HANDYMAN CLUB OF AMERICA MAGAZIN

PROJECTS

OUTDOOR SERVING STATION

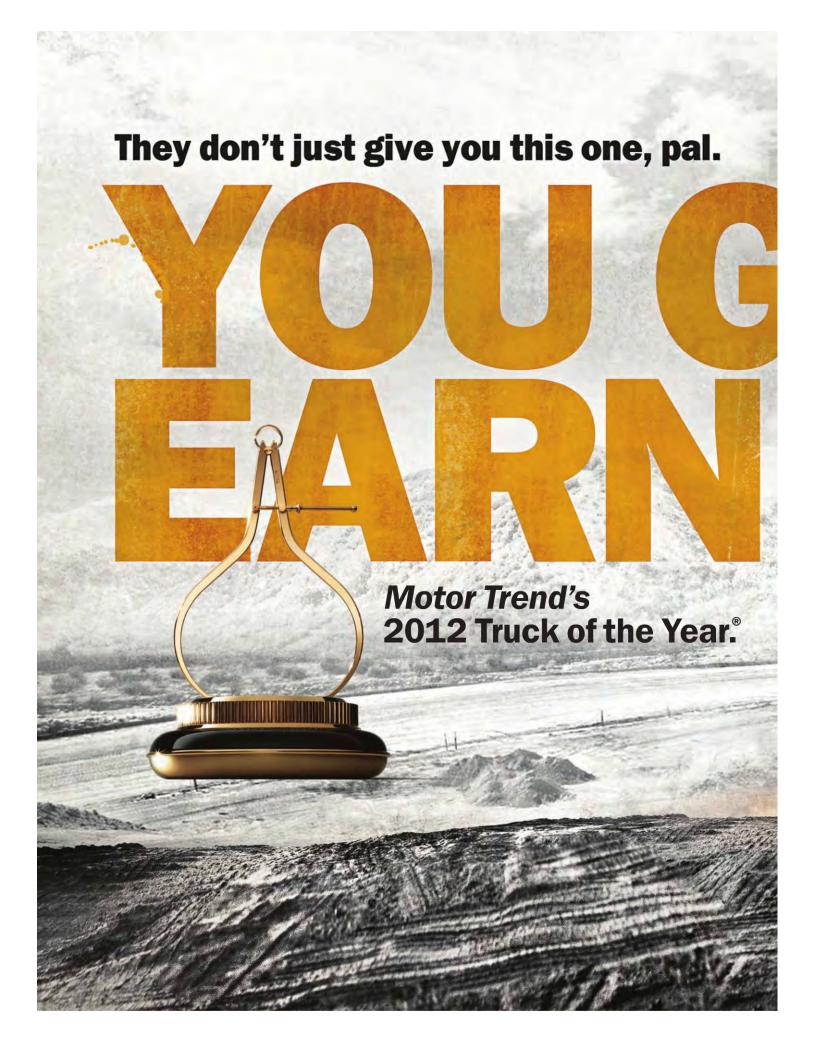
METAL FIRE BOWL

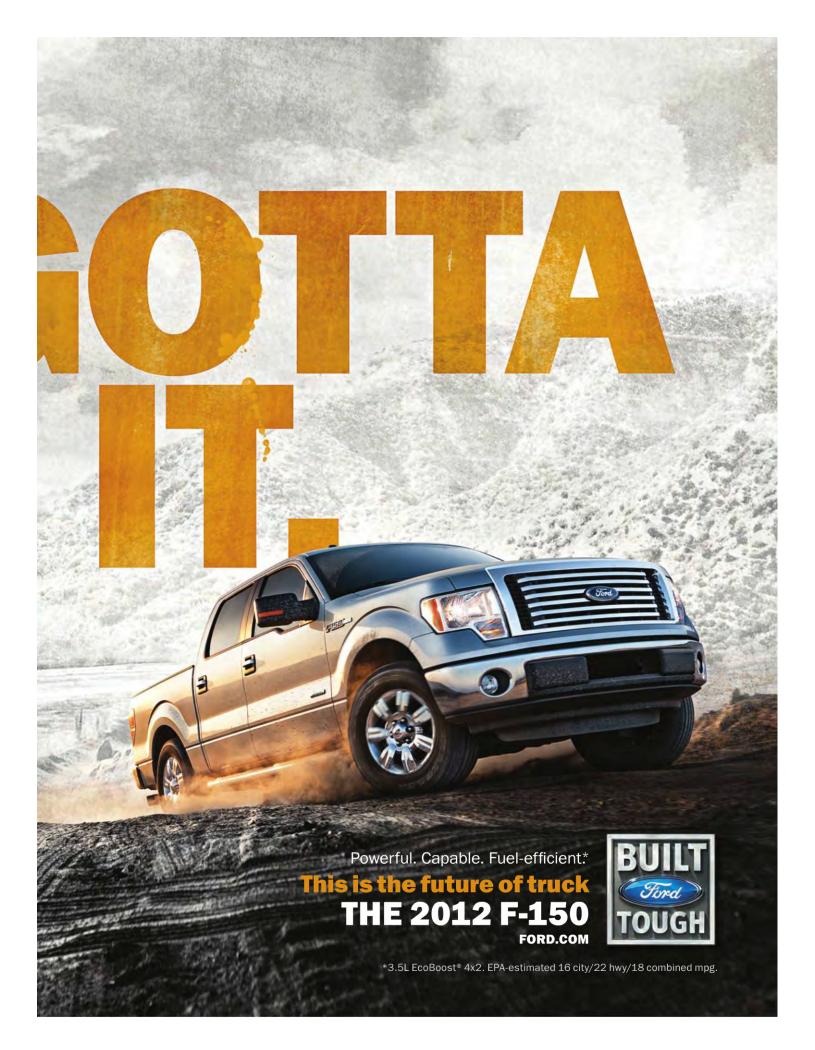
ENTRYWAY CADDY

WHAT'S
NEW FROM
THE 2012 NATIONAL
HARDWARE SHOW

REDO A DECK
BRICK A PATIO
ADD A SCREEN ROOM

CREATE YOUR OWN OUTDOOR SPACES







JUNE/JULY 2012

FEATURES

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Restore and renovate a tired deck to renew your outdoor-living experience



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Pavers provide a perfect patio surface — and an easy approach for do-it-yourself installers

COVER PHOTO BY MICHAEL ANDERSON

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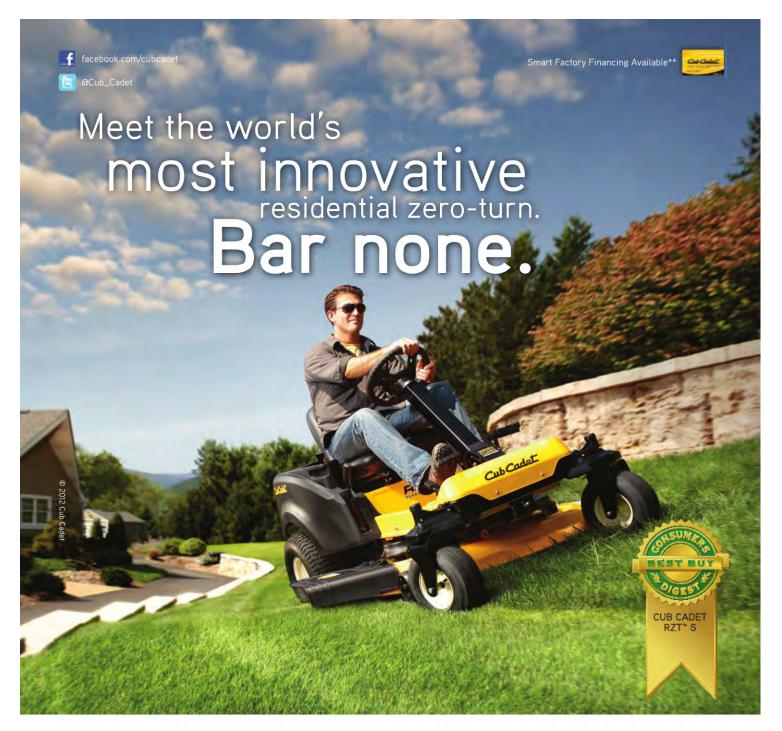
Paving Our Way:

Progress takes us back to the beginning









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A Salute to Our Winners

Get to know the 2012 HANDY Top Tool Testers

It comes as no surprise mto us how talented our Club members are, and every year we're reminded of your skill and dedication when we judge the entries for our Top Tool Tester Contest. We were in awe of the quantity (660 entries) and quality of your submissions. As in past years, the winners' prize was an expense-paid trip to the National Hardware Show in Las Vegas, where they tested tools and browsed one of the greatest collections of DIY



Our Top Tool Testers from left to right: Leeanne Mackowski, Doug Marvel, Thomas Baccei and Kurt Lundquist

products on the planet. In case you missed Senior Editor Jenny Stanley's blog about the winners, here's a brief introduction to these impressive DIYers:

Thomas Baccei of Fairlee, Vermont, spent some time as an apprentice furniture maker and cabinetmaker before transitioning into another line of work, and he's been developing his woodworking skills ever since. He often harvests and mills his own wood for projects; for example, he built a chest of drawers out of Oregon myrtle wood that he hauled cross-country to his Vermont farm. Thomas also has experience with timber-frame construction, stone and tile work and more.

Kurt Lundquist of Melbourne, Florida, was once a journey lineman and then a supervisor for 23 years. Kurt is now working his dream job as a full-time handyman. Each day brings a different task: installing sprinklers, repairing drywall, framing and installing doors, building custom closets and more. Kurt strives to add an interesting, artistic touch to each project.

Leeanne Mackowski of Rhome, Texas, has experience in remodeling, electrical work, plumbing, landscaping and carpentry (not to mention an 800-sq.-ft. workshop for building furniture). It's clear that Leeanne has plenty of DIY know-how. You may even recognize her as a frequent contributor to the member forums at www.HandymanClub.com. You can read one of her stellar forum threads at http://www.handymanclub.com/forums/aft/45998.

Doug Marvel of Indianapolis, Indiana, owns a custom-woodworking business (Marvelous Woodworking LLC). Doug not only tackles unique and challenging projects for customers but also applies his skills to personal home-improvement designs, such as a staircase renovation where he replaced the once blah-looking carpet with beautiful oak. His favorite projects, however, are those that bring him outdoors.

Although the tool testing is over, we'd like to pay tribute to this year's winners because of how well they represented our Club. See p. 38 for more Hardware Show coverage, and keep taking pictures of your projects — the next contest will be here before you know it.



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Rolling **Outdoor Buffet**

Build a portable serving island for summer entertaining You'll have everything you need right at hand when you roll this island out on the patio to serve refreshments or enjoy a barbecue. A slatted canopy offers protection from the sun, a two-tier countertop allows space for dining as well as food prep or bartending, and two large cabinets provide plenty of weather-safe storage. This project has a lot of parts but isn't difficult to build, as long as you accurately cut the parts and follow the steps to fasten them together. We built the island out of mahogany lumber and matching marine-grade plywood.

> (If you aren't going to leave it outdoors year-round, you may be able to use a lower grade of exterior plywood.) We dressed the countertop with natural



stone tiles and finished the wood with cherry stain and three coats of exterior polyurethane to provide lasting beauty.

CUT THE PANELS

Make sure to cut the panels so that the grain will run horizontally around the buffet. Start by cutting all the panel parts (PA through PG in the cutting list) to width; this will become the height of the panels. Keep the narrower panels grouped together, and do not cut them to length or miter the ends until after you have milled the grooves.

Cut a 1/4-in.-deep groove (1/8 to 1/4 in. wide) parallel to the grain 5-1/4 in. O.C. from the bottom edge. We used a table saw, setting the saw blade for a 1/4-in.-deep cut and ripping the first groove in each piece before moving the fence out to cut the next groove. (You can use a router and a straightedge to achieve the same results.) Cut a groove on the bottom of the top panels (PF and PG) to line up with grooves on the side-panel back caps (PD).

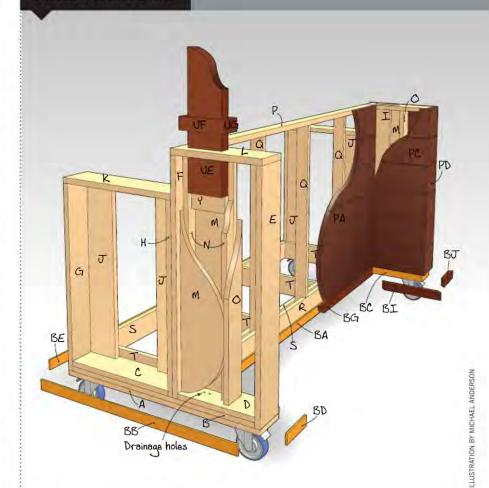
After you've milled the grooves, you can cut the panels to length. Although it seems counterintuitive, I find it easier to cut all of the side-panel miters first and then size the frames to the inside miters. Using a sharp, fine-tooth saw blade, cut the miters on a table saw or use a straightedge guide and a circular saw with the baseplate set at 45 degrees.

BUILD THE FRAMES

Cut the frame parts to size and assemble them (see illustration, right) using exterior-rated wood glue and 1-1/2-in.long narrow-crown staples. We used 3/4-in. AC exterior plywood for all of the frame parts that would not be visible or exposed to the elements.

To make the side frames, first build the three subassemblies: Parts C, G, H, J and K make up the short side assemblies; parts D, E, F, I and L make up the tall side assemblies; and parts M, N, O and Y make up the post-pocket assemblies. Attach the post-pocket stops (Y) 6 in. below the top and on one side of the inside of the assembly. The stops support the canopy posts yet allow any moisture that enters the post pockets to drain out the bottom.

Buffet Base Frame



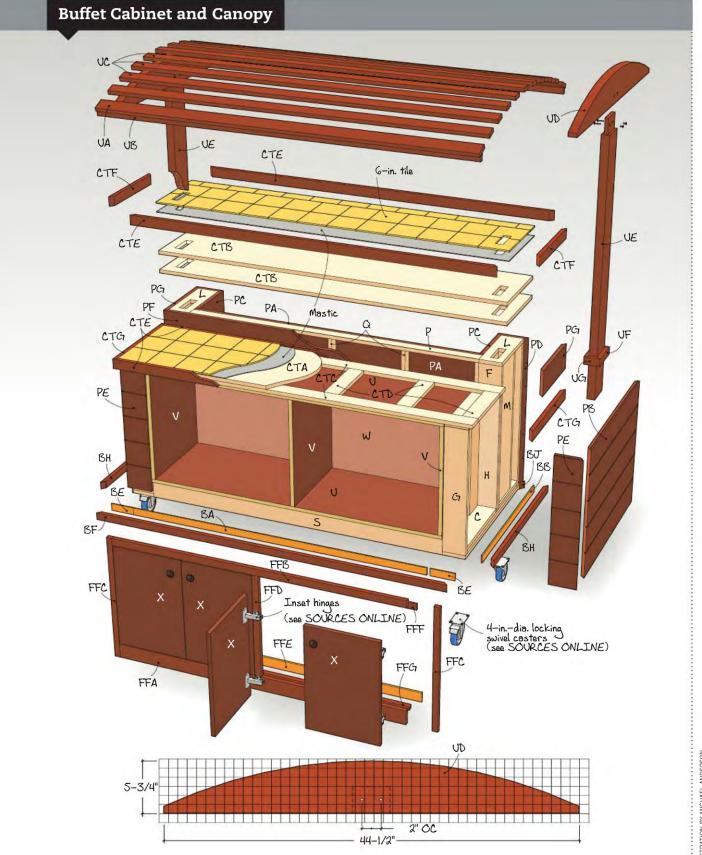
Cutting List

KEY	NO.	DESCRIPTION	SIZE
Pane	ls (all	parts 3/4-in. Meranti marine-g	rade plywood)
PA	1	Back panel	3/4 x 31-1/2 x 60 in.
PB	2	Side panels (outside)	3/4 x 26-1/4 x 31-3/4 in.
PC	2	Side panels (inside)	3/4 x 31-1/2 x 10-1/2 in.
PD	2	Side-panel back caps	3/4 x 31-1/2 x 6 in.
PE	2	Side-panel front ends	3/4 x 26-1/4 x 5-1/4 in.
PF	1	Front top panel	3/4 x 5-1/4 x 70-1/2 in.
PG	2	Side top panels	3/4 x 5-1/4 x 14 in.

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Frames and	capiners (a	II Darris 3/4-In	AL exterior blywood	uniess noteni

Α	2	Bottom plates	3/4 x 4-1/2 x 30-1/4 in.
В	2	Middle bottom plates	3/4 x 4-1/2 x 28-3/4 in.
С	2	Front upper bottom plates	3/4 x 4-1/2 x 16-1/4 in.
D	2	Back upper bottom plates	3/4 x 4-1/2 x 11 in.
E	2	Back studs	3/4 x 4-1/2 x 31-1/2 in.
F	2	Middle back studs	3/4 x 4-1/2 x 30-3/4 in.
G	2	Front studs	3/4 x 4-1/2 x 26-1/4 in.
Н	2	Middle front studs	3/4 x 4-1/2 x 25-1/2 in.
Ĺ	2	Back cleats	3/4 x 4-1/2 x 30 in.

Continued on p. 10



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Cutting List (Continued)

J	4	Front cleats	3/4 x 3 x 24-3/4 in.		
K	2	Front top plates	3/4 x 4-1/2 x 17-3/4 in.		
L	2	Back top plates	3/4 x 4-1/2 x 12-1/2 in.		
M	4	Post-pocket right and left	3/4 x 6-1/4 x 30 in.		
N	4	Post-pocket front and back	3/4 x 1-1/2 x 30 in.		
0	2	Post-pocket cap	3/4 x 3 x 30 in.		
Р	2	Back-frame plates	3/4 x 2 x 60 in.		
Q	5	Back-frame studs	3/4 x 2 x 31-1/2 in.		
R	1	Back-frame cleat	3/4 x 2 x 58-1/2 in.		
S	2	Bottom-frame plates	3/4 x 3-1/2 x 60 in.		
T	4	Bottom-frame studs	3/4 x 3-1/2 x 16-1/4 in.		
U	2	Cabinet top and bottom*	3/4 x 17-3/4 x 60 in.		
٧	3	Cabinet side and middle*	3/4 x 17-3/4 x 22-3/4 in.		
W	1	Cabinet back, 1/4-in. AC plywood	1/4 x 24-1/4 x 60 in.		
X	4	Cabinet doors*	3/4 x 14 x 21-1/2 in.		
Υ	2	Post-pocket stops	3/4 x 2 x 4-3/4 in.		
		*Use marine-grade plywood			

Bottom edging (all parts 1/4-in. AC exterior plywood, unless noted)

BA	2	Filler pieces (back and front)	1/4 x 1-1/2 x 60 in.
ВВ	2	Filler pieces (outer sides)	1/4 x 1-1/2 x 30-1/4 in.
ВС	2	Filler pieces (inner sides)	1/4 x 1-1/2 x 10-1/4 in.
BD	2	Filler pieces (back sides)	1/4 x 1-1/2 x 5 in.
BE	2	Filler pieces (front sides)	1/4 x 1-1/2 x 4-3/4 in.
BF	1	Trim piece (front)**	3/4 x 1-1/2 x 71 in.
BG	1	Trim piece (back)**	3/4 x 1-1/2 x 59-1/2 in.
вн	2	Trim pieces (outer sides)**	3/4 x 1-1/2 x 32-1/4 in.
ВІ	2	Trim pieces (inner sides)**	3/4 x 1-1/2 x 11-1/4 in.
BJ	2	Trim pieces (back sides)**	3/4 x 1-1/2 x 6-1/2 in.
		**Ilse mahogany	

Face frame (all parts mahogany)

FFA	1	Face-frame bottom rail	3/4 x 3 x 58 in.	
FFB	1	Face-frame top rail	3/4 x 1-1/2 x 58 in.	
FFC	2	Face-frame stiles	3/4 x 1-1/8 x 26-1/4 in.	
FFD	1	Face-frame middle stile	3/4 x 1-1/4 x 21-3/4 in.	
FFE	1	Bottom-rail spacer	3/8 x 2 x 60 in.	
FFF	2	Cabinet-door top stops	3/8 x 1-1/4 x 28-7/8 in.	
FFG	2	Cabinet-door bottom stops	3/4 x 3/4 x 28-7/8 in.	

Canopy (all parts mahogany)

UA	2	Outside slats	3/4 x 2-1/2 x 72 in.
UB	2	Outside-slat trim pieces	3/4 x 1-1/4 x 72 in.
UC	9	Inside slats	3/4 x 2 x 72 in.
UD	2	Arched beams	1-1/2 x 5-3/4 x 44-1/2 in.
UE	2	Posts	1-1/2 x 4-3/4 x 54 in.
UF	4	Post trim pieces	3/4 x 1-1/2 x 6-1/4 in.
UG	4	Post trim pieces	3/4 x 1-1/2 x 3 in.

Countertops (all parts 3/4-in. AC exterior plywood unless noted)

CTA	1	Lower-countertop base	3/4 x 17-3/4 x 71 in.
СТВ	2	Upper-countertop base pieces	3/4 x 14-1/2 x 71 in.
СТС	2	Lower-countertop build-up pieces	3/4 x 3 x 71 in.
CTD	6	Lower-countertop build-up pieces	3/4 x 3 x 11-3/4 in.
CTE	4	Upper and lower countertop trim**	3/4 x 2 x 72-1/2 in.
CTF	2	Upper-countertop trim pieces**	3/4 x 2 x 16 in.
CTG	2	Lower-countertop trim pieces**	3/4 x 2 x 19-1/4 in.

WORKSHOP

Staple and glue the three subassemblies together (photo 1, below) adding the middle bottom plate (B) first and then the bottom plate (A). The three bottom plates provide a solid base for attaching the wheels.

After you lay out the inside dimensions of the post pockets, drill a 1/2-in. starter hole; then use a jigsaw to cut out the post holes on the tops of the side frames (photo 2, p. 12). Be sure to drill a couple of 1/2-in. drainage holes in the bottom plate centered on the post pockets. Build the back-frame assembly (P, Q and R) and the bottom-frame assembly (S and T).

To construct the cabinet boxes, use simple butt joints, fastening them with 1-1/2-in. staples and glue. Now you are ready to put the island together.

ASSEMBLE THE ISLAND

Line up the panels flush with the top of the frames. Secure panels PB, PC, PD and PE to the side-assembly frames with exterior-rated glue and 1-1/2-in. brads (photo 3). In the same way, attach the back panel (PA) to the back-assembly frames. Then install the back assembly between the side assemblies, followed by the bottom frame (photo 4, p. 15). Set the cabinet case on the bottom frame between the side assemblies (photo 5) and attach it with 1-5/8-in. screws. Attach the front and side top panels (PF and PG; photo 6).

Next, add trim to the cabinet case. We used pocket screws to build the cabinet face frame (photo 7) and then attached it to the cabinet with 1-1/2-in. brads. Then, using a brad nailer, we attached



• Glue and clamp the subassemblies to each other and nail all the frame parts together. Be sure to follow the sequence of assembly (see text).



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the cabinet-door top stops (FFF) to the inside of the top face frame and fastened the cabinet door bottom stops (FFG) to the front edge of the cabinet case.

We routed a 1/8-in. roundover on all of the door edges and installed the doors with concealed inset hinges. Adding 1/4-in. spacers between the cabinet and the hinges allowed us to use frameless cabinet hinges (photo 8).

Rout a 1/8-in. roundover on the face of the bottom edge trim (BF, BG, BH, BI and BJ) before cutting the pieces to length. Using a brad nailer, attach the filler strips and edge trim along the bottom to complete the base.

Turn the base on its back and attach the wheels. The base is heavy and requires heavy-duty casters. We used 4-in.-dia. locking swivel casters (see SOURCES ONLINE) and secured them with 2-in.-long x 1/4-in.-dia, lag screws.

ADD THE COUNTERTOPS

Next we built the countertops from AC plywood topped with 6x6 onyx tiles and trimmed with prefinished 3/4 x 2-in. mahogany. The lower-countertop base (CTA) consists of one layer of plywood plus 3-in.-wide strips of plywood as build-up framing (CTC and CTD; see illustration). Before installing the lower countertop, we assembled, tiled, grouted



■ Mark the 1-1/2 x 4-3/4-in. posthole openings on the back top plate (L), following the dimensions shown here. Bore a clearance hole within the layout lines and use a jigsaw to cut along the lines; remove the waste to open up the top of the post pockets.



Keep the miter joints tight and the grooves aligned while attaching panels together.

Shopping List

3/4-in. x 4 x 8-ft. Meranti marine-grade plywood panels (3)

3/4-in. x 4 x 8-ft. AC exterior plywood panels (2)

1/4-in. x 4 x 8-ft. AC exterior plywood panels (1)

1x6 x 8-ft. mahogany boards (3)

1x10 x 8-ft. mahogany board (1)

Exterior-rated wood glue

1-1/2-in. narrow-crown staples

3/4-in. narrow-crown staples

1-1/2-in. brads

1-5/8-in. deck screws

1-1/4-in. screws

1-1/8-in. connector bolts (4; see SOURCES ONLINE)

Cap nuts (4)

Inset hinges (8)

Cabinet knobs (4)

4-in.-dia. locking swivel casters (4) plus 2-in. x 1/4-in.-dia. lag screws (16)

Tile and tile mastic (compatible with substrate and chosen tile)

Grout and grout sealer

Wood stain (2 quarts)

Exterior polyurethane (1 gallon)





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and trimmed it; then we fastened it from inside the cabinet using 1-5/8-in. screws.

The upper-countertop base (CTB) is made of two layers of plywood and is fastened to the cabinet in two steps. First, mark and cut the 1-1/2-in. x 4-3/4-in. post-pocket notches in both upper-countertop base pieces.

Measure, cut and dry-fit tiles on one of the CTB pieces. Then apply mastic and set the tile (photo 9). After the tile sets up (24 hours), attach the trim (CTE and CTF) to the 3/4-in. plywood edge with wood glue and brads, aligning the top of the trim so it's flush with the tile surface. Now you can grout the tile.

Next, trim about 1/8 in. off of the four outer edges of the other CTB piece and attach this one to the cabinet, driving 1-5/8-in. screws through the plywood and into the cabinet framing (photo 10, p. 16). Slip the tiled countertop over the sub-base and secure it from below.

BUILD THE CANOPY

A slatted canopy completes the serving island. The arched beams (UD) are secured to the posts (UE) by a mortise-and-tenon joint and locked in place with connector bolts. This joinery allows the posts to be easily removed for storage or transport.

Measure and mark the arched beams, and cut the mortises before cutting the arches. I like to make mortises first and then cut the tenons to fit. Center the mortises on the bottom of the beam, making them 1/2 in. wide x 4 in. long x 3 in. deep. We used a drill press to rough out the mortises (photo 11) and then finished shaping them with a chisel (photo 12).

Next, clamp the posts together and secure an edge guide to both. Using a router equipped with a 3/4-in. straight bit, cut several shallow passes (photo 13) until the tenons fit into the mortises.

To shape the arches, we used a jigsaw, followed by a sander to clean the cuts. We rounded the long edges of the slats using a router and a 1/8-in. roundover bit. You may find it easier to prefinish all the canopy parts before assembly. Starting at the outer ends of the arches, secure the slats using a dab of wood glue and a single screw centered



Flush-up the bottom plates of the frames and screw them all together. Use glue and 1-5/8-in. deck screws to connect the assemblies.



Make any adjustments needed on the top panels to get a good fit. Secure them to the frame with wood glue and finish nails.



■ Installing 1/4-in. spacers behind the hinges allowed us to use frameless hinges, which are less bulky and obtrusive than face-frame hinges.



Slide the cabinet case into position and secure it by screwing into the side frames.



■ The face frame goes together quickly using hidden pocket screws. If you do not have a pocket-hole jig, you can assemble the frames with wood dowels and glue.



When setting the tiles, make sure they do not overhang any of the edges or the openings for the post pockets.

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Bobcat

One Tough Animal



Position the nontiled, trimmed upper-countertop sub-base (CTB) piece on the cabinet, being sure to line up the post holes; then fasten it to the framing.



Remove the tenon waste using a router and several shallow passes. Use a guide to get a straight shoulder edge.



The post tenons should fit snugly into the mortises in the arch beams.



■ A tall fence clamped to the drillpress table keeps the mortise in line, and a 1/2-in. brad-point wood bit makes quick work of roughing out the mortises.



■ We used spacer blocks to establish the 3-in. slat overhangs and the 2-1/2-in. spaces between the slats.



Adding trim to the bottom of the post hides the cut tile edges and helps to keep water and debris out of the post pocket.



Smooth out the mortises using a sharp chisel and a heavy mallet.

on each slat connection (photo 14).

Set the canopy upside down and insert the post tenons into the mortises (photo 15). Bore two holes and insert the connector bolts, drawing them tight. Enlist a friend to help position the canopy assembly and insert the posts into the post pockets. Finally, attach the post trim pieces (UF and UG) to the post (photo 16). Once you have applied the exterior finish to the exposed wood, you and your serving island are ready to roll.

Handyman Club life member Vern Grassel is a custom furniture builder, cabinetmaker and woodworking designer in Elk River, Minnesota.

SOURCES ONLINE

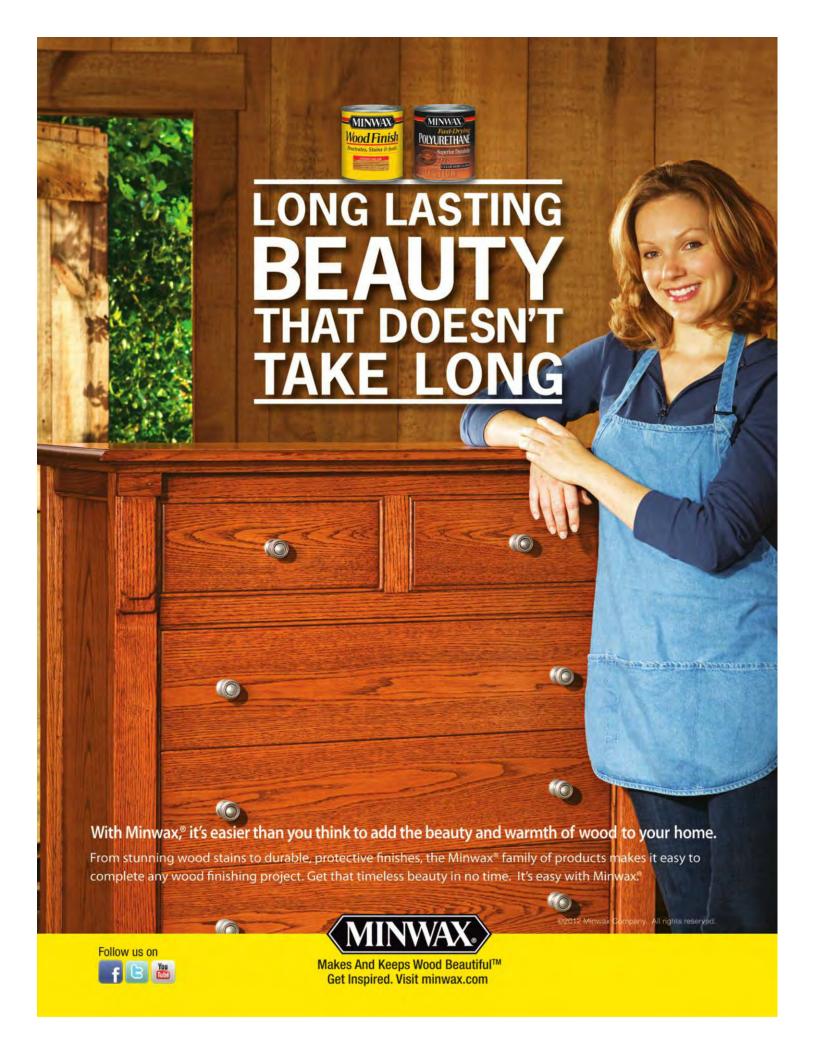
For online information, go to www.HandymanClub.com and click on WEB EXTRAS.

Minwax (Helmsman Spar Urethane and Cherrywood Gel Stain)

800-523-9299, www.minwax.com

Rockler Woodworking and Hardware

(1-1/8-in. connector bolts, No. 31831; cap nuts, No. 31815; inset hinges, No. 55809; 4-in.-dia. total-lock swivel plate-mount casters, No. 23030) 800-279-4441, www.rockler.com



Entryway Caddy

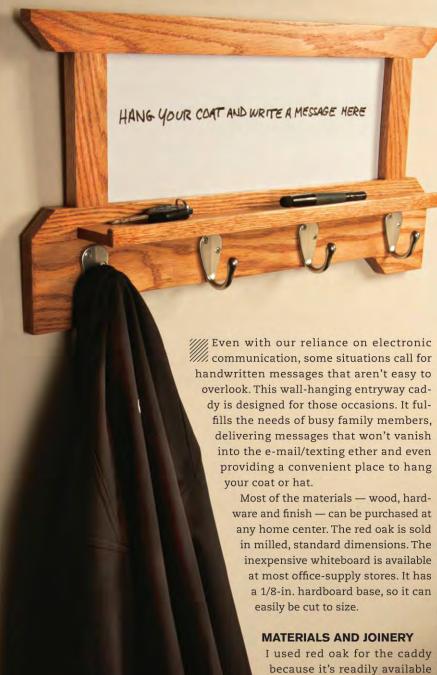


Makes and keeps wood beautiful.

Wood Finish

Penetrates, Stains & Seals

GOLDEN OAK 210B



in pieces milled to thickness,

and it's durable and matches the woodwork in many homes. I kept the joinery uncomplicated by using dowels — all of the parts are simply butted against each other. If you prefer, you can use other types of simple joinery, such as pocket screws or small biscuits.

Only a few pieces of hardware are necessary. I purchased satin-finish chrome coat hooks at a home center; you can choose what you like from what's available in your area. You'll also need picture-hanging hardware (almost any type will work) and push points or brads to secure the white-board in the frame.

TIPS AND FINISHING

Refer to the cutting and shopping lists (p. 20) for materials and sizes, and see the photos for a step-by-step look at how to build the project. Here are a few additional tips to help you create a caddy you'll be proud to display:

- To consistently and accurately cut parts to length, use a stop block clamped the table saw fence (photo 1). First, measure from the outside of the block to the inside edge of the blade to set the length of the workpiece. Then move the block back (away from the blade and toward you) far enough so that the workpiece cannot simultaneously contact the blade and the stop block. (This prevents binding and potential kickback.)
- Cutting the rabbets in the rails (photo 3) is easy, but with a little extra effort, you can make stop cuts that will prevent the rabbets from showing when the project is assembled. Locate where the cuts need to start and stop; then mark the workpiece and transfer the marks to the saw fence and table. To make the cut, start by lowering the work onto the blade, matching the first marks; then stop the cut on the

second marks. You may need to use a sharp chisel to square the ends of the completed rabbets.

 Applying stain gives the wood a rich, warm tone, and varnish provides a highly protective film finish. I used a traditional Minwax cherry stain and a fast-drying semigloss polyurethane (see SOURCES ONLINE).

Once the finish has cured, install the whiteboard with push points or brads. Mount the caddy with sturdy picture-hanging hardware; then invite your family to write messages — or better yet, compliments on a job well done.



■ Cut the rabbets in the backs of the rails and stiles with a table saw and a featherboard. Set the blade 1/4 in. high and the fence 1/4 in. from the outside edge of the blade. (Note: The blade guard has been removed for photo clarity.)



■ Sand the assembled frame thoroughly before attaching the shelf. Progressively use 80-, 120- and 180-grit sandpaper. A randomorbit sander with dust collection is more efficient and less messy than sanding by hand.



■ Use a table saw and miter gauge to cut parts to length. Clamp a stop block to the fence so the parts will be exactly the same length. It's important that the stop block be far enough behind the blade to prevent binding and kickback.



Use a doweling jig to center the holes in the rails and stiles. A brad-point drill bit will bore the most precise holes. Not all jigs operate the same way, so be sure to follow the instructions that come with the tool.



■ Once you have sanded the parts, bore pilot holes for the screws in the frame and shelf. Then attach the shelf to the frame with glue and four No. 6 x 1-1/2-in. screws driven through the back of the frame (see illustration).

Wood finishing projects are easier with Minwax.



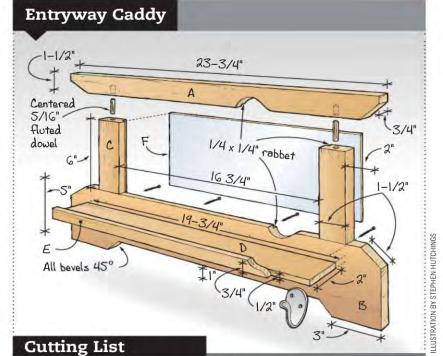
■ Lay out the cutout section on the bottom rail with a combination square and a pencil. Clamp the workpiece to your workbench; then use a jigsaw and a fine-tooth blade to make the cut.



■ Test fit the frame parts before joining them together. Also, confirm that the dowel holes are deep enough to accommodate the dowels with a little extra space. To prevent marring, use scrap blocks between the clamp jaws and workpieces.



■ Stain and then varnish the assembled project, following the manufacturer's instructions. We used a disposable foam brush to apply stain and a good-quality 1-1/2-in. bristle brush for the varnish.



KEY	NO.	DESCRIPTION	SIZE	
Α	1	Top rail	3/4 x 1-1/2 x 23-3/4 in.	
В	1	Bottom rail	3/4 x 5 x 23-3/4 in.	-
С	2	Stiles	3/4 x 1-1/2 x 6 in.	
D	1	Shelf	1/2 x 2 x 19-3/4 in.	
E	1	Shelf lip	1/2 x 3/4 x 19-3/4 in.	
F	1	Whiteboard	1/8 x 6-3/8 x 17-1/4 in.	

Shopping List

3/4 x 1-1/2 x 24-in. red oak boards (3)

3/4 x 6 x 24-in. red oak board (1, rip to 5 in. wide)

1/2 x 4 x 24-in. red oak board (1)

1/8-in.-thick whiteboard (1, size to fit opening)

5/16 x 1-1/2-in. fluted dowels (4)

Coat hooks (4)

Picture-hanging hardware

No. 6 x 1-1/2-in. wood screws (4)

Stain and varnish (see SOURCES ONLINE)

Push points or brads

Erasable marker

SOURCES ONLINE

For online information, go to www.HandymanClub.com and click on WEB EXTRAS.

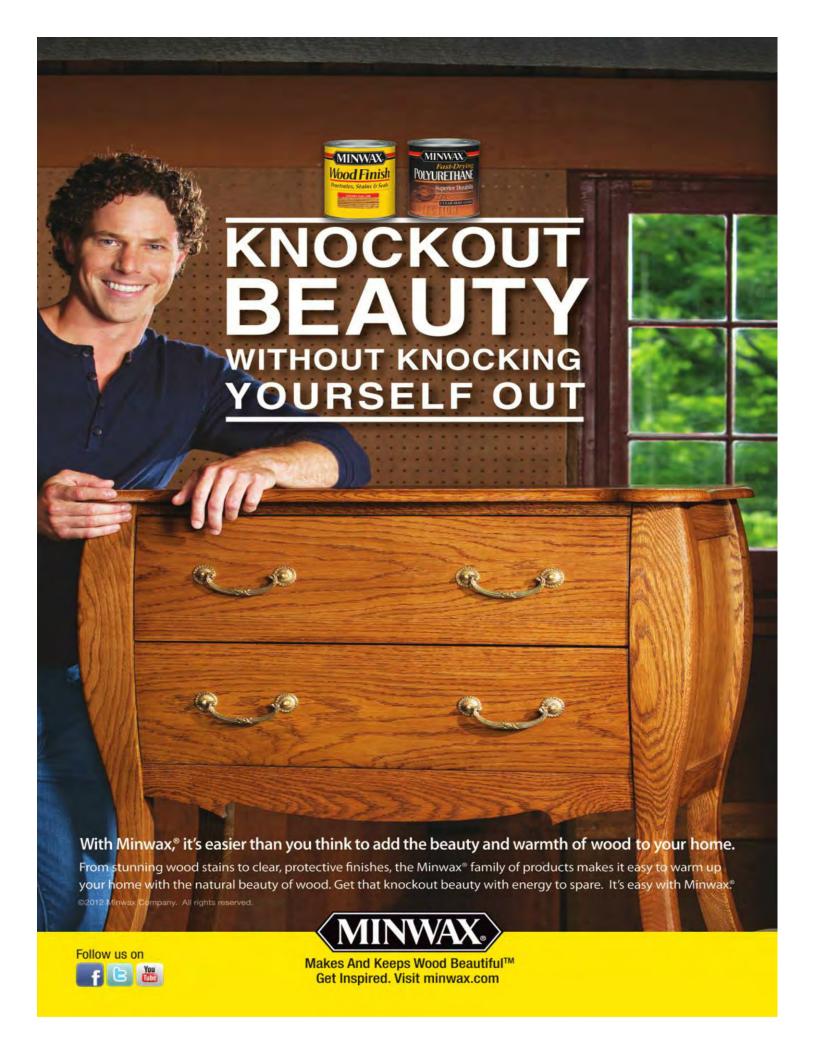
Minwax (No. 235 cherry stain; fast-drying semigloss polyurethane)

www.minwax.com



Visit minwax.com (







When I entered the carpentry trade almost 20 years ago, residential builders constructed decks primarily out of three types of natural wood: redwood (already an endangered species at the time), pressure-treated lumber and cedar — by far the most popular because it was readily available and easy to work with and took stain beautifully. But as ap-

pealing as a new cedar deck was, after a few years the finish would need to be scrubbed, stripped and recoated. Maintaining a cedar deck has always been an expensive, time-consuming ordeal.

Enter composite decking. Made from a mixture of recycled wood fibers and plastic resin, it cuts and shapes much like wood and requires no sealing or staining, making it completely maintenance-free. Of the many composite brands available, I install only a few. One of my favorites is TimberTech, a line that offers great quality and innovation as well as easy installation. So when a friend asked me to help him upgrade his deck with the new TimberTech Earthwood Evolutions decking,



I couldn't pass up the chance.

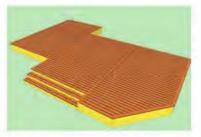
My friend wanted a complete deck makeover, including an expansion of the existing footprint. (The existing deck featured a clipped corner that was cut back 8 ft.; we extended the deck to make a square and regained the area lost by the clipped corner.) He also wanted to replace all of the existing PVC decking, which he considered incompatible with Minnesota winters. The snow and ice caused the deck to become dangerously slippery, and the decking popped and warped in the sun. TimberTech composite decking was a logical choice because it provides a nonslip surface that withstands changes in the weather.

+ PLAN AND DESIGN

We began by drawing a floor-plan view of the existing deck and then drew a plan for the expansion that included all of the measurements and dimensions. Once the drawing was complete and the dimensions were established, we used a simple computer program to produce a 3-D rendering of the design. This helped us to visualize details such as color and style and to decide on a decking border, a railing style and a bench height and shape. (To learn more about project-design software, see "High-tech Deck Plans," below left.) Once you have a plan, check with your local building inspections office to see whether you need to apply for a permit before adding to or changing your existing deck.

HIGH-TECH DECK PLANS





Using computer software to design a deck is easier than you think. For simple projects, TimberTech offers a free Deck Designer tool on its Web site. It is userfriendly with a minimal learning curve. Simply follow the steps and it will render a plan drawing, a 3-D drawing and a complete list of materials for your project. Another great computer 3-D tool is Google SketchUp (see illustrations above and SOURCES ONLINE). It is also free and can be used for more complicated projects. However, SketchUp is a little more difficult to learn, and as a result, it will take more time to produce a drawing that you can use. - MC

DEMOLITION

With all of the details hammered out, we ordered materials and began demolishing the existing deck. Removing the decking was easy because it was fastened with clips and screws. I used a Phillips-head extension to access the screws between the deck boards; then I programmed a long list of songs in my iPod and went to work. Six hours and one 5-gallon pail full of clips later, the decking was completely removed. Although spending that long removing clips may sound like drudgery, we were fortunate: Most decking is either screwed or nailed to the joists with fasteners that have corroded over time. If you face that type of situation, try these tips:

- If the decking is screwed down, remove as many of the fasteners as possible with a power screwdriver before using a pry bar.
- If the screws are too corroded or the decking is nailed down, use a 3- to 4-ft. pry bar. (This length will provide optimal leverage; anything longer will be too cumbersome.) Make sure that the bar tip will fit between the deck boards you want to remove. Wedge the tip in the space between the deck boards and push down, using the deck board under the bar as the fulcrum point. The decking will resist at first, but eventually it will pop away from the framing.



- Working carefully to remove the old deck boards (by using a power screwdriver with an extension) may seem tedious, but preserving the existing deck frame is worth the effort.
- Keep working the bar from joist to joist until the entire board breaks free. Be careful to pry on only the decking to avoid damaging the deck framing. If you run out of old decking to use as a fulcrum, lay a 3/4-in. scrap between the deck framing and the pry bar for protection.

WEB EXTRA

To watch a video about crowning lumber for a deck frame, scan this tag with your smartphone or go to www.HandymanClub.com and click on WEB EXTRAS.



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FRAMING



With the old decking out of the way, we were able to inspect the framing for any flaws or structural issues — an essential step. It is particularly important to examine the framing where it is attached to the house. If the original deck wasn't flashed properly, the ledger board and even some of the deck joists will likely need to be replaced because of rot.

This deck was not flashed properly, but luckily there wasn't rot or decay at the house or in the deck framing. We installed new flashing along the house and then checked the deck for level. In cold climates, decks tend to settle or heave due to the yearly freeze/thaw cycle. We moved the level from area to area, shimming the deck to level it as needed. Once it was level and sound, we were able to move on to building the addition.

Adding square footage to an exist-

ing deck is fairly simple: You essentially attach the extension to the existing frame just as you would attach a new deck to the house. And like a new deck, the extension will need support at its outlying perimeter, which usually means installing posts and footings.

Keep the following tips in mind as you extend the deck frame:

- Verify the size and location of the existing footings and post supports. If the deck is cantilevered beyond the supports, you may need to add extra footings and posts at the existing deck perimeter because adding more framing could place too much weight on the existing posts and footings. The same goes for the size of the posts and footings supports that were designed for the weight of the original deck may be insufficient for the expansion.
- Double-up the outside rim joist where the new deck meets the old.
 Fasten the rim joists together with two heavy lag screws or bolts ev-

DECKING INSTALLATION

We began the decking installation by running a dark-color border around the perimeter of the deck (photo A). Because the deck was fairly large, we split it into three sections to eliminate seams. We added the border decking to divide each section (photo B).

Next, we began to fill in the sections with light-color decking, starting at the house and working outward (photo C). The TimberTech decking is grooved along each side to accommodate the hidden fastener clips and screws that hold the boards in place (photo D). This eliminates the need to fasten the deck board to the framing through the face, an approach that results in an unblemished deck surface.

It's best to have two people install this decking and fastener system. I used a hammer and block to tap the boards into place. We fastened one clip at each joist, according to the manufacturer's instructions, and then installed the next plank.

We periodically measured the distance from the new decking to the outside edge of the deck framing at each end of the deck to ensure equal distance. If one side was longer than the other, we made slight adjustments when installing the clips. The clips are designed to space the deck boards evenly, so only very small adjustments can be made when installing the clips. It's important to measure and make adjustments often.

We ripped the last light-color board in each section. Once all of the sections were filled, the deck surface was stunning (photo E).



ery 12 in. Also, make sure that both boards are "crown up" to prevent sagging or improper movement due to expansion and contraction. (Almost all natural-wood joists or studs have a noticeable crown, a slight curve along the length. For a video tip about crowning lumber, see WEB EXTRAS.)

If you have any doubts about the design or construction of your deck addition, contact a local contractor or building official. Building officials are there for your benefit and can be a great (and free) source of information and education.

For this deck addition, we needed to add one footing. We located the spot for the footing by extending lines along the perimeter of the existing deck framing about 8 ft. in both directions. We dug a hole for the footing at the intersection of the two lines (photo A, opposite). (Note: It is important to know the required footing depth for your geographical region. In central Minnesota, the code for footing depth

is a minimum of 42 in.) After the concrete footing cured, we were able to start building the deck-frame addition.

Because our design called for a border around the perimeter that wasn't part of the original deck configuration, we had to add framing so that we could fasten the border securely to the deck (photo B, right). We used ACQ pressure-treated lumber for the framing, which conformed to the building code. (Never use untreated pine to frame exterior structures: It not only will fail inspection but also will begin to structurally fail in about three to five years.) If you use ACQ pressure-treated lumber, make sure that you fasten it with the appropriate nails, bolts and screws - typically stainless steel or hot-dipped galvanized and labeled "ACQ compatible."

The next step was to install posts for the rails and the built-in bench we incorporated into the design. The 4x4 posts were pressure-treated like the rest of the framing lumber. We

purchased a railing system from TimberTech that included composite post sleeves to cover the pressure-treated 4x4s. This made selecting lumber for the posts easy — any knots or blemishes would be covered by the sleeves.

We added construction adhesive to the posts before fastening them to the framing. (For details about how to space the bench posts to accommodate the deck board dimensions, see "Space Case," below.)



SPACE CASE

Spacing the bench posts properly required some math. First we multiplied the deckboard width (5-1/2 in.) by the number of boards we planned to use for the top of the bench (3); then we multiplied the measurement of the gap between the boards and outer skirt boards (1/4 in.) by the total number of gaps (5). 5-1/2 in. x = 16-1/2 in.

(total width of combined deck boards) 1/4 in. x = 1-1/4 in.

(total added width of gaps)

Next, we added these two totals together.

16-1/2 in. + 1-1/4 in. = 17-3/4 in. (total width of deck boards and gaps)
Then we multiplied the width of the 2x6 framing (1-1/2 in.) by the number of 2x6s installed at the posts (2) and subtracted that amount from the total. 1-1/2 in. x 2 = 3 in.

(total width of framing installed at posts) 17-3/4 in. -3 = 14-3/4 in.

(the outside-to-outside dimension of the bench posts)

Based on these calculations, we spaced the bench posts 14-3/4 in. apart. —MC

B





STAIRS, RAILS AND BENCH

After the decking was in place and secured, we slipped the sleeves over each of the 4x4 posts. TimberTech also supplied post-base trim to cover any gaps caused by contraction or movement in the decking.

Part of our deck makeover involved replacing stair framing. Once we had installed the new decking, we measured from deck surface to deck surface and cut the stair stringers accordingly (photo D). The rise was 7-1/2 in.; current building code for stair rise is 7-3/4 in. maximum and 10 in. minimum for stair run. We framed the stair run at 11-1/2 in. to accommodate two deck boards. Then we used the dark-color decking for treads and installed risers provided by TimberTech. We also added treads and risers to the steps along the front of the deck (photo C).

After that, we installed the guardrail and stair rail and then added a post cap to each post (photo B). It's best to use just a dab of adhesive (silicone works well) on each post so the cap stays in place.

We installed framing at the bench posts and topped it with decking to make the solid built-in bench (photo A). It was easy to frame and finish because we spaced the posts to accommodate three full deck boards.

The result of our efforts is a beautiful outdoor space that rivals any cedar or pressure-treated deck, though I think the real beauty is that the structure will never need to be stained or sealed and will provide years — if not decades — of enjoyment.







For online information, go to www.HandymanClub.com and click on WEB EXTRAS.

Google SketchUp

http://sketchup.google.com

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Handyman Club of America life member Mike Conner is a professional contractor and builder who lives and works in the Twin Cities.

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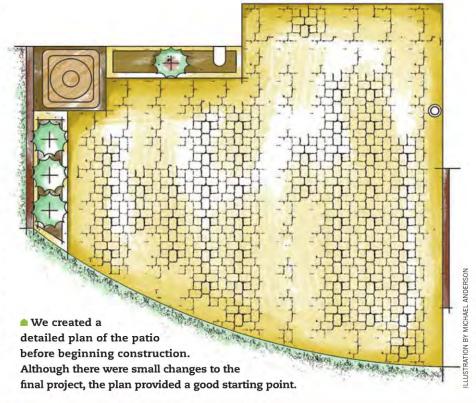
PAINT SMART



CREATE A PLAN

As with any project that alters your property or requires digging, you should check whether a permit is required and get a list of the related construction standards. If necessary, seek approval from your homeowners' association. Before you start, be sure to have the locations of underground utilities marked (www.call811.com).

You can make a paver patio as large and complex as you like, but we designed this one to be small — less than 250 sq. ft. — and simple to make it DIY-friendly. First, you'll need to measure the area and mark it with stakes and string to visualize the size. Next, use the measurements to make a plan drawing of the project so you can estimate how much material you'll need, including landscape fabric, sand and gravel (see "Estimating Materials," p. 35). If you're building a larger patio, it may require curbing or larger pavers to retain the smaller pavers.



EXCAVATE



Because a utility line ran under the project site (note the orange marking paint), we had to dig carefully to ensure that we didn't cause damage.



Mark the border with landscape marking paint and dig a 10-in.-deep trench; then excavate the remainder of the site. Be sure you have a place to relocate the excess soil.



■ You can use an edging tool to establish a crisp, smooth edge for the patio border. The edge should extend out a few inches past where the pavers will be laid.

For this project we used 2-1/4 x 4 x 8-in. tan permeable pavers made by Boral Bricks (see SOURCES ONLINE). These pavers exhibit slight color variations that create visual interest. Unlike typical construction bricks, pavers have spacing tabs on the edges so water can drain between them.

When you're planning a patio, consider factors such as the location of downspouts, the landscaping bordering the edge (if it's grass, you might want a flush curb) and whether you'll need an underground drain to prevent water

from pooling. Depending on the size of the project, the soil conditions, drainage requirements and expected load, a deep base layer of large gravel may be needed.

GET ORGANIZED

Although it may not seem to be a high-priority consideration, the way you receive, store and handle the materials for your patio can make the difference in whether the project goes smoothly or goes sour. You'll have to either arrange for the supplier to transport the materials across the yard (and protect it with plywood) or

WEB EXTRA

To read more about building a patio with pavors, scan this tag with your smartphone or go to www.HandymanClub.com and click on Web Extras.



cart them yourself. For this project, we had everything unloaded on the drive-way and then used a garden wagon and wheelbarrows to move materials to the backyard as needed. (Many rental centers offer power carts that are ideal for moving heavy materi-

LEVEL AND FILL



If you disturb any soil or need to fill an area, use the tamper to compact it. Sprinkling a little water on the area will help the process and keep dust to a minimum.



Lay rows of landscape fabric starting from the edge of the house. Overlap the rows and use small stakes or stones to keep them in place.



Use Class II gravel or an equivalent material for the patio base. Spread the gravel with a garden rake turned so that the tines face up.



Spread two 2-in. layers of gravel, using the tamper to compact each layer. Sprinkle some water on the area to help bond the gravel and keep down dust.



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Simple. From start to finish.

als.) We also had the deliverer place the materials in the order we would use them: gravel in front, then sand, pavers and finally polymeric sand (for the joints).

To get started, you'll need basic yard tools such as a shovel, a spade, a rake and a hoe. In addition, you'll need a tamper, a 4-ft. level and a string level, a straight 8-ft. 2x4, a rubber mallet, a push broom, landscape marking paint, landscape fabric, construction adhesive, work gloves,

kneepads and safety glasses. We also rented a masonry wet saw to cut some of the pavers.

DIG IN

Once you've established the patio boundaries with stakes and string, mark the perimeter with landscape marking paint (because you won't trip over paint lines) and then remove the string and stakes. You'll need to find a good place to relocate the soil you dig up — you may be able to reuse some of it to adjust the

grade. (Be sure to use a hand tamper to compact it.) To prevent the pavers from settling too much, try not to disturb any more soil than is necessary.

Trench the perimeter to about 10 in. below grade to establish the outline and grade; then continue digging, but not quite as deep. We excavated the rest of the area about 7 in. below grade. Don't worry about being precise; you'll create an even surface later with the gravel and sand layers.

Once the excavation was complete, we covered the site with landscape

PREPARE TO PAVE



• Check the grade with a 4-ft. (or longer) level. The grade should slope down from the structure about 1 in. every 10 ft.



Once you've completed the base layer, spread 1 to 1-1/2 in. of coarse sand. Grade and level just as you did the base layer.



▲ Lay the perimeter pavers first to define the space. You can use a rubber mallet to help set the pavers flush. Occasionally check to be sure the line remains level.



▲ As you start to lay pavers, use the 2x4 to screed the sand while checking for level. Continue doing this to establish a flat, smooth path.

fabric. This optional step inhibits plant growth and makes the site less messy.

FILL AND ADD PAVERS

We used Class II limestone gravel as the base material. Spread the gravel evenly to about a 2-in. depth. Rake the gravel and check with the level (or a string level) to be sure the base is level parallel to the house but slopes slightly away (1 in. every 10 ft.) for drainage. Fill or remove gravel where needed. Lightly sprinkle the base with water to suppress dust; then use the hand tamper

to compact the gravel.

Repeat the process with another 2 in. of gravel. For a larger patio, consider renting a gas-powered plate compactor.

Next, add about 1 in. of coarse sand. Be careful when raking and leveling the sand because you'll set the pavers directly on top of it. Use the 2x4 to screed the sand flat and level. Moisten the sand slightly; then add pavers.

We started with the border and leveled it; then we worked from the house toward the border, laying a basketweave pattern. A rubber mallet is use-

ESTIMATING MATERIALS

PAVERS:

Patio length (in feet)

- x width (in feet)
- = square feet

COMPACTIBLE GRAVEL AND SAND:

Surface area (in square feet) x depth (in decimals, for example:

6 in. = .5 ft.

= cubic feet

27 cu. ft. = 1 cu. yd. (or 1.4 tons)

REQUIRED GRAVEL DEPTHS:

Foot traffic = 4 to 6 in. Vehicle traffic = 8 to 10 in.

REQUIRED SAND DEPTH:

1 to 1-1/2 in.

12

A masonry wet saw allows you to cut pavers to the size and shape needed for your project. These saws are available at most rental centers.



We laid a simple basket-weave pattern starting against the structure and then worked our way toward the border. Adjust the sand under the pavers as needed.

COMMON PAVER STYLES



ful for setting the pavers flush with one another. Pull up any pavers that aren't flush, and adjust the sand underneath. Be sure to check often that the work is level. You may occasionally need to make adjustments with the 2x4 screed.

To set the pavers, you'll need to use the tamper again, but this time with a small, flat sheet of plywood to protect the pavers and spread the force evenly. Work from the house, moving back and forth and out toward the border.

Some parts of the border on our

patio needed a second row of pavers, and we secured them with construction adhesive. Depending on how well the patio and soil drains (or doesn't), you may need to create a dry well or two next to the border. This is simply a trench or hole filled with gravel that siphons water away from the patio.

To finish, sweep the polymeric sand into the joints. This sand expands the first time it gets wet and locks the pavers together. It's important that the sand dry thoroughly after wetting, so

don't do this step if rain is imminent.

Although relatively simple and DIY-friendly, building a patio can be physically demanding. Once you're finished, take time to sit back, relax and give your sore muscles a break.

SOURCES ONLINE

For online information, go to www.HandymanClub.com and click on WEB EXTRAS. Boral Bricks, www.boralbricks.com

ADJUST AND FINISH



Set the pavers flush with a tamper and a small piece of 3/4-in.-thick plywood. The plywood spreads the force and protects the pavers from damage.



Use an exterior-rated construction adhesive to bond pavers together. For this project, we added a second row of pavers along the edge of the house.



Finally, sweep polymeric sand into the joints. This sand expands the first time it's exposed to water and locks the pavers into position.



PHOTOS COURTESY MANUFACTURERS

Hardware Show Happenings

News and products from this year's exhibition

Enthusiastic Club members, top manufacturers and industry insiders gathered in Las Vegas for an exciting and fruitful few days at the 2012 National Hardware Show. Read on to learn more about products that caught our eyes and to see highlights from this year's Product Test Shop.



GENERAL TOOLS & INSTRUMENTS IBORESCOPE

Going above and beyond the function of a traditional inspection camera, the iBorescope from General Tools & Instruments (\$299) allows users to transfer high-quality still images and video (captured by the tool's high-definition camera-tipped probe) to iPads and iPhones using its Wi-Fi hotspot capability and free iBorescope app. Useful for countless home-inspection tasks, the camera features a thumbwheel on the pistol grip for adjusting the brightness of the light and a rechargeable Li-Ion battery.



2012 HANDY Innovation Awards Nominee



TORO XTRA SMART PRECISION SOIL MOISTURE SENSOR

Automatically water your lawn when it's thirsty (and avoid running your sprinklers in the rain) using the Toro Xtra Smart Precision Soil Moisture Sensor (\$150). The unit employs Wi-Fi technology to transmit your yard's moisture levels to your irrigation system; the sensor will activate the sprinklers when moisture levels are low or prevent the sprinklers from turning on if moisture levels are high. The battery-powered sensor installs in your turf; the receiver can be installed up to 500 ft. away.



2012 HANDY Innovation Awards Nominee



ARCHWAYS & CEILINGS UNIVERSAL ARCH KIT

The Universal Arch Kit from Archways & Ceilings (\$20) can turn amateur DIYers into archway experts. Its two precut arch boards, which work with wall widths of 4 in. or more, simply screw into place at the corners of an opening; the boards can also be cut in half to create archways in walls up to 12 in. wide. Plenty of online instructions and videos are available to help DIYers and pros alike easily and affordably change cookie-cutter walls into interesting focal points.



2012 HANDY Innovation Awards Nominee

ROTOZIP ROTOSAW

RotoZip's new RotoSaw (\$69) is an ergonomically designed spiral saw that makes plunge and freehand cuts in tile, wood, plastic, laminate, underlayment and drywall. The pistol-grip, 5.5-amp cutting tool is compatible with more than 20 bits for countless home-improvement applications, and it features advanced electronics that can sense if the motor is being overloaded and will automatically slow it down to prevent it from burning out.





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HYDE TOOLS POUR N ROLL

Hyde Tools' Pour n Roll (\$5 to \$6) combines a paint-can pour spout and a mini roller grid for neater, easier painting. The snap-on spout keeps paint out of the rim and makes pouring from a bucket less cumbersome. When you need to paint a small area, attach the grid to the spout frame and use a mini roller right from the can. Two models are available (one for metal cans and one for plastic); both have a brush-rest and a brush-wipe built in.



IMPROVED MASKING TAPES

In checking out the rainbow of painters' tapes at the Hardware Show, we discovered why professional painters



are so selective about which color they use. Manufacturers such as 3M

and ShurTech offer job-specific tape types for the different surfaces and conditions that painters encounter.



To help you understand the options (and the logic behind them), we'll include a

high-tech-tape guide in *HANDY*'s August/September issue. (Preview hint: ScotchBlue isn't just blue anymore, and Frog-Tape isn't just green.)



KREG TOOL RIP-CUT CIRCULAR SAW GUIDE

To make cutting sheet goods easier and safer, Kreg Tool has introduced the Rip-Cut Circular Saw Guide (\$34.99). The guide attaches to most left- or right-hand circular saws and can be reversed for right- or left-hand use. Its 24-in. rule allows you to make straight cuts as wide as a half sheet of plywood. Conversely, you can rip an accurate 1/8-in. piece — or any width between. All assembly hardware is included in the kit. **Continued on p. 42**

SOURCES ONLINE

For online information, go to www.HandymanClub.com and click on WEB EXTRAS.

3M (ScotchBlue Painter's Tape), www.scotchblue.com

Archways & Ceilings (Universal Arch Kit), 855-272-4776, www.archkit.com

Bosch, 877-267-2499, www.boschtools.com

General Tools & Instruments, 800-697-8665, www.generaltools.com

HydeTools Inc., 800-872-4933, www.hydetools.com

Kreg Tool, 800-447-8638, www.kregtool.com

Ridgid, 800-474-3443, www.ridgid.com

RotoZip, 877-768-6947, www.rotozip.com

Ryobi, 800-525-2579, www.ryobitools.com

ShurTech Brands LLC (FrogTape), 877-376-4827, www.frogtape.com

Toro, 877-345-8676, www.toro.com





Product Test Shop Showcase

Another year of inviting Handyman Club members to the National Hardware Show brought great camaraderie and exciting tool performances to the 2012 Product Test Shop. The following tools were reviewed by Club members Kurt Lundquist, Doug Marvel, Leeanne Mackowski and Thomas Baccei. Read more about these inspiring DIYers in this issue's CLUBHOUSE (p. 4).



RYOBI 18V DUAL FUNCTION INFLATOR/DEFLATOR

The One+ 18-volt Li-Ion battery in Ryobi's new Dual Function Inflator/Deflator (about \$40) provides enough oomph to fill low-pressure inflatables such as beach toys as

well as high-pressure items such as car tires. It's even programmable to automatically turn off at any pressure. When you want to deflate an item, simply switch the hose to the deflator port to suck out air quickly and easily.

Also from Ryobi:

18V One+ Lithium Ion Combo Kit, 18V One+
Jobplus Multi-Tool, 18V One+ Impact Driver,
18V One+ Pro-Tip Paint Sprayer, 18V One+ Super Charger

RIDGID ROOFING CUTTER

Ridgid's new pneumatic Roofing Cutter (\$99) boasts 9,600 strokes per minute for effortlessly cutting shingles and other roofing materials. It features a tool-free adjustable exhaust port, a swiveling connector for fewer hose tangles, a self-cleaning in-handle air filter and a light weight of 1.2 pounds for enhanced maneuverability and decreased fatigue.



Also from Ridgid:

18V Hyper-Lithium X4 Combo Kit, 18V Hyper-Lithium Impact Driver Kit, 12V Hyper-Lithium Sub-Compact Drill Kit, Corded JobMax Multi-Tool Kit, JobMax Jigsaw Head, Pneumatic Roofing Nailer

BOSCH GLM 80 LASER DISTANCE MEASURER PLUS R60 DIGITAL LEVEL ATTACHMENT

Combining digital distance and level measurement capabilities into one tool, the Bosch GLM 80 Laser Distance Measurer plus R60 Digital Level Attachment not only measures dimensions with the push of a button (including inaccessible distances around obstacles or places that lack a reflecting surface) but also can transform into a 24-in. digital level for finding precise angles.



Also from Bosch:

Multi-X Oscillating Tool Kit, 18V Compact Tough 1/2-in. Drill/Driver



Washington crossing the Delaware. Eisenhower launching D-Day. Kennedy rescuing the crew of PT 109.

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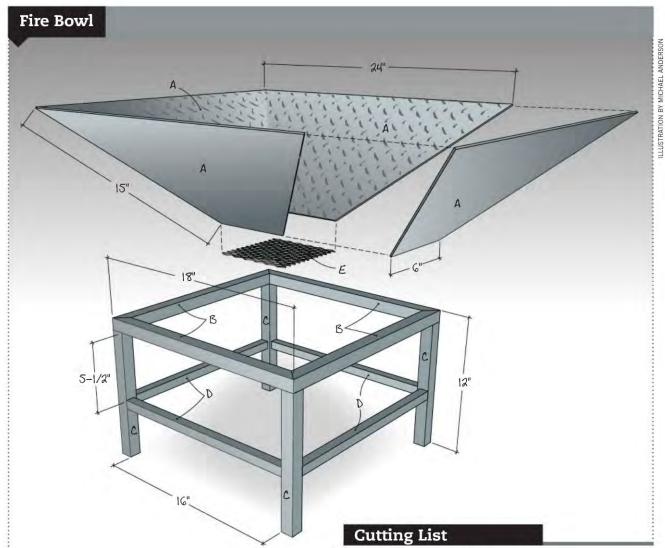
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■ Cut the four sections of diamond-tread plate that will make up the fire bowl according to the dimensions shown in the drawing. There are various ways to cut thick plate such as this; we used an angle grinder outfitted with a metal-cutting wheel. You should be able to cut two sides from each of the 24-in.-sq. sheets.

KEY	NO.	DESCRIPTION	SIZE	
Α	4	Bowl sides	24 x 12 in.	
В	4	Bowl-cradle pieces	1 x 1 x 18 in.	
С	4	Legs	1 x 1 x 11 in.	
D	4	Horizontal supports	3/4 x 3/4 x 16 in.	1

6-3/8 x 6-3/8 in.

Shopping List (All items are steel)

Ash grate

24-in.-sq. sheets of 14-gauge diamond-tread plate (2)

3-ft. lengths of 1-in. hollow square tube (4)

3-ft. lengths of 3/4-in. hollow square tube (2)

12-in.-sq. sheet of 3/4-in. expanded metal mesh (1)



WEB EXTRA

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■ Cut all of the square hollow tube to the lengths specified in the cutting list. Remember to miter each of the ends of the four lengths of 1-in. tube that will form the bowl-cradle pieces (B). A metal-cutting chop saw is the perfect tool for this task, but you can also use an angle grinder outfitted with a metalcutting wheel or a hacksaw. Be careful to cut accurately — otherwise your miters won't fit tightly together.



■ Using 2x4 scraps, build a wooden frame that measures 24-1/8 in. sq. on the inside to serve as an assembly jig for the fire bowl. Position the four bowl sides top-down in the jig so that they all rest together as shown in the photo; then run a weld bead down each of the joints.



■ Use a square to accurately position the four mitered lengths of 1-in. tube that will make up the cradle for the fire bowl. Once the four pieces are properly aligned and square, weld them together.



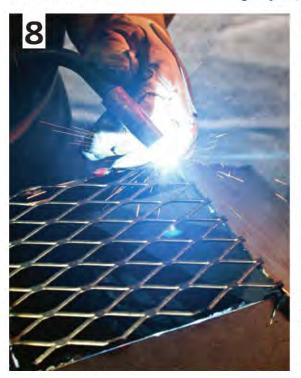
Before doing any more welding, use an angle grinder outfitted with a grinding wheel to smooth the welds at the corners of the bowl cradle.



■ Weld the four legs (C) in position at the corners of the bowl cradle. Use a square to ensure that the legs are properly positioned perpendicular to the cradle. Once you've welded all of the legs in place, grind the welds smooth.



■ Weld the bottom 3/4-in.-sq. horizontal support pieces (D) in place between the legs. Use a 5-1/2-in. scrap of 2x4 to establish the proper position for the support pieces. Once all four are in place, grind the welds smooth.



Cut a 6-3/8-in.-sq. section from the sheet of 3/4-in. expanded metal mesh. Position it over the bottom of the fire bowl; then weld it in place. (By cutting the mesh just a tiny bit oversize, you'll have metal to work with as the ends of the mesh melt during the welding process.) Grind any remaining welds smooth, clean the entire assembly with mineral spirits and then paint it with your choice of a hightemperature grill or engine-block paint. Or you can leave it unfinished and your fire bowl will develop a nice patina of rust as it weathers.

SAFETY PRECAUTIONS

Working safely and using the fire bowl in a responsible manner will reduce your chances of an accident or injury. Be sure to wear the appropriate safety gear and clothing for welding and metalworking. Clothing should be made of fire-retardant cotton or wool, never synthetics, which can melt. Always wear a helmet when welding and a full face shield when grinding. Also wear leather welding gloves to protect against burns. Of course, you should always work in a well-ventilated area.

Most communities have rules that regulate recreational fires. Typically, fires can be no more than 3 ft. dia. and should be at least 25 ft. from any structure. Check with your local codes authority to be sure you're in compliance. Finally, burn only cut firewood — never burn construction scraps, particularly any pressure-treated wood.

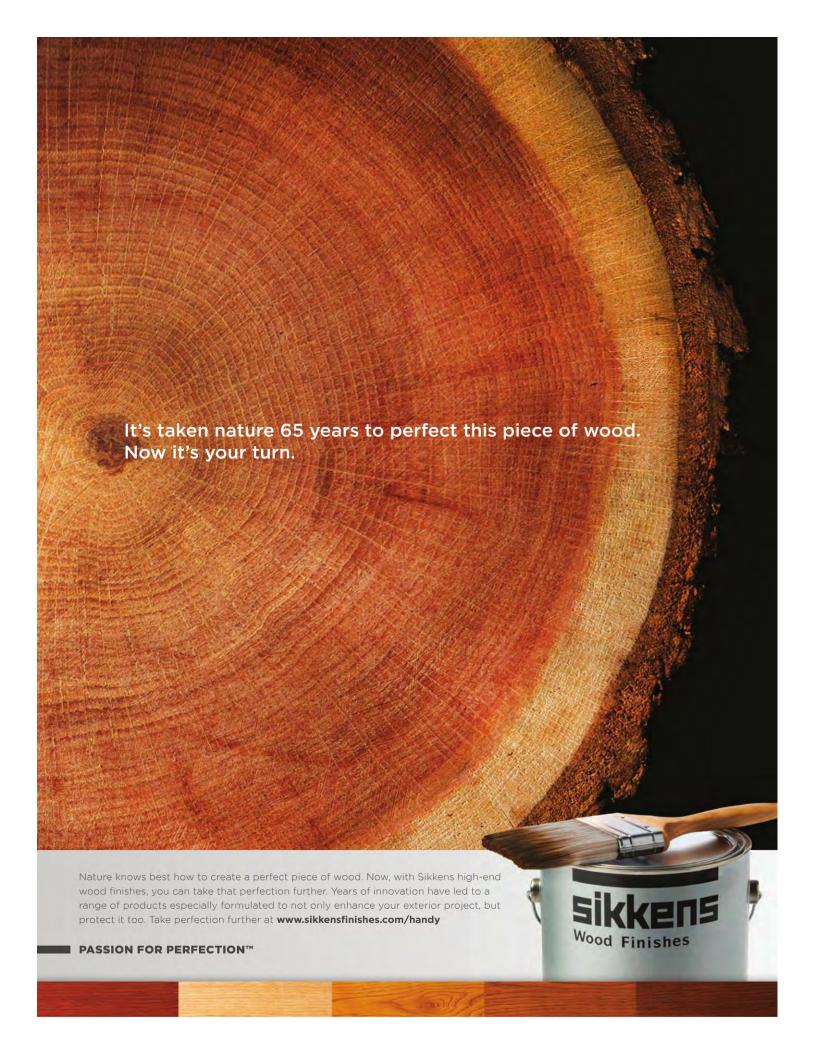


Table Saw Safety Basics

Take the proper steps to avoid regrets

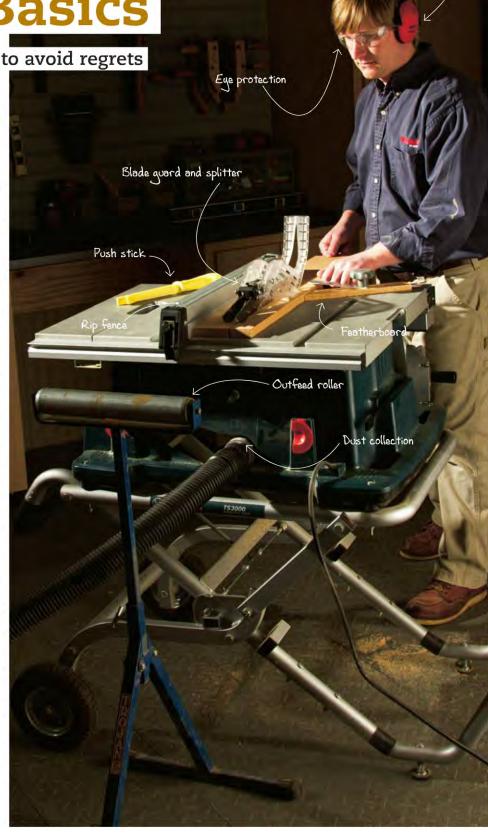
Every step you take to correctly operate power tools reduces your chance of an accident and injury. And playing by the book is especially important when you're using a table saw. Because these machines are so popular and require more care than most tools, improper setup and operation cause a disproportionate number of accidents among the people who use them.

Though we can't address every possible setup and safety issue in a single magazine article, we want to help you avoid the most common pitfalls associated with table saws. Even if you already have years of experience with these machines, you can use the following guidelines to assess your work habits — and break the bad ones before they cause problems.

SETUP FIRST

Proper setup is absolutely essential for the safe and accurate operation of a table saw. For example, if the fence and miter-gauge slots aren't parallel with the blade, stock can bind, burn or kick back, and you won't get an accurate cut. Adjusting the fence and blade carriage is critical. (Refer to your saw's manual for specific instructions.)

The safety devices included with every table saw — blade guard, antikickback pawls and splitter or riving knife — should be used for all through rip cuts and crosscuts. There are a few occasions when it's not practical to use the guards, mainly when the blade does not cut entirely through the stock (for dadoes, rabbets and grooves). In these situations, use other safety devices to help keep your hands well away from the blade. Keep push sticks within easy reach to use with narrow workpieces, and use featherboards to push stock



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against the fence so that your hands don't have to. Of course, you should always wear safety glasses and hearing protection — and a dust mask if a vacuum dust collector isn't hooked up. And never, ever forget to unplug the saw when changing the blade.

SIMPLE RULES

An important rule of thumb (assuming you want to keep yours) is to avoid operations that can cause kick-

back: Any cut that has the potential to bind stock between the fence and blade, cutting wet or case-hardened stock (dry on the outside, damp on the inside), using the fence as a guide to crosscut narrow stock, cutting irregular-shape stock and attempting any sort of freehand cutting are not worth the risk.

Pay attention to your gut instincts; if something doesn't feel right, stop. Always keep your hands away from the spinning blade — if the proxim-



WEB EXTRA

To see a video about changing a table saw blade, and one on making safe cuts, scan this tag with your smartphone or go to HandymanClub.com and click on Web Extras.

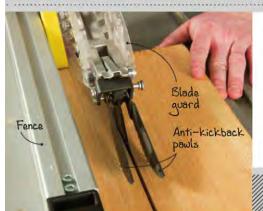
ity of your hand to the blade is stressing you out, you're probably too close. If you find yourself wishing that the saw table were free of debris, stop and clean it. (Keep the floor under

Steps to Safety



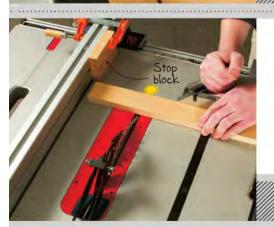
To ensure square cuts, use a combination square to check that the blade is perpendicular to the saw table. The angle gauge on the front of the saw should be set on, or adjusted to, 0 degrees.





The fence, blade guard, antikickback pawls and riving knife (or splitter) should always be used for rip cuts. Kickback can result if the fence or splitter is not parallel or not in line with the blade. For narrow cuts such as this, always use a push stick.





To make short repeatable cuts with a miter gauge, clamp a stop block to the fence behind the saw blade. The block should be thick enough so the cut piece won't bind between the blade and the fence. (Note: The blade guard has been removed for photo clarity.)



BASICS

the saw clean, too. It's easy to slip on sawdust.) Don't wear baggy or loose-fitting clothes or any kind of gloves: A spinning blade can snag them and pull you in.

Perhaps most important, never work when you're fatigued or need to eat. To be safe, your brain must be engaged and focused. Resist the temptation to keep going and make that "one last cut" because you might wind up cutting the wrong thing.

- The blade should be parallel with the miter slot. The rule of the combination square should contact the tips on the front and back of the blade. If it doesn't, the saw carriage needs to be adjusted. Refer to the saw's instruction manual.
- A featherboard can be helpful to push stock against the fence. The featherboard ends before the front of the blade to avoid pushing work into the blade. Note that the blade height is set so the gullets are just above the stock.

When making cuts that don't go through the stock, such as grooves and dadoes, you'll need to remove the guard and lower the riving knife or remove the splitter. Never attempt to make cuts freehand; always use a miter gauge or fence.



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fabrics that provide years of reliable use, these kits can be installed over an existing deck or patio.

Before you buy a kit, however, it's important to understand the various models' differences. Some need to be completely disassembled before cold weather hits; others can be left in place and used year-round. Here's a look at what's available and a step-by-step example of how easy it can be to create a comfortable outdoor retreat.

LOTS OF CHOICES

The type of enclosure you choose to build will depend mainly on two closely related factors: permanency and price. The more permanent the structure, the more expensive it will be. The good news: You can find kits that will fit almost any budget. Here are the three basic types of screened structures:

• Cabanas - An elegant step up from a tent (bottom photo), this type of enclosure typically has a set of upright columns supporting a framework covered with a light fabric roof and pull-back curtains. It's a lightweight, temporary, affordable structure that's versatile because it is not tied to one location. You can set it up over your deck for general use; then carry it to a spot in your yard as your outdoor entertaining needs change.

Ranging in price from about \$150 to \$400, screened cabanas are sold under a variety of brand names at most home-improvement stores. They provide shade and moderate protection from insects — because the curtains are not attached to a bottom frame-

Cabanas are the most affordable type of screened enclosure. They're easy to assemble, but because of their lightweight construction, they must be removed before winter.





A permanent structure with a solid roof such as this one from ShadePorch protects you from harsh sunlight as well as insects. Its insulated roof and sliding window panels help to retain warmth during cool evenings.

work, bugs can enter when the screening billows in a breeze.

• Seasonal rooms - This more lasting approach is a permanently installed metal-frame structure with rigid removable screen panels and a fabric roof. Sold at many homeimprovement stores and through a variety of online retailers, these kits range from about \$600 to \$2,000, depending primarily on size.

Seasonal rooms are not strong enough to withstand snow loads and must be disassembled in the late fall in many climates. However, they do provide better insect protection than a cabana, as the screens are framed in rigid panels that extend to the floor.

One drawback is sizing. The number of a kit's screen panels determines the overall room size. Each panel is typically about 4 ft. wide. If the area where you plan to install a seasonal room is limited, or if its dimensions aren't equally divisible by 4 ft., you will have limited options. For example, if you want a kit for a 11-ft. x 14-ft. deck, the closest size kit you could purchase would in most cases be 8 ft. x 12 ft., leaving an awkward area of your deck



SCREENING IN AN EXISTING STRUCTURE

If your home has a covered porch, you may be able to easily turn it into a screened enclosure. Components such as those from ScreenEze (see SOURC-ES ONLINE) allow you to quickly install screens over open framework. Consisting of an extruded-aluminum base and a vinyl cap, these systems can be screwed directly to most wooden structures, eliminating the need to build separate screen frames. - MB





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inaccessible and unused.

• Permanent structures — If you want a screened room that is usable all year, never needs to be disassembled and (in some cases) can even be glass-enclosed, you'll want to build a permanent structure. This is the most expensive option, costing from a few thousand dollars to as much as \$10,000, depending on size and features.

These kits, available from manufacturers such as SunPorch and Shade-Porch (photos, p. 56), feature roofs that can withstand snow loads, and they have permanent panels that do not need to be removed before winter. They also provide the best protection from insects and sun.

Whether you decide to build a simple cabana or a more permanent

Typical Assembly Steps

BUILDING A CABANA KIT

Because screened rooms are usually not considered part of a home's permanent structure, they typically don't require a building permit — provided you're installing the enclosure over an existing deck or patio. As always, check with local building-code officials about any applicable requirements before you buy.

For this project, we assembled a cabana-style structure to fit a moderate-size deck. Although each type of kit (and each brand) has unique requirements, all cabana kits follow a similar assembly process. Start by opening the packaging and laying out all of the components, familiarizing yourself with the parts and the instructions. These photos provide an overview of the typical steps involved in assembling a cabana kit.



Start by assembling the columns. In most cases you'll need to attach bases and top brackets.



Connect the segments that will form the main perimeter framework of the structure.



Identify the framework sections for the front and back walls. Lay them on a flat surface; then connect them to their respective columns.



■ While a helper holds the back wall in position, raise the front wall; then connect the sections of framework that will span the front and back walls. Use a square to make sure the structure is not racked.

PROJECTS

structure, do plenty of research before you buy. Many manufacturers have online planning tools that help you determine the components you'll need and estimate the cost. Analyze how you will use the room once it's built, and weigh that against the price. If you think your needs may change over time, look for a kit that can be adapted as necessary.



Attach the roof framework to the wall structures and the main columns.



Spread the fabric over the roof framework. Pull it snug and then fasten it to its mounting points. In this case, simple fabric pockets slip over rod ends. Hang the screens and you're ready to enjoy insect-free outdoor fun.

SOURCES ONLINE

For online information, go to www.HandymanClub.com and click on WEB EXTRAS.

ScreenEze

800-884-6697, www.screeneze.com

SunPorch/ShadePorch

800-221-2550, www.sunporch.com

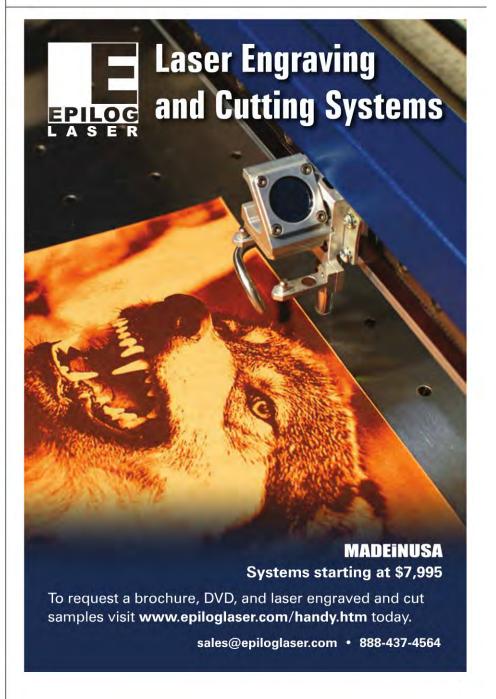
Walmart Stores Inc.

(cabana shelter; model No. 5KGZ7187), www.walmart.com



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PHARAOH-SIZE BED

"In a moment of crazed inspiration, I decided to make a kingsize bed large enough and dramatic enough to fill a spacious bedroom with towering 12-1/2-ft. ceilings," says Club member Paolo Sapienza of San Francisco, California. To complement his home's Victorian style, Paolo designed the piece with Egyptian

accents, which he says often appeared in Victorian décor. He used Tennessee red cedar for the headboard and footboard and chose black walnut for the posts, rails and decorative accents. Paolo chiseled the large mortise-andtenon joints by hand and carved the Egyptian iconography with care. "I really enjoyed the carving and recommend it to anyone who likes a rustic,

primitive look and hates sanding as much as I do," he says.

COMPACT TOOL CART

In preparation for his move to a new home with a smaller shop, Club member Bob Sporlein of Gamaliel, Arkansas, built this portable toolstorage project using a 30 x 30-in. wall cabinet. He secured the cabinet to a

VOTE NOW

small platform with wheels and topped it with a Formica countertop for a durable work surface. The cabinet features a lot of interior storage for power-tool cases and other containers, and the exterior is covered with pegboard for hanging hand tools within easy reach.

PRACTICAL PRIVACY FENCE

Club member and contractor Monte Eakin of Rocky Mount, Virginia, designed and built this decorative privacy fence for customers who wanted to gain a little demarcation in their backyard without completely blocking out their neighbors. Monte created two 6 x 4-ft. outer panels and one 2 x 6-ft. center panel. For a unique touch, he cut out and framed space for a piece of stained glass in one of the large panels. He also topped each post with a decorative cap. But perhaps the most impressive aspect of this project is that the total cost of materials was just \$250.

DECK REVIVAL _"Two years ago, our house burned to the ground," says Club member Tom Ferry of Dewey, Arizona. "The only thing the firemen saved was part of the back deck." After the home was rebuilt, there wasn't enough insurance money left to pay for a new deck, but that didn't deter Tom: He salvaged some 2x6s from what was left of the old deck, found some tongue-and-groove pine for a good price at an auction and even collected free cedar stakes from a nursery to use as railing stiles. All of the old materials look as good as new, and Tom has a cool story to tell about the beautiful covered deck on the front of his new home.

VOTE ONLINE FOR YOUR FAVORITE PROJECT

Vote online for one of these projects to receive the Critics' Choice Award. Go to www.HandymanClub.com and click on WEB EXTRAS.

- 1 PHARAOH-SIZE BED
- 2 COMPACT TOOL CART
- 3 PRACTICAL PRIVACY FENCE
- 4 DECK REVIVAL

Voting for this issue ends July 31, 2012. The winner will be announced in the October/November 2012 issue.

SHOW OFF YOUR PROJECT

To have your project considered, send:

- 1. A photo of your project
- 2. A detailed description of your project Address to:

HandyWorks (or GoodWorks) c/o Jenny Stanley HANDY 12301 Whitewater Drive Minnetonka, MN 55343

Or e-mail to:

HandyWorks@HandymanClub.com or GoodWorks@HandymanClub.com
We regret that we cannot acknowledge or return submissions.

CRITICS' CHOICE AWARD

Winner: Corrie Everhart of Pikesville, MD Project: "Jumbo Jewelry Box,"

February/March 2012

Prize: Corrie will receive an official certificate and a GLM 80+R 60 digital distance measurer with level attachment from Bosch. Congratulations, Corrie!







GOODWORKS

HANDY APPLAUDS THOSE WHO EXTEND A HELPING HAND



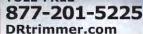
LOWE'S HEROES

It's no secret that Lowe's employees have a passion for home improvement, but did you know that they also have a passion for improving the lives of others in their communities? Lowe's Heroes is a companywide program that encour-

ages employees to work together on volunteer projects such as building play-grounds, renovating homes for veterans, refurbishing community ice rinks, rebuilding after severe storms and more. In 2011 Lowe's Heroes completed 1,400 projects, and the company contributed \$1.8 million in materials — a great example of handy people offering a hand to neighbors in need!









Home and Shop Solutions



STACKING PANEL CLAMPS

"I built myself a set of stacking panel clamps using 2x4 lumber, threaded rod, BEST TIP WINNER \$200

ultra-high-molecular-weight polyethylene (UHMW) salvaged from a sawmill and skate laces," says Club member Jeff Warkentin of Leoville, Saskatchewan, Canada. He cut the rod into short pieces to serve as clamping posts and cut teardrop cams out of the UHMW. "I maintain clamping tension by cinching the cams together with the laces," Jeff adds. He has employed this clamping system to create panels out of reclaimed barn boards, which he uses to build blanket boxes.

SUBMIT YOUR TIP:

The member who submits the best tip wins \$200. Other published tips are awarded \$50. Submit your tips by e-mail to:

tiptrader@HandymanClub.com

or mail them to:

Tip Trader c/o Jenny Stanley HANDY, 12301 Whitewater Drive Minnetonka, MN 55343

Include your name, member number, address and daytime phone number. Sketches and photos are welcome. We regret that we cannot acknowledge or return submissions.

MEASURING AN OPENING

"I've found that two sticks of wood can form the perfect tool to take measurements of an inside opening, such as a door or window frame," says Club member James Edwards of Northport, Alabama. He recommends holding two sticks side by side so that the opposite ends touch the opposite edges of the opening. Secure the sticks with a spring clamp and you'll have a portable story stick of the dimension.

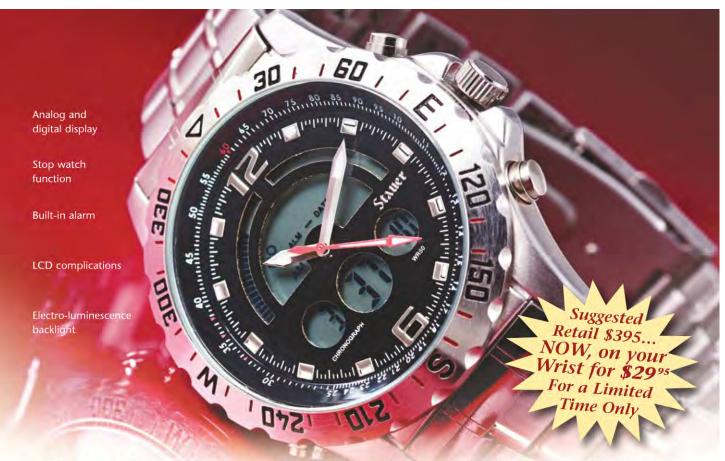
James suggests taking this tip a step further by screwing a piece of plywood to each stick, as shown in the photo; then scribing and cutting the plywood pieces to fit the exact shape of the opening. This works as a jig for projects such as creating a door threshold.



CORNER-SANDING TOOL

Club member Phil Duck of Columbia, South Carolina, created this easy-to-use handheld sanding tool for quick detail jobs. It features an ergonomic handle, and the face is cut to accommodate self-adhering triangular sanding pads. "The tool is comfortable to work with and saves me the trouble of finding and setting up a full-size electric sander when I'm busy working on a project," Phil says.





Amazing New Hybrid Runs Without Gas

The new face of time? Stauer's Compendium Hybrid fuses form and functionality for UNDER \$30! Read on...

Innovation is the path to the future. Stauer takes that seriously. That's why we developed the Compendium Hybrid, a stunningly-designed hybrid chronograph with over one dozen analog and digital functions that is more versatile than any watch that we have ever engineered.

New technology usually starts out at astronomical prices and then comes down years later. We skipped that step to allow everyone the chance to experience this watch's brilliant fusion of technology and style. We originally priced the Stauer Compendium Hybrid at \$395 based on the market for advanced sports watches... but then stopped ourselves. Since this is no ordinary economy, we decided to offer the Compendium Hybrid at 92% off. That means this new technological marvel can be yours for only \$2995!

Welcome a new Digital Revolution.

With the release of the dynamic new Compendium, those boxy, plastic wrist calculators of the past have been replaced by this luxurious LCD chronograph that is sophisticated enough for a formal evening out, but rugged and tough

enough to feel at home in a cockpit, camping expedition or covert mission.

The watch's extraordinary dial seamlessly blends an analog watch face with a stylish digital display. Three super-bright luminous hands keep time along the inner

dial, while a trio of circular LCD windows track the hour, minutes and seconds. An eye-catching digital semi-circle animates in time with the second hand and shows the day of the The Compendium: The week. The watch also latest watch technology. features a rotating



bezel, stopwatch and alarm functions and green electro-luminescence backlight. The Compendium Hybrid secures with a rugged stainless steel band and is waterresistant to 3 ATMs.

Guaranteed to change the way you look at time. At Stauer, we believe that when faced with an uphill economy, innovation and better value will always provide a much-needed boost. Stauer is so confident of their latest hybrid timepiece that we offer a money-back-guarantee. If for any reason you aren't fully impressed by the performance and innovation of the Stauer Compendium Hybrid for \$2995, simply return the watch within 30 days for a full refund of the purchase price. The unique design of the Compendium greatly limits our production, so don't hesitate to order! Remember: progress and innovation wait for no one!

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Moldy sealant

Recommendations?

Betty Galloway

Many factors can cause mold under warranty or to seek advice?

Because we don't know what type of material the surround is, let's clarify a couple of terms. Grout is a hardened porous material typically used to fill the spaces between stone or ceramic tiles. If the problem is with grout, it may not have been sealed (ideally after it was cured but before the shower was used). In that case, try to clean the grout with

ide to two parts water. (Don't use chlorine bleach; it can make white grout turn yellow.) Once you're certain that the mold has been eliminated, allow the grout to dry for several days (checking that mold stains do not redevelop) and then apply grout sealer according to the manufacturer's instructions. A second application of sealer - and periodic reapplications — may be needed.

If the surround is a solid-surface material or an acrylic or fiberglass panel, it should have been sealed along seams and edges using a silicone (or part-silicone) caulk sealant - not grout. Most kitchen-and-bath caulks are made with an antimicrobial ingredient to discourage mold growth. If mold is embedded in the caulk (not just on the surface), the caulk needs to be removed and the area thoroughly cleaned and dried before a new, moldresistant sealant is applied. Again, it's important to ensure that there is no source of water intrusion from behind the wall surface. Use of a proper-size bath vent is also essential in curbing humidity and preventing mold.

My sister had a new tub surround installed and she is having a major problem keeping the grout around it clean. Apparently it is quickly getting moldy.

Via Facebook

to develop, especially in a humid environment such as a bath. The mold's recurrence indicates that the moisture/mold source may be coming from inside the shower wall rather than from splashed water. If the mold is most concentrated near the faucet or plumbing lines, it might be due to a leaky connection inside the wall. Has your sister contacted the installer to see whether the surround is

a mixture of one part hydrogen perox-

SUBMIT QUESTIONS TO:

expertanswers@HandymanClub.com

Include your name, member number, address, daytime phone and e-mail address. Sketches and photos are welcome. We regret that we cannot respond personally to all questions. For the fastest answers, post questions on our Club's online forum at:

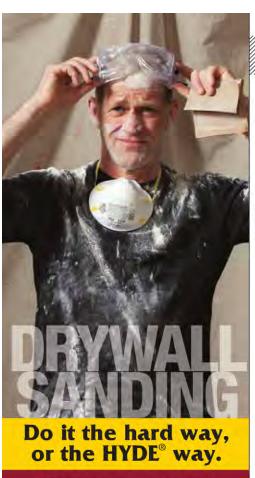
www.HandymanClub.com

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or mail them to:

Expert Answers c/o Connie Bastyr HANDY, 12301 Whitewater Drive Minnetonka, MN 55343

Quiz answers: 1) p. 30; 2) p. 22; 3) p. 18; 4) p. 50; 5) p. 12





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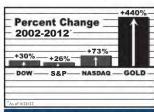
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This seal is awarded to products that at least two out of three testers recommend to fellow Club members. The test scores are compiled from all test reports. Ratings are based on a scale of 1 to 10, with 10 being the highest.





Compact saw

MEMBER RATING: 9.1 BEST FEATURE: QUALITY

Dremel, 800-437-3635 www.dremel.com

The Dremel Saw-Max (\$129.99) is a compact, handheld saw that makes precise, clean, straight cuts while allowing for detailed work in tight spaces. It offers easy one-hand operation and features quick-change cutting wheels that make straight, plunge or flush cuts up to 3/4 in. deep in wood, plastic, laminates, drywall, sheet metal and tile. The kit includes a 3-in. multipurpose carbide wheel, a 3-in. metal cutoff wheel, a 3-in. tile diamond wheel and a 3-in. multipurpose flushcut wheel.

Henry Cunningham, Morrice, MI: "I cut tile, plywood, 2x4s, cement board and drywall with the Saw-Max, and it performed extremely well. It's now my go-to cutting tool." David Appleby, Port Neches, TX: "It's great for plunge cutting, especially when cutting outlets in panels or drywall, and it's perfect for trim and finish work where attention to detail is important."



Metalworking machine

MEMBER RATING: 8.5

BEST FEATURE: PERFORMANCE

Multiplaz LLC, (855) 314-5551 www.multiplaz.com

The Multiplaz 3500 (\$1,995) uses a patented welding technology that turns ordinary tap water into plasma so you can weld, solder, braze, harden and cleanse steel, aluminum, copper, cast iron, bronze and other metals. This compact system can be easily transported in a tool bag, and it replaces a variety of tools such as a welding machine, a gas torch, a plasma cutter, an inverter welder and more. Other features include two torches (to easily switch between cutting and welding applications) and the ability to cut ceramic tiles, quartz glass, bricks, concrete and other nonflammable materials.

Brian Torkelson, Princeton, MN: "I used the Multiplaz 3500 for welding brass, aluminum and stainless steel. It's portable, easy to maneuver and more convenient to use than my big, bulky stick welder."

Jerry Vreeman, Colorado Springs, CO: "The versatility and overall engineering make it a great tool. I enjoyed the fusion style of Mode 1, but Mode 2 with wire might become my favorite. It's now my first choice for remote locations and emergency welding."



Acrylic-block door insert

MEMBER RATING: 8.5

BEST FEATURE: NATURAL LIGHT IN HOME Hy-Lite, a U.S. Block Windows Co. 888-256-2599, www.hy-lite.com

The Hy-Lite Acrylic Block Door Insert (starting at \$117) provides a window for natural light without compromising privacy. The preassembled units (which take about 90 minutes to install) transform ordinary doors into distinctive design elements. The acrylic block weighs 70 percent less than glass, so the door will open and close easily. The inserts are available in three block patterns, feature a white frame and have a full five-year warranty.

Ralph Larsen, Sanford, NC: "The insert was fairly easy to install in my solid-core door. It looked like a custom-made door when I was finished."

Vanessa Alexander, Simpsonville, SC: "Everything arrived in excellent condition, and the installation instructions were easy to understand and follow."

HCOA RECOMMENDED

Products earn additional seals when favorable ratings are received from Club members who are trades contractors, automotive mechanics or avid woodworkers. These products are identified with Contractor Tested, Mechanic Tested and Woodworker Tested icons.

DEALS & DISCOUNTS

The Deals & Discounts icon appears next to select tested and recommended products to signify a special members-only offer. For details, go to www.HandymanClub.com, roll over the Member Benefits tab and click on Deals & Discounts.

YOU CAN BE A TESTER

To be a product tester, you must fill out a Product Test Profile form. To request a form, call Member Services at 800-243-7679 or go to www.HandymanClub.com and click on the Member Benefits tab. There, you can fill out the form online.

Handheld showerhead

MEMBER RATING: 8.8

BEST FEATURE: EASE OF USE

Moen Inc., 800-289-6636 www.moen.com

Moen's new Twist Handheld Shower (\$64.98) allows you to choose from four spray settings with a flick of your thumb. The immerse setting provides an invigorating, full-coverage spray; the soothe setting offers a heavy, relaxing mist; the drench setting provides a soft-yet-heavy rinse; and the shine setting is a strong, focused spray ideal for cleaning a bathtub and shower. Other features include a 59-in. hose and a limited lifetime warranty.

Steve Saffle, Valley Center, KS: "The shower works extremely well on low water pressure; we can use all the functions with very good performance. Its twist motion rotates very easily."

Bill Davis, Molino, FL: "Assembly and installation took no more than three minutes. The hose has ample length, and it doesn't leak. I'm upgrading my other two showers with this model."



Paint and primer

MEMBER RATING: 8.9

BEST FEATURE: QUALITY

BehrPro, (714) 545-7101 www.behrpro.com

Behr Premium Plus Ultra Paint (\$166 for 5 gallons) is an exterior two-in-one paint and primer that can be used on wood, vinyl, aluminum, fiber cement, siding, brick, masonry, stucco, fences and garage doors. The paint dries in less than two hours and is appropriate for all climates; its protective shell shields against sunlight, moisture, stains and dirt. Kilz Pro-X 310 Interior Flat paint (\$79.47 for 5 gallons) is a high-quality latex paint that offers superior coverage so you can apply fewer coats. It's available in a two-base system (white and dark) with a palette of more than 1,100 colors.

Jose Mujica, Aliso Viejo, CA: "The Premium Plus Ultra Paint has the right viscosity for outdoor jobs, provides a good finish with little paint and offers a vivid and durable color." Jorge Lucano, Carson, CA: "The Pro-X paint has great colors to choose from, and it doesn't have a heavy paint smell."



Custom cellular shades

MEMBER RATING: 9.4

BEST FEATURE: EASE OF INSTALLATION

Redi Shade Inc., 888-608-6611 www.simplefitcustomshades.com

Simple Fit Custom Cellular Shades (starting at \$109) by Redi Shade Inc. are affordable and can be installed in less than 30 seconds without tools or brackets — a patented compression-mount system lets you complete installation with the touch of a button. Once installed, the shades provide effortless, child-safe cordless adjustment. Other features include high-quality honeycomb cellular fabric that's available in both light-filtering and blackout styles, durable aluminum top and bottom rails, multiple color options and an easy online ordering system that allows consumers to customize each shade.

Kathleen Dentler, Pittsburg, PA: "I installed each blind in less than a minute. The colors and custom-fit choices on the Web site are extremely accurate."

Kathleen Barach, Woodstock Valley, CT: "The way that the shades fit into window frames and mount using compression is borderline genius! The shades are sturdy, and operation is smooth."





Paint roller cleaner

MEMBER RATING: 9.0

BEST FEATURE: CLEANING ABILITY NJ Product Development LLC (801) 822-6289, www.thecurlyq.com

The Curly-Q (\$13.90) allows you to quickly and effectively clean rollers without touching paint. Simply push the stainless steel spring down the roller to squeeze most of the paint back into a tray or can; then repeat multiple times under running water. The device features two sizes of rings so you can clean rollers as large as 3/4-in.-nap.

Kevin Morgan, Chester, IL: "Using the Curly-Q cut my cleanup time in half. The amount of excess paint you get off of the rollers is amazing!"

Eugene Bacon, El Paso, TX: "The amount of paint and time saved using the Curly-Q is remarkable. My fingers are clean, I have more time to work on other projects, and I'm reusing my paint rollers instead of throwing them away."



Painting accessory

MEMBER RATING: 8.4

BEST FEATURE: PERFORMANCE Hyde Tools Inc., 800-872-4933

Hyde Tools Inc., 800-872-4933 www.hydetools.com

Hyde's Metal Can Pour & Roll (\$5.93) is a convenient accessory that securely attaches to metal gallon paint cans. Its spout helps you avoids spills when pouring paint, and the opposite side incorporates a paintbrush wipe. A plastic grid attaches to the rim so you can paint with a 4-in. roller directly from the can. The grid has two slots for use with full and partially used paint cans.

David Stringer, East Islip, NY: "The handy 4-in. roller grid is perfect for small paint jobs or touch-up work."

Jerry Rambo, Baraboo, WI: "It eliminated drips down the side of the paint can, saving me from additional cleanup, and it made my painting project more enjoyable."



Grout-removal tool

MEMBER RATING: 8.4 BEST FEATURE: QUALITY Spyder, 888-471-2239 www.spyderproducts.com

Remove grout in a fraction of the time with the Spyder Grout-Out Multi-Pack (\$23.99). The one-piece carbon-steel blade easily fits into any reciprocating saw and features a durable, carbidegrit edge to enhance performance and control while limiting damage to tile and glass. Available in two sizes, the blades power through grout, including urethane and epoxy, and can be used on joints from 1/16 in. to 1/4 in. wide.

Patrick Rossini, Hibbing, MN: "I used the Spyder Grout-Out to remove 50 linear feet of grout and it worked great! It cut my labor time in half, and the blade never seemed to get dull."

Edward Lee, St. Louis, MO: "I've used about every grout-removing tool you can imagine, and this is by far the best tool for the job. It's a lot easier to control, and it cuts through grout like butter."

Belt hook

MEMBER RATING: 7.6 BEST FEATURE: DURABILITY

PDP Innovations, 800-496-4153, www.thegorillahook.com

Made from a durable and dense plastic, the Gorilla Hook (\$14.99) offers strength and security while keeping your tools easily accessible. It slides onto any regular belt or most tool belts and incorporates a locking hook that holds cordless drills, nail guns and more.

Dale Szymanowski, Maumee, OH: "With the Gorilla Hook holding my drill, my project was finished in record time. The latch keeps the tool where you need it, and the tool doesn't drop."

David Hall, Commerce Township, MI: "It was well-balanced and felt very comfortable with my drill in it. The drill was easy to remove from the holder when needed. I'll be using this for all of my projects from now on."



Folding knife

MEMBER RATING: 8.7 BEST FEATURE: PERFORMANCE Columbia River Knife & Tool, 800-891-3100, www.crkt.com

Weighing only 2.5 ounces, the CRKT Aluminum Ripple Folding Knife (model No. K415KXP, \$59.99) has a stainless steel blade that opens instantly when you press the blade flipper with either hand, and a locking liner holds it in place. The blade, which features a high-hollow grind and satin finish, also has a ball detent for safety while closed. Its aluminum handle is machined with more than 40 lightening holes and small ripples that are polished at the tops to create a pocket-worn finish. The handle also includes a removable stainless steel clip.



Justin Gordon, Putnam, CT: "This is the sharpest knife out of the package that I have ever owned. It's extremely lightweight and comfortable to handle."

Michael Rufener, Madras, OR: "It's smoother to open and close than all of my other knives; plus it holds an edge longer and is easier to sharpen."

AC and USB wall outlet

MEMBER RATING: 8.9 BEST FEATURE: CONVENIENCE

Newer Technology Inc., 800-275-4576, www.macsales.com

The Newer Technology Power2U AC/ USB Wall Outlet (\$27.99 each, \$22.95 for two or more) is a dual-socket, in-wall outlet that includes two USB charging ports for use with iPods, iPads and other USB-charging devices. According to Newer Technology, it's the only ULlisted in-wall USB charging solution that will work on any 15-amp circuit with a 16-cu.-in. electrical box. It even limits charging power to the amount required by the attached device.

Michael Haberman, Trinidad, TX: "It's a must-have for anyone who has multiple devices that use a USB charging system. The design of the outlet is great."

Timothy Allen, Metamora, IL: "The USB ports are spaced far enough out that the standard plug-in transformers do not interfere with the USB ports."



Retractable towel ring

MEMBER RATING: 7.9

BEST FEATURE: APPEARANCE

Moen Inc., 800-289-6636 www.moen.com

Moen's Retractable Towel Ring (\$19.99) keeps hand and kitchen towels off of counters and floors. It features a stamped-steel mounting bracket for secure connection to the wall, expands out to 11 in. from the base and effortlessly retracts back to its original position. It can be used in bathrooms, kitchens, utility rooms, garages, etc.

Thomas Detweiler, Mountain Top, PA: "The towel ring was easy to install, and I love the retractable cord. It's used on a daily basis, and the towel is always handy yet out of the

Charles Cohen, Palm Coast, FL: "It's very sturdy, and we love that the retractable ring holds the towel so we don't have to remove it with each use."



Workpiece grips

MEMBER RATING: 9.1

BEST FEATURE: EASE OF USE

Milescraft Inc., (847) 683-9200

www.milescraft.com

TriGrips (\$11.99 for a pack of four) securely hold projects in place for routing, sanding, painting, drilling, carving and more. When laid flat, the grips' nonslip friction pads hold projects 1-3/16 in. above the work surface without the need for clamps. When set on end, the cone-shape tip raises the workpiece 3 in. above the work surface, making it a perfect painting support.

Dustin Walker, Fort Wayne, IN: "The gripping texture makes for an extremely nonslip surface, and the pointy end is very helpful as well."

Donald DiRienzo, Sandown, NH: "It grips well on rough and smooth surfaces for sanding or routing, and the shape permits use with odd-shape pieces."



Can you find the following photos in this issue of HANDY?











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Remember to include your membership number on all correspondence and have it ready when you call.

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Check out this issue's GREAT GIVEAWAY on p. 72.

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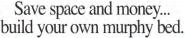
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ABC's 20/20 "SPEED DATE" TEST SHOWS ATHENA PHEROMONES CAN INCREASE SEX APPEAL.

MESSAGE FROM DR. CUTLER

Dr. Cutler has a Ph.D. in biology from University of Penn, post-doc at Stanford. Co-discovered human pheromones in 1986 (Time 12/1/86: and Newsweek 1/12/87).

When ABC 20/20's television crew came out to Athena Institute to interview me, I had no idea of what "test" they might perform on my two pheromone cosmetics. And I did not suggest one. When I saw their 12/9/05 telecast, I found out. ABC 20/20 cleverly picked a "speed dating" contest with identical sets of twins.

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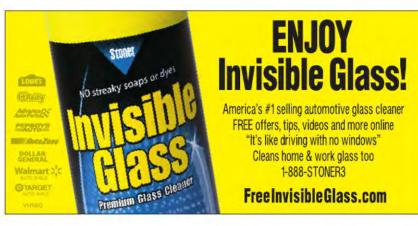
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Paving Our Way Stepping stones down memory lane

It's funny how modern methods of-ten take us full circle. Such is the case with today's patio pavers. Though asphalt and poured concrete have long been considered state-of-the-art for building roads, the rock-solid benefits of the oldschool approach to surfacing have given pavers newfound popularity: They allow DIYers to form a heavy-duty surface without heavy equipment, one block at a time - just like early road builders.

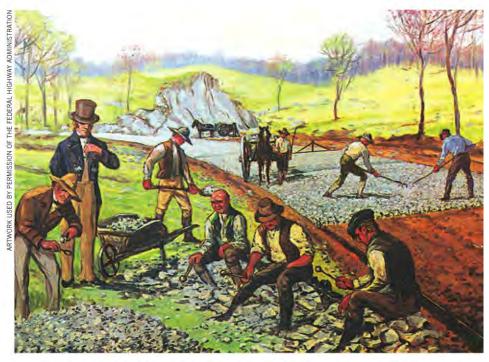
Before paved roads, travel was a dirty proposition. Heels and wheels met with mud or dust, ruts and roots, potholes and puddles. Roads were essentially well-traveled pathways that had been cleared of trees, boulders and other obstacles and compacted through heavy use. To create cleaner, slightly more even roads, early street builders used stones or bricks. Where abundantly available, round rocks (called cobbles) were collected from rivers and fields and placed in beds of sand and gravel, sometimes with concrete mortar. The surface, albeit a bit bumpy, provided some traction and kept travelers out of the mud.

In the 18th century, roads began to incorporate blocks cut from quarried granite. Like cobblestones, they were set on a coarse sand base and grouted with sand or a tarlike substance. In regions where stone was not available, fired-clay

HANDY FACT:

Tarmac refers to a 1902 patent by British surveyor Edgar Hooley, who noticed that dirt plus tar from a tipped barrel created a smooth, dust-free surface. He combined the tar topping with a macadam roadbed and called the treatment tarmac.

Turnpikes were so named during the early 1800s in England, where landowners charged a toll for public use of their private roads. Their roads were blocked with long poles (pikes), which were turned when the fee was paid.



bricks were used. And in places where both clay and stone were in short supply, some roads were paved with blocks or discs made of wood (which made for a much quieter ride through town).

During the mid-1800s, the popularity of bicycles began to drive further improvements in road surfacing. The League of American Wheelmen was organized in 1880, largely to lobby for tire-friendly roads. By the early 1900s, the automobile took over the primary use of paved roads and prompted the development of stronger, longer routes, leading to thousands of miles of highways. Asphalt and concrete became the standards for covering these vast systems of roads and endless acres of parking lots.

Meanwhile, as European cities began to rebuild after WWII, many incorporated stone and brick pavers into their streets. To meet the trend, German engineer Fritz Von Langsdorff designed interlocking shapes and offered better colorations for concrete pavers. With the development of machinery to efficiently manufacture concrete pavers,

During the early 1800s, Scotsman John McAdam determined that roads made of small angular stones in compacted layers were more stable than those made with large slabs of stone. This 1823 painting depicts the first American macadam road.

their use spread throughout Europe and to other continents such as Africa and Australia. North Americans first began to appreciate concrete pavers in the 1970s, and demand for them has steadily increased since.

Today, manufacturers are introducing designs that allow more water to drain between the blocks and filter into the soil. And in a wonderfully full-circle development, eco-conscious companies have created composite pavers using (of all things) recycled tires. Centuries after it began, paver progress continues without a roadblock in sight.



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