts from each corner of the inner rectangle to the ⅛" hole. Also cut notches for the back legs, and small notches at the front corners that allow the metal to bend around the plywood.

4 Place the steel sheet facedown on your workbench, and apply a bead of clear silicone caulk to the metal near the perimeter of the hole and the cutouts for the rear legs, and put small dots of silicone in a 6" grid pattern in the field of the metal. (Don't use all of the caulk; you'll need some later.) Position the top (N) on the metal,

Drawing 3
DIVIDER PANEL



as shown in **Photo D**, and let the silicone cure.

5 Using a dead-blow mallet and wood scraps, wrap the metal around the edges of the waste opening and the perimeter of the top, as shown in **Photo E**.

6 Cut the side skirts (O) to the length shown in **Drawing 4**, then cut the radius at one end of each. Drive screws through the top (N) from underneath to attach the side skirts.

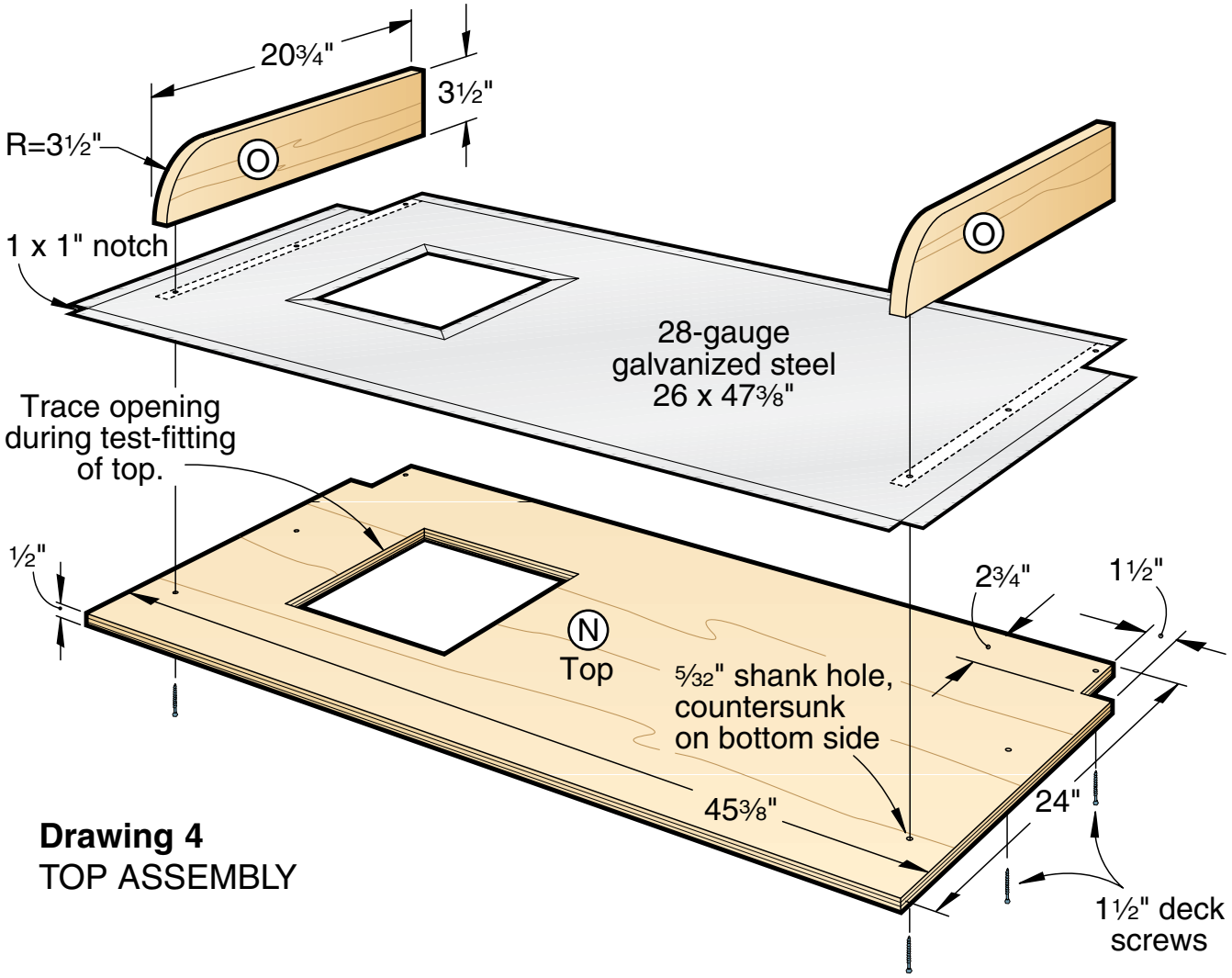
7 Wipe a thin layer of silicone onto the notches for the back legs in the top (N) to seal the edges of the plywood. Then position the top on the carcase assembly, and drive 1¼" screws up through the cleats (L) and into the top.

8 Crosscut the back skirt (P) to size. Then align its top edge with the side skirts (O), where shown in **Drawing 2**, and screw the back skirt in place.

Add a convenient shelf

1 Cut the shelf back (Q) and the two shelf boards (R) to size. Notch both ends of one shelf board, where shown in **Drawing 2**.

2 Cut the three shelf supports (S) to size. One support has square ends and the other two have a

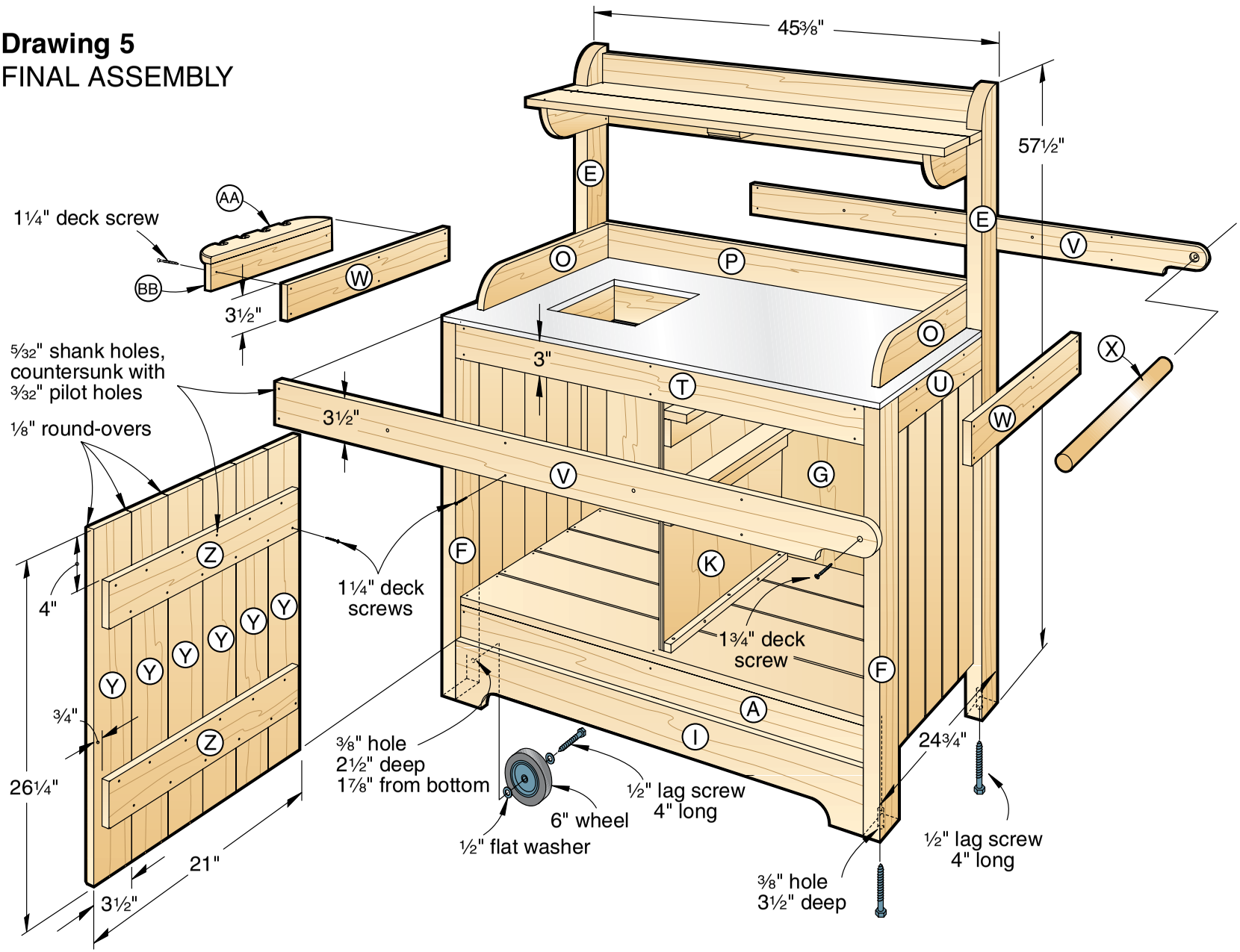


Drawing 4
TOP ASSEMBLY

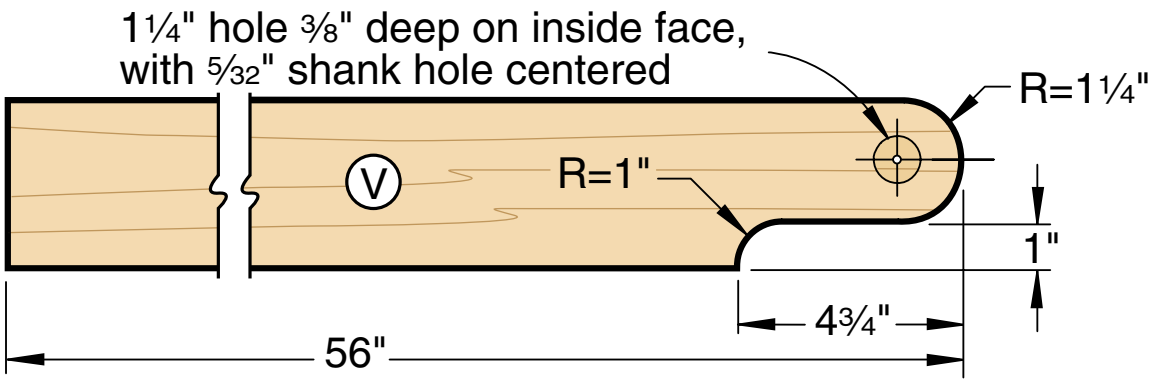
Support the metal top on a sheet of scrap plywood as you drill the holes at the corners of the rectangles.

Align the plywood top and sheet metal, then place weights on the top. Let the silicone cure before bending the metal.

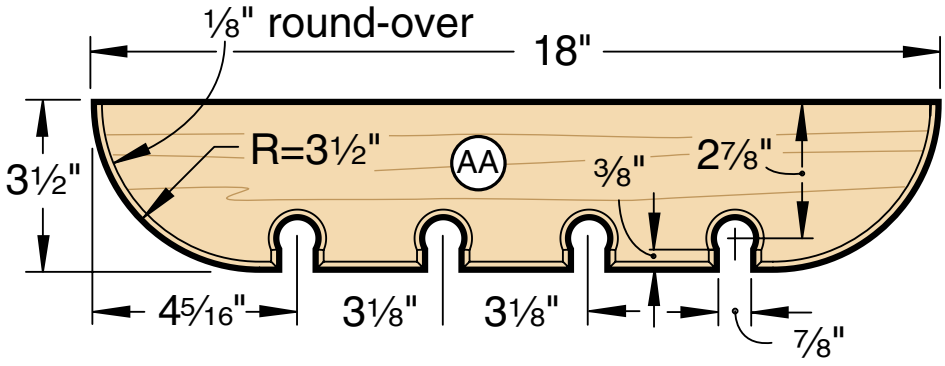
Drawing 5
FINAL ASSEMBLY



Drawing 5a
FRONT/BACK TRIM DETAIL



Drawing 5b
TOOL RACK DETAIL



Wrap the metal around the perimeter, and then form the cut-out opening. The hardwood scrap keeps the metal from rising.

radiused end that you cut with a jigsaw.

3 Screw the two radiused-end shelf supports (S) to the back legs (E), where shown on **Drawing 2**. Now attach the shelf boards (R) to the two outer shelf supports, then attach the remaining shelf support to the shelf boards where shown.

4 Align the lower edge of the shelf back (Q) with the lower edges of the radiused shelf supports (S). Then screw the shelf back into the rear shelf board (R) and the radiused shelf supports (S).

Fasten the fillers, then the trim

1 Cut the front filler (T) and the end fillers (U) to size. Fasten these parts where shown in **Drawing 5**.

2 Cut the front/back trim (V) to length. Then lay out and cut the shaped ends on both pieces, where shown in **Drawing 5a**, and bore the stopped holes that will receive the handle (X). Cut the end trim (W) to length. Now attach both pieces of end trim and the front trim.

3 Cut a length of 1¼"-dia. fir closet pole to length for the handle (X). Position the handle into the holes in the front/back trim (V), and screw the back trim into place with the handle captured between the front and back trim.

The doors make it an open-and-shut case

1 Crosscut twelve door boards (Y) and four door battens (Z) to size. Ease the edges on the the door boards using your router and an ⅛" round-over bit. Butt six of the door boards edge to edge, facedown on your workbench. Square up the boards, and attach the door battens (Z), where shown on **Drawing 5**. Repeat for the other door.

2 Mount the hinges to the carcase, referring to the **Opening Photo** to see their locations. The rectangular plates of the T-hinges are spaced 2¼" from the bottom skirt (I) and front trim (V). Then attach the doors, leaving approximately a ⅛" gap between them. Mount each door pull centered on the width of the innermost door boards (Y) 2½" from the top of the door. To hold the doors closed, we mounted roller catches inside the doors and carcase.

You're ready for the finishing touches

1 Lay the potting bench on its back, and drill ⅜" holes into the inner edges of the left-hand front leg (F) and back leg (E), where shown on **Drawing 5**. Place the washers and wheels onto the lag screws, and drive the screws into the legs, leaving enough clearance for the wheels to spin freely.

2 Drill holes into the ends of the other two legs, where shown on **Drawing 5**. Drive lag bolts into these holes to act as leveling feet and to prevent moisture from wicking into the ends of the legs.

3 Cut the tool rack (AA) to size, then shape the radiused ends and the hole centerpoints, where dimensioned in **Drawing 5b**. Bore the holes using your drill press, and cut the opening from each hole to the edge. Sand the edges smooth, then rout a ⅛" round-over on the edges of the tool rack.

4 Crosscut the mounting plate (BB), and glue and clamp it to the tool rack, forming the L-shaped assembly shown on **Drawing 5**. When the glue dries, screw the assembly to the end of the potting bench.

5 Before applying finish, use sandpaper to ease the remaining exposed edges on any bench parts you may come in contact with. Apply your choice of finish to the potting bench. We used two coats of an exterior oil finish. To help prevent water from wicking under the metal top, run a bead of silicone around the seams where metal meets wood.

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