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HANDY (ISSN 1531-569x) is published bimonthly by the Handyman Club of America, 12301 Whitewater Drive, Minnesota 55343-9447. To become a Club member, send \$18 annual dues to: Handyman Club of America, Box 3401, Hopkins, MN 55343-2101. For Canadian membership, please send \$36 Canadian funds (including 5% GST) for annual dues. Eighty-four percent of each year's dues is for an annual subscription to HANDY. Periodicals postage paid at Hopkins, MN, and additional mailing offices. Direct editorial inquiries to HANDY, 12301 Whitewater Dr., Minnetonka, MN 55343-2101. POSTMASTER: Send address changes to HANDY, Box 3401, Hopkins, MN 55343-2101. Canadian Post Publication Mail Agreement No. 40063731. Return undeliverable Canadian addresses to: HANDY, Station A, PO Box 54, Windsor, Ont. N9A 6J5. E-mail: returnsIL@imex.pb.com. Canadian GST registration number R131271496. Copyright 2011, North American Membership Group, Inc. All rights reserved. Produced in U.S.A. Volume 19, Number 4, Issue 107.

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CLUBHOUSE

Make a Difference

How can we help you help others?

eople who possess handy skills can make substantive and immediate improvements in the lives of others. For example, in the aftermath of this spring's disastrous weather, news reports showed people working to help tornado victims dig out, repair and rebuild homes and businesses. But you don't need to wait for a disaster to put your abilities to good use.

As citizens, neighbors, friends and family members, none of us lives in a vacuum. We depend on each other — and our government, private enterprise and religious institutions — to make our society whole, civilized and livable. And when the need arises, there's nothing quite as satisfy-



We would like to know how you're pitching in to help others.

ing as altruistically pitching in. Donating money is probably the most common and convenient way to help others, but offering your time and experience is a precious gift that demonstrates true dedication. Whether it's teaching a neighborhood kid some DIY skills, assisting with a Habitat for Humanity project or working to save an elderly person's home from disintegrating, there are countless ways you can use your know-how to improve your community.

At *HANDY*, we want to help you help others. So we're asking you to tell us how you've put your DIY skills to good use. You can submit an entry to the GOODWORKS department (GoodWorks@HandymanClub.com; see p. 55) or post your text, photos and links on our Facebook page (www.facebook.com/HandymanClub). Describe what you're doing and why you think it's important, and explain how others could become involved. Once we get some feedback, we'll try to find ways to offer support. We're not sure exactly *how* until we hear from you. Perhaps we can help to get the word out about your cause, coordinate volunteers or join forces with other businesses to provide some supplies. Like many of our DIY projects, this endeavor is a work in progress, and right now we're in the design phase. Your input is essential to help us develop a workable plan.

Whether you can boast of using your skills to benefit many people or are just looking for a way to help someone, remember that no act of kindness is too small. One seemingly insignificant effort can inspire great gratitude and spur others to generous acts of their own. We really can make a difference, one person at a time.

Larry Okrend
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ART & PRODUCTION

Executive Art Director Mark Simpson Art Director Michael Anderson Production Director Paula Reddy **Production Coordinator** Erin Nielsen

MEMBERSHIP QUESTIONS: memberservices@HandvmanClub.com

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NORTH AMERICAN edia

Group Publisher Grayle Howlett

Senior Vice President Advertising

Steve Clow

Vice President Media Development & Production Rill Miller

> **Executive Marketing Director** Bruce Revman

ADVERTISING

Digital Sales

Art Hotz, (646) 862-3905 ahotz@namginc.com

NY and Southeast Sales Director

Tuck Sifers, (646) 862-3911 tsifers@namginc.com

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Detroit

Jay Gagen, RPM Associates (248) 230-3777, jay@rpmassoc.com

Shop@HANDY

Colleen Hobbs, (301) 482-1778 chobbs@meaghermedia.com

Direct Response Advertising

Smyth Media Group, (914) 693-8700 Stephanie Delia, stephanie@smythmedia.com Randi Wisner, randi@smythmedia.com

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Outdoor Slat Chair

BY BRUCE KIEFFER

Cross a park bench with an Adirondack to create a unique seat



he design for this patio chair has been coming together in my head for a long time. I think of it as a cross between a park bench and an Adirondack chair. I'm not fond of Adirondacks; I find them too hard to get in and out of. My adaptation feels more like a regular chair. It's rock-solid, easy to build and unusual-looking enough to be a conversation starter.

I spent a lot of time adjusting the prototype to make it comfortable and to achieve the look I wanted. (I considered adding arms but decided they would detract from the unique all-slat design.) The holes in the tops of the sides are handholds so the chair can be easily grabbed and moved. The chair is made from cedar, which is rot-resistant: I left

mine unfinished so it would weather to a natural gray color. You could apply exterior-rated stain or finish, but keep in mind that there are a lot of hard-to-reach surfaces that will be difficult to finish.

Construction notes

You can expect to spend about \$100 for materials and eight hours on construction. You'll need a table saw, a jigsaw, five 18-in. bar clamps, three 36-in.-opening pipe clamps, one 24-in. bar clamp and another 24-in. clamp that can be converted to a spreader, a pneumatic brad-nail gun, a router, a top-bearing pattern bit and a 1/8-in.-radius roundover bit (see SOURCES ONLINE). I also employed a surface planer because the cedar that I bought at my local home center was 7/8 in. thick and one face was rough sawn. I used the planer to remove the rough face and make the wood 3/4 in. thick. It is possible to build the chair without planing the wood — just orient the rough faces to the back, bottom. etc.

The sides of the chair are cut from large blanks of edge-glued cedar boards. You must use waterproof glue to create the blanks; otherwise the chair will fall apart when exposed to the elements. The slats are fastened with waterproof glue and galvanized brads set with a pneumatic nail gun. Don't be tempted to forgo gluing the slats to the sides — gluing is essential to the strength of the chair. When you're gluing the parts together, use a damp (not wet) rag to remove Nature has something to tell you.



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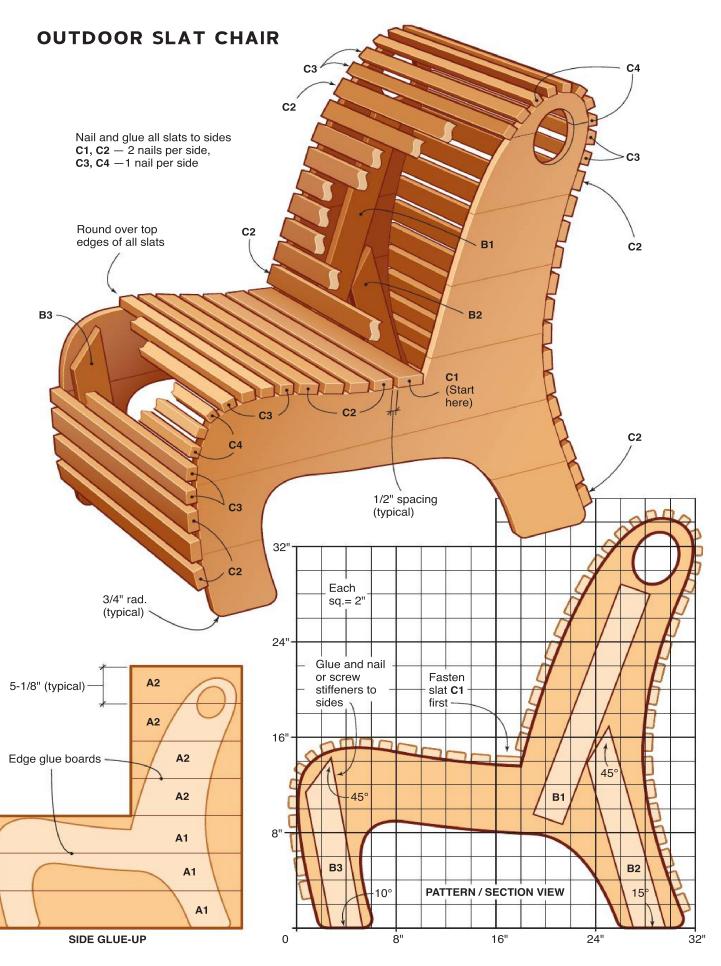




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excess glue. (Dried glue is hard to sand off.)

Working with cedar can be frustrating. I bought constructiongrade lumber to save money. It had a lot of knots, some sapwood (very light color) and some separations along the growth rings. Working around these defects takes time and planning. Carefully decide which board to use for each part. Any included knots must be tight and small. Don't use boards with knots or defects for the 3/4-in.wide slats (C4), and make sure that all of the wood you use is structurally sound. I wound up with about 25 percent waste, which is not unusual with low-grade cedar.

Creating the template

The shapes of the sides are routed using a pattern bit guided against a 1/4-in.-thick plywood template. You have two options for making the template. If you have access to the Internet and a copy center with a large-format printer, you can download the full-size PDF (see Web Extras), send or take it to the copy center and have it printed. The printing instructions appear on the PDF file. It cost me \$7 to print the pattern full-size — well worth the minor expense.

To mount the printout on a 1/4-in.-thick x 36-in.-square piece of hardwood plywood, first apply a light coat of spray adhesive to the paper pattern and to the face of the plywood. Let both pieces dry. Cut a 36-in.-square piece of cardboard or poster board. Lay the cardboard on the plywood and the printout on the cardboard. (The dried adhesive won't stick to the cardboard.) Slowly pull the cardboard out and press the pattern onto the plywood. The two surfaces with the dried adhesive will stick to each other.

The other option is the low-tech. old-fashioned method of transferring the small grid pattern to a larger grid by hand. Draw a 2-in. grid on a 36-in.-square x 1/4-in.-

WEB EXTRAS

To download a full size pattern of the sides, go to www.HandymanClub.com and click on Web Extras.



Lay out the 2-in. grid on a 36-in.-square x 1/4-in.-thick piece of plywood. Mark the intersection points shown on the original pattern; then connect the dots to create the shape. A poker chip is the perfect diameter for drawing the radius on the bottom corners of the legs.



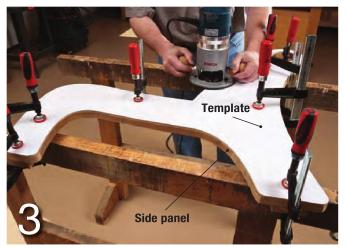
Use pipe clamps when you glue the short upper pieces to the side panels. Place two clamps underneath and one on top. To prevent the metal from staining the workpiece, cover the part of the pipe that touches the glue joint with masking tape.

CUTTING LIST

Cedar					
Key	No.	Description	Dimensions		
A1	6	Sides	3/4 x 5-1/8 x 33 in.		
A2	8	Sides	3/4 x 5-1/8 x 14-1/2 in.		
B1	2	Stiffeners	3/4 x 2-1/2 x 21-1/2 in.		
B2	2	Stiffeners	3/4 x 2-1/2 x 17-1/2 in.		
В3	2	Stiffeners	3/4 x 2-1/2 x 14-1/2 in.		
C1	1	Slat	3/4 x 2 x 22 in.		
C2	30	Slats	3/4 x 1-1/2 x 22 in.		
СЗ	10	Slats	3/4 x 1 x 22 in.		
C4	9	Slats	3/4 x 3/4 x 22 in.		

SHOPPING LIST

1x6 x 8-ft, cedar boards (10: includes extra material to allow for 25 percent waste) 1/4-in. x 36-in. x 36-in. hardwood plywood (1) 18-gauge x 1-1/4-in. and 18-gauge x 1-1/2-in. galvanized brads Waterproof glue Spray adhesive



Rout the shape of each side using a top-bearing pattern bit (see SOURCES ONLINE) guided against the template. Use a lot of clamps to secure the template in place. You'll need to move the clamps as you work to complete the routing.

thick piece of plywood (photo 1, p. 9). Referring to the illustration (p. 8), mark the points where the shape intersects with the grid; then connect the dots to create the shape.

Once you've transferred the pattern to the plywood, drill a starter hole for the handhold. Using a jigsaw, carefully cut out that opening and the shape



Round over the top edges of the slats using a 1/8-in. roundover router bit (see SOURCES ONLINE). Ganging the slats to rout the ends greatly speeds the work.

of the sides; then sand the sawn edges smooth. Take your time — your chair sides will only be as good as your template.

Making the sides

Once you've completed the template, cut pieces A1 and A2 to size (see cutting list, p. 9). You'll need to



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Align the two sides face-to-face, and use a combination square to draw lines across the outside edges. These lines are visual aids for keeping the slats aligned as they are added.

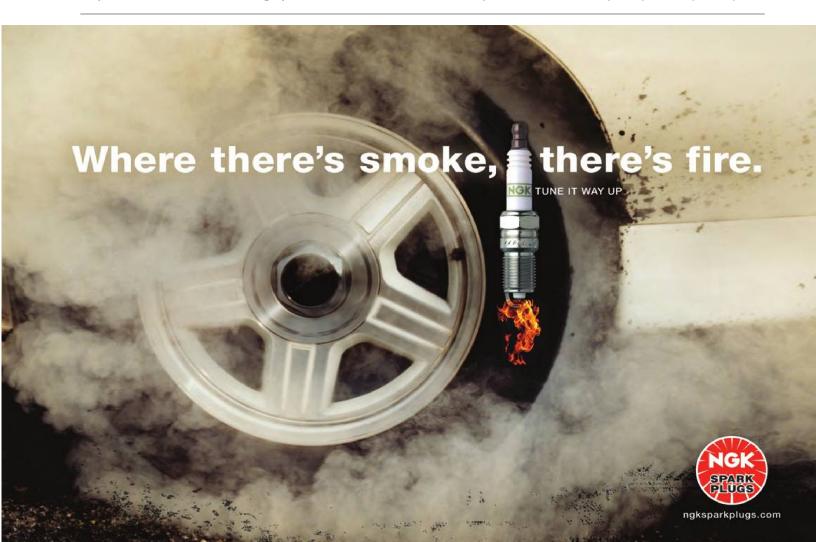
glue together three A1 pieces for each side: First glue two pieces and let that joint dry; then add the third piece. Next, working with the faces up and using pipe clamps (photo 2), add the A2 pieces one at a time to the side panels. (Cedar is too soft and pliable to use bar clamps for this step — I tried, and the assemblies just kept popping apart under pressure.) Keep in mind that as you work with the faces up, you need to add the



Glue and nail the first slat in place using a pneumatic brad nailer and 18-gauge x 1-1/2-in.-long galvanized brads. Place two brads at each end. Use a damp rag to remove any excess glue before it dries.

short pieces to opposite ends of the blanks so that you create both a right and a left side blank.

Align the template leg bottoms with the bottom edges of the side blanks and trace the shapes onto each blank. Use a jigsaw to cut out the shapes. Cut close to the lines, but leave 1/16 in. to 1/8 in. extra to be trimmed away when you rout the shape. Be very careful when handling the sides; at this stage they are very flimsy.





Space the slats 1/2 in. apart as you glue and nail them in place. Keep the distances between the slat edges and the alignment lines equal at both ends.

Next, make the stiffeners (B1, B2 and B3). Use glue and 1-1/4-in. screws or brads to fasten the stiffeners to the inner faces of the sides. Once the stiffeners are in place, the sides will be much sturdier. The stiffeners also raise the sides to make routing easier. Align and clamp the template to each rough-cut side and rout the shapes (photo 3, p. 10).

Assembling the chair

Make all of the slats (C1 through C4). Cut a few extras of each size in case you find a few bad ones during assembly. Round over the top edges (photo 4); then finish sand the slats.

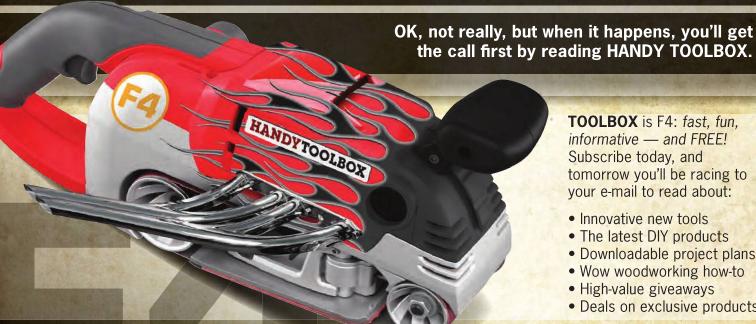
Draw slat-alignment lines across the outside edges of the chair sides (photo 5, p. 11). Space the lines roughly every 5 in. These guides will help you to space the slats evenly and keep the slats perpendicular to the sides.

Set the sides upright and temporarily clamp a C2 slat at the outside bottom of the front and rear legs. This defines the spread between the sides and holds the sides so that it's easier to attach the first batch of slats. Position the first slat (C1) tight in the corner between the seat and the back; then fasten it with glue and nails (photo 6).

Attach the next few seat and back slats (photo 7). Finish adding the seat top slats, including four C3 slats. Use one brad at each end when attaching the C3 and C4 slats. Then lay the chair on its back and add the rest of the seat back slats (photo 8, opposite). Continue adding slats, being careful to attach the correct number of C3 and C4 slats in the proper sequence. Flip the chair over and add the back slats (photo 9). Flip the chair over again and add the remaining front slats.

As you add slats near the leg bottoms, you may find

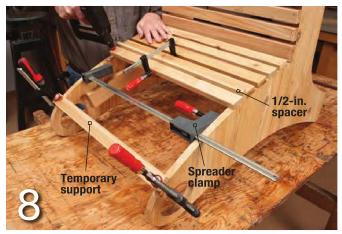




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When adding the slats, you may need to spread the sides apart a bit so the slat ends are flush with the sides. Use a spreader clamp to do this.

that you need one more or one less C2 slat to complete your chair. (This would result from a cumulative spacing error, but it's nothing to worry about.) Stop adding slats when the next one would cover any part of the radius corners of the leg bottoms.

All that's left is to finish sand the chair sides and any remaining unsanded surfaces and smooth all sharp edges. There's no need to fill the nail holes. Your chair is ready to take outside and enjoy. \diamondsuit



As you add the slats, you may need to pull the sides closer together so the slat ends are flush with the sides. Use a 24-in. bar clamp to do this.

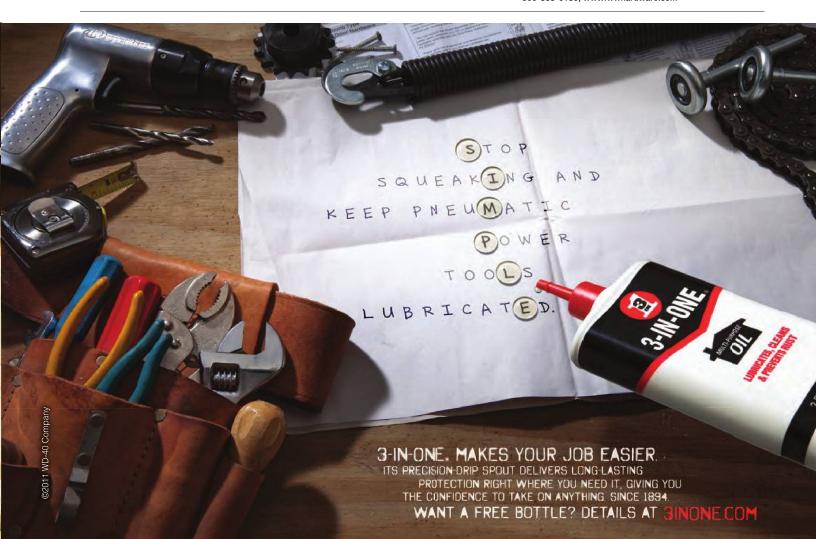
Handyman Club life member Bruce Kieffer is a custom furniture builder, freelance woodworking author and technical illustrator. You can see a collection of his work at www.kcfi.biz.

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he ideal deck invites you to relax, unwind and enjoy the outdoors. Unfortunately, many decks place you on display for all your neighbors to see. As soon as you step outside, your every move can be scrutinized by prying eyes. Add to that the sun's glare and your deck becomes an uncomfortable spot that you avoid.

However, you can reclaim your deck from nosy neighbors and harsh sunlight — and add a sense of style and sophistication — by incorporating arborlike structures into its design. Integrated into the deck's railing system, these structures are a great place from which to hang draping plants or outdoor privacy screens. Here's how you can retrofit your deck to block the neighbors' view and create shade in the process.

INSTALLING THE POSTS

The key to this project is proper placement and installation of the cedar 4x4 posts that support the railing sections and form the base of the two corner arbors. Because every deck is unique, actual spacing from post to post will depend on your deck's size and construction. In general, you'll want the posts that make up the corner arbors to be no more than 36 in. apart, and the spacing of the rest of the posts should follow local building codes. If you plan to use a manufactured railing system as we did, you'll also need to follow its installation requirements for post spacing.

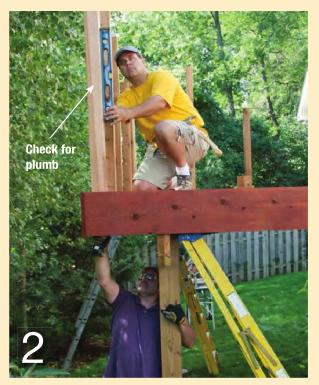
Once you've determined the posts' placement, mark their locations on your deck by drawing a box for each post. Drill holes at two opposing corners of the box; then use a jigsaw to cut away the decking **(photo 1)**.

Cut the posts to the correct heights. For this project, we needed six 94-in.-long posts, four 70-in.-long posts and four 45-1/2-in.-long posts. (The lengths include an extra 10 in. to allow the posts to be bolted to the deck's framing.)

Insert each post into its respective hole **(photo 2)**. Have a helper hold the post in position, check that it is plumb and then use lag screws and a building strap to secure the post to the deck framing **(photo 3)**.

POST PLACEMENT





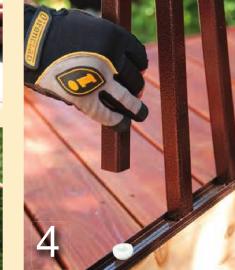


RAILINGS

















BUILDING THE RAILINGS

For this project, we used a modular railing system from Anchorail (see SOURCES ONLINE) that features a metal top and bottom track with "anchor balls" that lock the individual powder-coated metal balusters in place **(photo 1)**. Here's an overview of the basic steps involved in installing the system.

To build the railing sections, start by cutting lengths of 2x4 that are 8 in. longer than what would be required to fit between the 4x4 posts. Attach the tracks to the edges of the 2x4s, and screw the anchor balls onto the tracks. Carefully align the top and bottom tracks, and mark the actual required railing lengths so that the first and last balusters will be equally spaced from their respective posts (photo 2); then use a miter saw to cut the 2x4s with the attached track to the required actual lengths (photo 3).

Push the individual balusters onto the anchor balls of the bottom rail **(photo 4)**. Hold the top rail in position so that its anchor balls fit loosely into the tops of the balusters; then use a rubber mallet to tap the top rail firmly into place **(photo 5)**.

Set scraps of 2x4 material on the deck to act as spacers for the positioning of the railing sections. Make sure that each section is vertically centered on the posts to which it attaches; then screw the railing sections to the posts (photo 6).

Once you have all of the railing sections installed, you'll need to attach a cap rail fashioned from 1x6 cedar that has been notched to fit around the posts (photo 7). For a professional look, miter the ends of the cap rails (photo 8), and make sure that any seams where two cap rails meet fall behind a post so they'll be out of sight.





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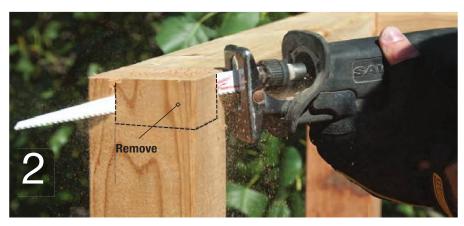
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ARBOR









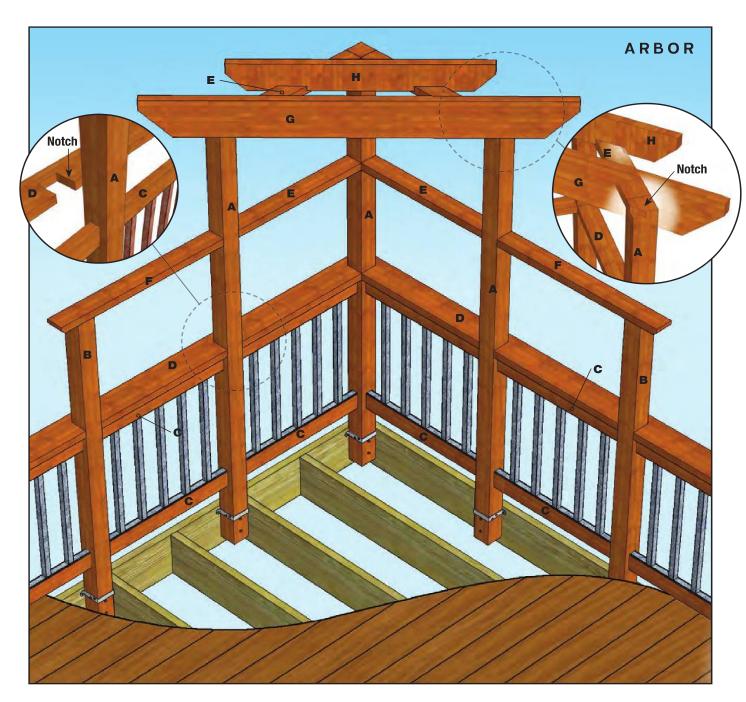
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CUTTING LIST

Dimensional cedar (Note: Quantities listed are for one arbor.)				
No.	Description	Dimensions (nominal)		
3	Main posts	4x4 x 94 in.*		
2	Secondary posts	4x4 x 70 in.*		
8	Railing members	2x4 x 29 in.		
2	Railing cap	2x6**		
4	Arbor horizontals	2x4 x 29 in.		
2	Arbor horizontals	2x4 x 36 in.		
1	Front cross membe	r 2x8 x 72 in.		
1	Rear cross member	2x6 x 45 in.		
	No. 3 2 8 2 4 2	No. Description 3 Main posts 2 Secondary posts 8 Railing members 2 Railing cap 4 Arbor horizontals 2 Arbor horizontals		

^{*}includes 10 in. for mounting

^{**}Overall length will vary depending on size of deck.



CREATING THE ARBORS

The two corner arbors lend style to the overall design and create shade and privacy. To build them, start by toescrewing the horizontal 2x4s in place (photo 1; see illustration for dimensions and placement). To accommodate the front 2x8 cross member (G), notch the tops of the tallest posts (photo 2); then set the front cross member into the notches, check that it's equally spaced between the two posts and toescrew it in position (photo 3).

You'll need to cut two diago-

nal notches in the rear 2x6 cross member (H) so that it can fit over the arbor's top horizontal 2x4s (photo 4; see illustration for the location of the notches). There are a variety of ways you can do this; we made repeated passes with a circular saw, cleaned away the waste with a chisel and then used a file to smooth the notches (photo 5). Set the rear cross member in place and then toescrew it to the 2x4 upon which it rests.

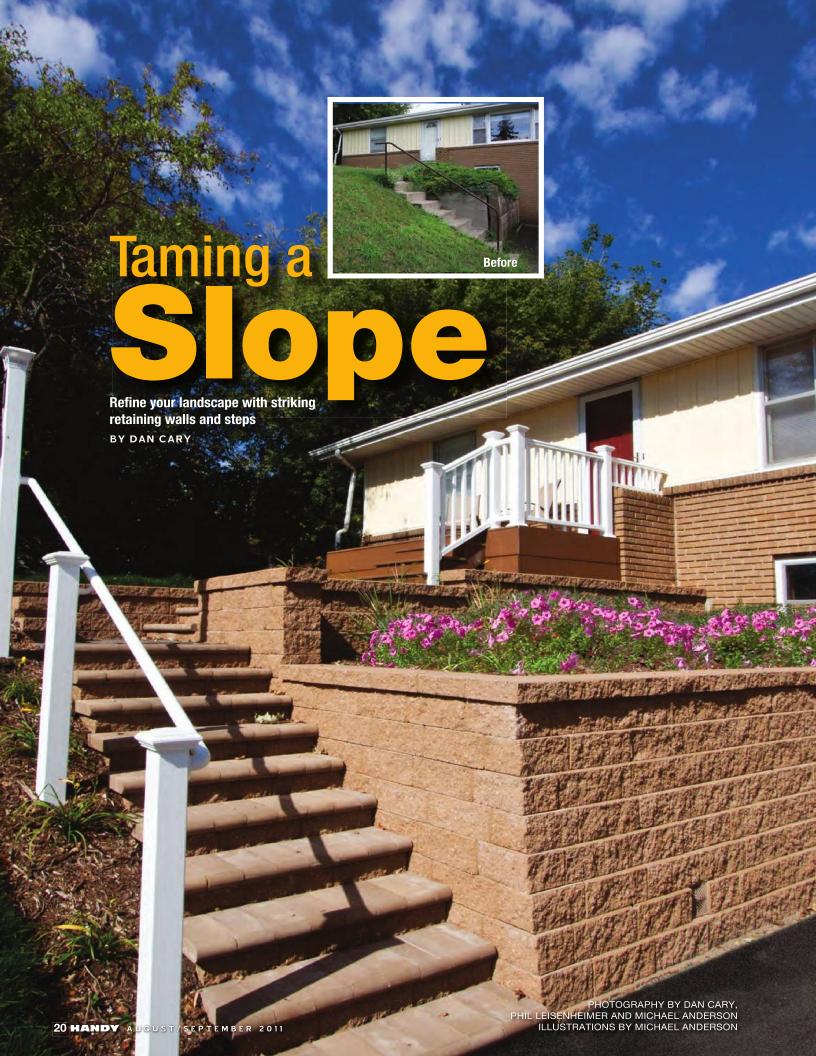
For increased strength during high winds, you can attach a pair

of triangular gussets to the back of the front cross member and to the topmost horizontal 2x4s (photo 6). Finally, stain the railings and arbors. Once they're dry, you can hang any privacy screens or plants you desire and enjoy your newfound retreat. \diamond

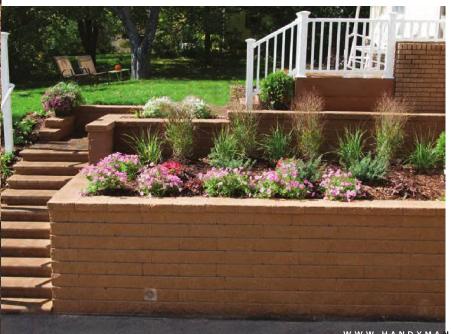
SOURCES ONLINE

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

Anchorail 800-233-9349, www.decksolutionsllc.com







here's no sugar-coating it: Building a retaining wall and steps like these is a big project. In my case it involved removing an old poured-concrete wall and steps and moving a lot of heavy materials, including dirt, compactable gravel, sand and 80-pound blocks. But although the work was physically challenging, it wasn't as complicated as you might think.

Like most successful projects, this one starts with a good design. I've designed and built several retaining walls, patios and paths, but this project combined all three and added the complicating factor of a steep 7-ft.-high slope, so I sought help. A wall higher than 4 ft. requires additional structural reinforcement and should be designed by a professional who understands the structural engineering requirements. I sketched out a basic plan and then handed it over to Villa Landscapes, the design division of the landscape center where I planned to buy my materials, for completion.

STRATEGY

The steps and the walls of this project are constructed from Versa-Lok standard blocks. We chose these blocks for multiple reasons. First, Versa-Lok provides many detailed drawings and thorough instructions on the company's Web site (see SOURCES ONLINE, p. 25). Second, the blocks use a pin system that makes alignment easy and results in a very strong wall. And finally, it's surprisingly easy to build steps with these blocks. Once the base is formed, all you do is stack the blocks. Called the "base pedestal" installation method, it's similar to building a pyramid. Several blocks are buried and seemingly wasted under the surface, but you're trading the cost of those blocks for the time you save and potential errors you avoid by not having to compact and level multiple tiers.

Machines are essential to a job of this scale. A mini-excavator and skid-steer loader finished in one day what would have required a week of hard labor from two people to accomplish; their rental was money well spent. If you don't have a place on your property to put the extra dirt, you'll need to hire a dump truck to haul it away.

Because we had a professional design and Versa-Lok's excellent installation instructions and drawings, we could have tackled the construction ourselves. But recognizing the value of experience, we hired installers at Highstone Landscapes Inc. to show us how the pros work

BUILDING THE RETAINING WALL









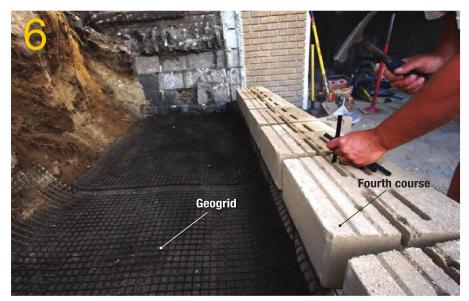
WALL CONSTRUCTION

"The key to building any retaining wall or steps is a good design and getting the elevations [for the base pads] correct — the rest is just stacking blocks," says Highstone's owner, Jay Meyer. The bottom of the steps and the bottom wall are both built on the same level pad. We dug down approximately 10 in. below the grade in front of the wall and 4 ft. into the slope behind the wall (see illustration, p. 25) so we could install the geogrid wallreinforcement mesh. We also had to dig approximately 9 ft. into the slope for the steps. Make measurements as you excavate to check that your depths and layout are accurate (photo 1, above left). You must install the pad materials on undisturbed or compacted soil. If you dig a little too deep, do not replace the dirt. Instead, use more base materials to bring the pad up to final grade.

After the excavation is complete, drive stakes into the ground in several locations along the wall layout to establish the compacted pad elevation. Pound in the stakes, checking them with a surveyor's level, until the top of each stake is at the final compacted gravel elevation (photo 2). Lay down landscape fabric and compacted gravel until the pad is level at the final base elevation. The accuracy of the base pad is critical, so take your time to

JAY MEYER, OWNER, HIGHSTONE LANDSCAPES INC.





make the compacted pad level and smooth. Next, place two 1-in.-o.d. pipes on the compacted base and dump a layer of fine material such as sand over the pipes and base. The crew from Highstone prefers to use a driveway trap material instead of sand. Screed the fine material across the pipes to leave an even 1-in.-deep layer. Remove the pipes and carefully fill in the pipe tracks with more fine material.

Place the bottom course of blocks on the base material. Check each block to make sure that the top is level, and use a straightedge to align the back edges (photo 3). Install the second course of blocks, staggering them so that the vertical seams do not align. The 3/4-in. setback distance is easy to maintain with the Versa-Lok wall blocks because pins connect and align with the course. The pins fit through holes in the top block and into a channel in the bottom block (photo 4). Use a string line to align the back edges of each course. Backfill and tamp behind the blocks after each course is installed.

You must use alternating half blocks to build outside corners. We built one outside corner at the return wall (the wall section that turns 90 degrees back into the hill). The half blocks are broken **(photo 5)** rather than cut to create a rough face that matches the other exposed

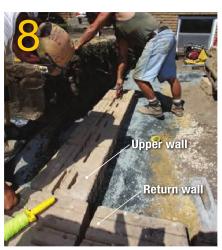


block faces. The corner blocks are secured with concrete adhesive.

We installed the first layer of geogrid on top of the third block course. Place the geogrid on top of the wall, making sure that it overlaps the pin channels. Then lay the next course of wall blocks **(photo 6)**. We installed another layer of geogrid on top of the sixth course of block. Backfill and compact the soil behind the wall as you install each course.

DRAINAGE

Providing a path for water to drain from behind the wall is critical to prevent potential damage caused by water pressure and water freezing behind the wall. Drain tile (perforated flexible drain pipe) provides the path for water to drain



from behind the wall. We installed a drain-tile grate between two blocks in the third course. Then we graded the drainage backfill behind the wall to slope down toward the grate. Lay the drain tile behind the wall and connect it to the grate with a coupling **(photo 7)**.

We built the upper wall following the same process that we used to build the lower wall. The upper wall is located behind the lower wall at a distance that is twice the height of the lower wall. The upperwall blocks are connected to the lower return wall (photo 8). The base elevation of the upper wall was determined by the elevation of the lower return wall. We excavated to a level so that the upper-wall blocks would match the elevation of the return-wall blocks.

BUILDING THE STEPS









STEP CONSTRUCTION

We used the same Versa-Lok wall blocks to build the steps as we used to build the wall. As with constructing the wall, the most important aspect is to first create a level base pad at the proper elevation. Once the base material was installed, building the steps basically involved stacking up a lot of blocks — a job that was laborious but not complicated.

The steps and walls in our project are connected, but you can also use this system to build steps without any walls. For example, this type of step construction would work well for the steps and stoop on the front of a house.

The bottom course of step blocks

is the most important. The layout must be accurate, and the tops of the bottom-course blocks must be level and flush (photo 1). In our case, the front row of the bottom-step course is a continuation of the bottom-wall course, and the return wall is the right side of the steps. We created the 44-in.-wide steps by placing two blocks facing forward and one block turned sideways to make the width of the steps.

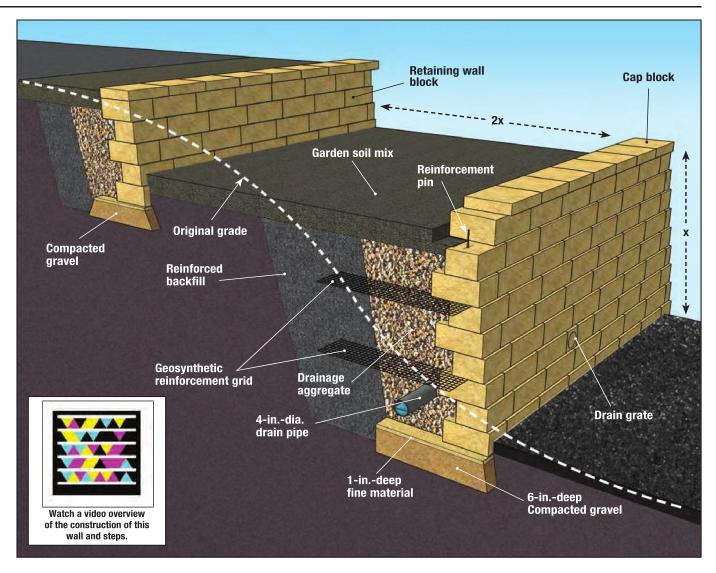
The front edge of each course is set back 11 in. from the previous course **(photo 2)**. Each course of blocks is secured using concrete adhesive. Brush the tops of the block clean before applying the adhesive and placing blocks on

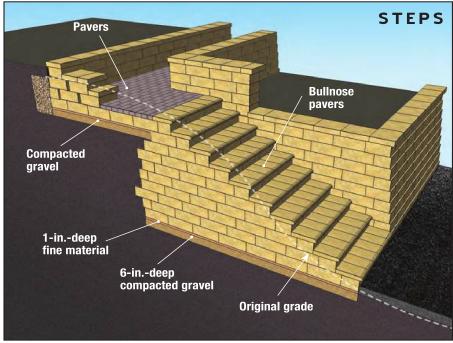
top. Even a tiny pebble left under a block can prevent a good fit and cause the next block to rock.

The left side of the steps is partially exposed **(photo 3)**. The blocks for the left side are turned sideways to expose the front cut face of the block. The front block of the exposed side must be cut in half so that there is a rough face that matches the other front-face blocks — similar to an outside wall corner.

We capped the steps with bullnose pavers. You could also use wall cap blocks, but we preferred the round face of the pavers. We secured the caps with concrete adhesive and aligned them with a straightedge **(photo 4)**.

RETAINING WALL ANATOMY





The landing and path at the top of the steps are made with pavers. The process is the same as building a patio. A gravel base is leveled and compacted and topped with a 1-in-deep layer of leveled sand or other fine material so that the top of the pavers is flush with the top of the top step.

Though it was a lot of work, the finished project adds curb appeal and function that will last for many years — certainly worth a few days of heavy lifting. \diamondsuit

SOURCES ONLINE

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

Versa-Lok

(product information and detail drawings) www.versa-lok.com/homeowner/cad-details

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Showing Potential

BY JENNY STANLEY

Innovation outshines the bright lights of Vegas at the 2011 National Hardware Show

ith a boost in both attendance and exhibitor bookings for next year's event, the **2011 National Hardware Show** proved that the sluggish economy can't dampen DIYers' and innovators' enthusiasm. Read on for a sampling of new products from the show and highlights from the second-annual *HANDY* Product Test Shop.





LIGHTING THE WAY

Typical compact fluorescents take a little time to completely light up. For consumers who don't like to wait, **GE Energy Smart Soft White and Reveal hybrid halogen-CFL bulbs** (\$6 to \$8) combine instant bright light with energy efficiency. The bulbs feature a halogen capsule nestled inside the swirl of a CFL and surrounded by a traditional glass bulb. The halogen element provides instant brightness and turns off to save energy once the CFL reaches full illumination.







CONVENIENT SCRAPERS

A retractable razor scraper with onboard blade storage (shown, about \$3) and a 4-in. glass, tile and wall scraper with a quick-blade-change feature (about \$5) stand out among several new offerings from Hyde.





his story breaks my heart every time. Allegedly, just two years after the discovery of tanzanite in 1967, a Maasai tribesman knocked on the door of a gem cutter's office in Nairobi. The Maasai had brought along an enormous chunk of tanzanite and he was looking to sell. His asking price? Fifty dollars. But the gem cutter was suspicious and assumed that a stone so large could only be glass. The cutter told the tribesman, no thanks, and sent him on his way. Huge mistake. It turns out that the gem was genuine and would have easily dwarfed the world's largest cut tanzanite at the time. Based on common pricing, that "chunk" could have been worth close to \$3,000,000!

The tanzanite gem cutter missed his chance to hit the jeweler's jackpot...and make history. Would you have made the same mistake then? Will you make it today?

In the decades since its discovery, tanzanite has become one of the world's most coveted gemstones. Found in only one remote place on Earth (in Tanzania's Merelani Hills, in the shadow of Mount Kilimanjaro), the precious purple stone is 1,000 times rarer than diamonds. Luxury retailers have been quick to sound the alarm, warning that supplies of tanzanite will not last forever. And in this case, they're right. Once the last purple gem is pulled from the Earth, that's it. No more tanzanite. Most believe that we only have a few years supply left, which is why it's so amazing for us to offer this incredible price break. Some retailers along Fifth Avenue are more than happy to charge you outrageous prices for this rarity. Not Stauer. Staying true to our contrarian nature, we've decided to lower the price of one of the world's rarest and most popular gemstones.

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FOLD FOR STORAGE

SnowBear's new **StrongBox Trailer** (\$1,500) functions as both a traditional 8-ft. trailer and a durable, towable box. Its folding design offers an innovative twist on hauling and securely storing building materials and tools.



CLEAR WINNER

Loctite's new **Power Grab Clear Construction Adhesive** (\$4) goes on white but dries clear, so there's no need to worry about squeezeout on projects such as a chair rail or crown molding.





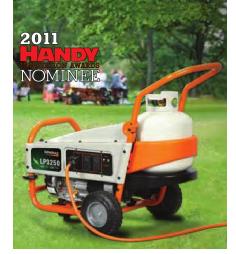
WOODWORKING SIMPLIFIED

General Tools & Instruments has introduced two must-haves for woodworkers. The **E-Z Pro Mortise & Tenon Jig** (\$150) produces fully aligned 1/4-, 3/8- and 1/2-in. joints using a plunge router. And the **Digital Sliding T-Bevel Gauge** (\$35) takes the guesswork out of measuring, storing and transferring inside and outside angles.



RAISED-GARDEN GREENHOUSE

A DIY space- and back-saving solution for backyard gardening, the new **Plant Inn** from Palram Applications Ltd. (\$349 to \$399) combines the ergonomic benefits of a raised garden bed with the growing advantages of a greenhouse — and provides convenient storage underneath.



PORTABLE PROPANE POWER

A first of its kind, Generac's **LP3250 portable propane generator** combines the green benefits of liquid propane with a compact, easy-to-maneuver design. It features onboard tank storage, a Generac OHV 212cc engine, automatic shutdown when oil is low, and more.



SMART SPRAYER

Wagner SprayTech's **Power Painter line** (\$130 to \$150) eliminates spitting
problems with its EZ Tilt technology, which
employs a flexible suction tube that remains submerged inside the cup no matter
which direction the sprayer is pointed.

VOICING THE ALARM

When it comes to waking children in an emergency, studies show that voice alarms are more effective than beeping, according to First Alert. That's why the company's Voice Smoke and Carbon Monoxide Alarms add a recorded voice to the traditional high-decibel beeps. The alarms also

announce the location of smoke or carbon monoxide to help inhabitants find the best escape route.



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SMARTER OUTDOOR POWER EQUIPMENT

Eco- and safety-conscious tool manufacturers have made major improvements in these cutting-edge OPE offerings:





The Worx IntelliCut 36-volt self-propelled mower with PaceSetter (\$500, model WG789) automatically adjusts to match your walking pace. Also from Worx, the JawSaw (\$120) chain saw boasts three safety-enhancing features: a durable jaw that surrounds the chain, a scissor-cutting action that slices wood at a safe angle, and steel teeth that secure workpieces in place.



Black & Decker's **36V Variable-Speed Self-Propelled Cordless Rechargeable Mower** (\$450) allows users to adjust the mowing speed, and it folds to a compact size for storage.



Ryobi's 48V Self-Propelled Cordless Mower (\$399) features a boost of power without releasing harmful emissions. Also from Ryobi, the 24V Lithium-ion Cordless String Trimmer (\$159) and 24V Lithium-ion Cordless Extended Reach Hedge Trimmer (\$159) are lightweight yet powerful tools for tackling landscaping tasks.



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CORDLESS AND COMFORTABLE

In September DeWalt will introduce the **20 Volt Max Lithium Ion line** (\$49 to \$489). Offering a choice between 1.5- and 3-amp-hour slide-lock batteries, these tools feature a slim, ergonomic grip, stellar balance and increased user control. The tools come with a charger that's compatible with DeWalt's 12 Volt Max tools. A currently available highlight from DeWalt is its **24-in. Tote with Power Tool Case** (\$25), a two-level carrier that houses power tools in the bottom and hand tools and accessories in the top.

MEMBER TESTED — IN LAS VEGAS!



Four Club members won a free trip to Las Vegas to test new tools at the 2011 National Hardware Show. The following are a few of their favorites. To watch videos and a slideshow of the event, go to http://hardwareshow.ning.com.



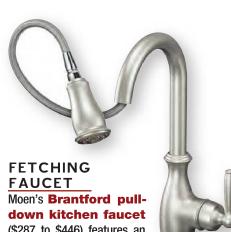
Skil's new **Oscillating Multi- Tasker** (\$80) features a 2-amp motor, a no-mar head and an integrated dust-extraction port — plus accessories for cutting, sanding, removing grout and more.



The One+ Cordless 7-1/4-in. Miter Saw (\$99) from Ryobi is light-weight and compact, and it's great for home-improvement tasks such as cutting hardwood flooring and trim.



Professional-grade yet reasonably priced, Ridgid's Portable Job Site Wet Tile Saw (\$199) features a rip/miter gauge, a T-square design for fast self-alignment and a sliding fence rail for large tiles.



down kitchen faucet (\$287 to \$446) features an innovative Reflex system that extends and retracts effortlessly, prevents snags under the cabinet and automatically returns to the docked position. It also features a swivel joint between the hose and wand for a full range of spray direction. The Reflex system will be incorporated into all Moen pull-down faucets throughout 2011.



IF PLANTS COULD TALK

Providing guidance for gardeners of all skill levels, the **PlantSmart** from Black & Decker (\$50) analyzes growing conditions and makes recommendations for what to plant, when to water and more. Users simply plug it into a computer to unveil a wealth of personalized information.



NEW PVC GLUE

Gorilla PVC's new **Gorilla Blue Hot Glue** (\$5 for a 4-ounce can, \$8 for an 8-ounce can) is a fast-acting PVC cement that allows for quick pressurization in wet conditions. It is also low-VOC.



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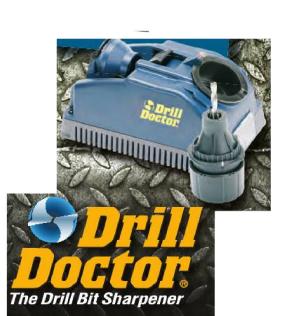
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BY MIKE BERGER

Build this stylish metal mailbox stand from easy-to-purchase steel square tube



n 1775 when the Continental Congress met in Philadelphia to establish an independent government, one of the first questions its members faced was how to deliver the mail. Benjamin Franklin was appointed chairman of a Committee of Investigation to establish a postal system, and after his report in July of that year, the Second Continental Congress agreed "... that a Postmaster General be appointed for the United States, who shall hold his office at Philadelphia, and shall be allowed a salary of 1,000 dollars per annum" Thus the Post Office Department, the predecessor of the United States Postal Service, was born. And now, 236 years later, we're still enjoying the benefits of that decision.

Of course, to receive mail today, you need a mailbox. Rather than simply attach it to a wooden post, you can easily weld together a stylish steel mailbox stand that will look great and provide years of trustworthy service. Follow these easy steps to craft your own stand that will admirably serve through snow, rain, heat and gloom of night.



Need to build a wooden mailbox stand? Log onto www.HandymanClub.com to see how to build a four-box stand that can be modified to fit almost any neighborhood.

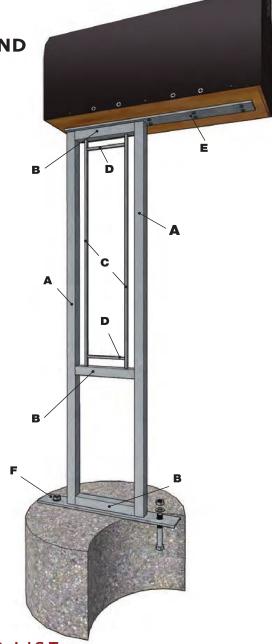
MAILBOX STAND

MAILBOX SPECIFICATIONS

H METER

When building a mailbox stand, it's important that you follow these basic guidelines from the United States Postal Service:

- Install the mailbox so the bottom of the box is 41 to 45 in. above the road surface, unless you have a road or curb condition that prevents this. If you do, be sure to contact the postmaster before you change your mailbox location.
- Boxes must be on the right-hand side of the road and in the carrier's direction of travel in all cases in which driving on the left-hand side to reach the boxes would pose a traffic hazard or violate traffic laws and regulations.
- The mailbox should be set back so that the door is 6 to 8 in. from the front face of the curb or road edge.
- The letters or numbers on the mailbox should be at least 1 in. tall.
- A mailbox with a lock must be a model that's USPS approved by the Postmaster General with a slot large enough to accommodate your daily volume of mail.
- Advertising on a mailbox or its supporting post is prohibited.
- You can attach a receptacle for newspaper delivery by a private company to the post of a curbside mailbox used by the Postal Service as long as it doesn't touch or use any part of the mailbox for support, doesn't interfere with mail delivery or obstruct the view of the mailbox flag, doesn't extend beyond the front of the mailbox when the box door is closed, and doesn't display any advertising except for the publication's title. MB



CUTTING LIST

Key	No.	Description*	Size
A	2	Main uprights	1 x 1 x 43 in.
В	3	Main cross members	1 x 1 x 7 in.
C	2	Infield uprights	1/4 x 1/4 x 26 in.
D	2	Infield cross members	1/4 x 1/4 x 4-1/2 in.
E	1	Mailbox support plate, steel C channel	1/8 x 2 x 20 in.
F	1	Base support, steel C channel	1/8 x 2 x 16 in.

^{*}All parts hollow steel tube except as noted.



Start by welding together the 1-in.-sq. hollow-tube main uprights (A) and main cross members (B) that make up the framework of the mailbox stand. Carefully align the parts and check for square before striking a weld bead.

SHOPPING LIST

1-in.-sq. x 4-ft. hollow steel tube (2)
1-in.-sq. x 3-ft. hollow steel tube (1)
1/4-in.-sq. x 3-ft. hollow steel tube (2)
1/8 x 2 x 36-in. steel C channel (1)
1/2 x 4-in. stainless steel bolts, nuts
and washers (2)
No. 10 x 1-1/4-in. stainless steel screws (16)

Lumber for mailbox base
(size according to your mailbox)

Mailbox



METALSHOP



Weld in place the two long 1/4-in.-sq. hollow-tube sections (C) that serve as the vertical members of the infield (see illustration, p. 39). Use a short scrap of 1-in.-sq. hollow tube as a spacer to ensure proper placement.



Again use a scrap of 1-in.-sq. hollow tube as a spacer and weld into place the two 1/4-in.-sq. hollow-tube cross members of the infield (D) as shown in the illustration.



Weld the mailbox support plate (E) to the top of the stand. Make sure the support is aligned flush with the back edge of the stand before beginning your weld bead.



Position the stand in the middle of the base support (F), and weld the stand to the base. After all the welds have cooled, grind them smooth.



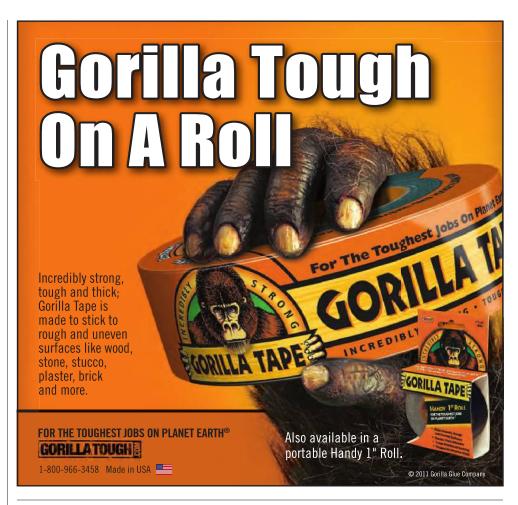
Drill two 5/8-in.-dia. holes through the base support to accept the ground mounting bolts; then drill eight (four per side) equally spaced 3/8-in.-dia. holes through the mailbox support plate to accept the stainless steel wood screws that will secure the wood mailbox base to the support plate.



Call 811 to have utilities marked before you dig the hole for your mailbox post. Pour a fast-curing concrete base that adheres to your local codes (including frost depth). While the concrete is still wet, insert two 1/2-in.-dia. x 4-in. mounting bolts. Once the concrete has cured, fasten the mailbox stand to the bolts.



Attach a wooden base to the mailbox using eight No. 10 x 1-1/4-in. stainless steel screws; then use the same screws to attach the box to the stand.





How to choose the right ladder and work safely with your feet off the ground



f we could levitate, changing light bulbs and skim coating ceilings would be a snap. Unfortunately, gravity requires that we seek other ways to get our feet and our tools off the ground. Ladders and scaffolding are the two most popular solutions, but they can be dangerous when used improperly. Here's what you need to know to elevate your safety practices when working on high-rise projects.

Ladder basics

Every DIYer has used a ladder at one time or another and probably given it little thought. Yet the Consumer Product Safety Commission estimates that ladder accidents result in 150 deaths and 180,000 injuries in the United States each year. I've been one of those statistics: Several years ago I was hanging gutters when my ladder slipped out from under me. As I fell, my feet got

tangled in the rungs, and I landed on the outside of my right foot, dislocating my ankle and breaking a bone in my foot. In addition to suffering severe pain, I missed more than five months of work. That accident cost me about \$35,000 in lost wages and medical bills. Needless to say, today I am extremely conscientious about ladder safety.

The material a ladder is made of can significantly affect its performance and your safety. Aluminum ladders are a good choice because they combine strength with little weight. Fiberglass ladders are the best choice for doing electrical work or when working near power lines because fiberglass is nonconductive. Wood ladders, on the other hand, are almost a thing of the past. They are heavy and more fragile than aluminum or fiberglass. Although I still have a couple of wood ladders at home, I use them only for light-duty tasks such as replacing light bulbs and dusting the blades of ceiling fans. At my place of work we no longer use wood ladders — most of them became unstable and warped with age, and many were cracked or missing pieces. Unless your wood ladder is in good condition, stick with more modern materials.

Ladder ratings

Ladders are rated by the amount of weight they can safely bear (including the person using the ladder plus any tools and materials). Each is clearly marked with a color-coded label stating its duty rating:

- **Red (Type III)** is for lightduty and household use and can support up to 200 pounds.
- **Green (Type II)** is mediumduty (up to 225 pounds) and suffices for most painting jobs and typical handyman tasks.
- **Blue (Type I)** is considered heavy-duty (up to 250 pounds).





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You can modify a stepladder's tray by drilling a hole in it to accept tools — in this case, the handle of a plastering hawk, which is difficult to set down without spilling the plaster.



Besides helping to secure the top end of an extension ladder, a stabilizer bar also props the ladder a few inches from the wall so you can paint or work on the surface directly behind the ladder.

- **Orange (Type IA)** is extraheavy-duty (up to 300 pounds).
- **Yellow (Type IAA)** is special-or rugged-duty (up to 375 pounds).

I tip the scales at 195 pounds. I need a Type IA extension ladder to safely climb onto my roof with my work belt and a bundle of shingles in tow. If I'm merely changing



To check for a 75-degree angle on an extension ladder, stand with your toes at the ladder's base. If you reach your arms straight out from the shoulders, your fingers should be able to touch the ladder.

a light bulb, a Type III stepladder will be fine.

Styles and accessories

Ladders come in a variety of styles, some more familiar than others.

• Stepladders are typically 4 to 8 ft. high, providing a safe reaching height of 8 to 12 ft. (To calculate your range of reach, add 4 ft. to the ladder's height.) The highest permitted standing position on a stepladder is two steps from the top—climbing any higher makes the ladder unstable and increases the risk of losing your balance.

My favorite stepladder is a platform stepladder (upper left photo). It has wide treads instead of rungs, which greatly reduces leg and foot fatigue. Mine also has a large foldout tray at the top, so I don't have to climb up and down to fetch tools and materials.

• For tasks requiring greater height, an *extension ladder* becomes necessary. These ladders range from 16 to 40 ft. long (when both sections are fully extended with the required four-rung overlap). The highest safe standing position on an extension ladder is four rungs from the top. In addition to

your position, you must consider the horizontal distance from the base of the ladder to the surface where the top of the ladder is propped. Safety requires a 75-degree angle, or 1 ft. of horizontal distance for every 4 ft. of rise (upper right photo, opposite). The maximum reach of a person on an extension ladder is usually 1 to 3 ft. shorter than the ladder's height.

• Combination ladders, also known as articulating, telescoping or multiladders, fold and extend in different combinations to offer a variety of configurations. They can be used as stepladders or extension ladders, as a pair of bases for short scaffolding or as a stairway stepladder. Regardless of the style of ladder, it must be properly set up for safe use (see "Ladder Precautions," p. 46).

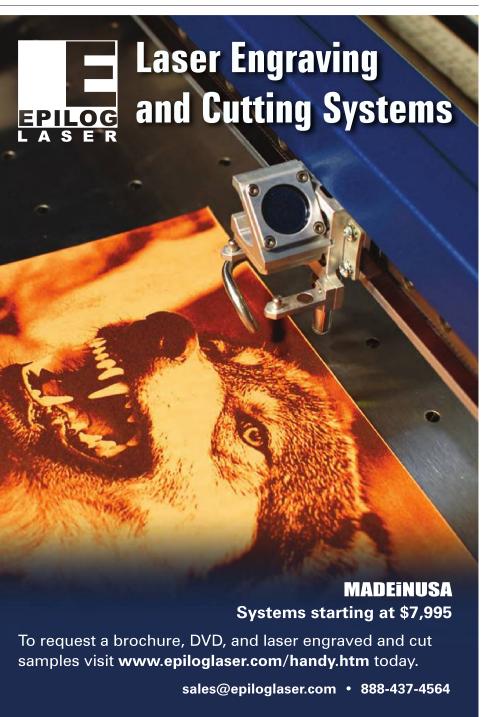
Several useful accessories are available for various ladders trays, hooks, tool keepers and paint cups, to name a few. One of my favorites is a ladder stabilizer, which attaches to the top of an extension ladder like a wishbone. It provides a wider "stance" for the top of the ladder and has rubber caps to keep the legs from marring the wall (lower right photo, opposite). Caution: Although you can reach a bit farther to the side using a stabilizer, always remember to keep your belt buckle between the ladder's rails so your center of gravity remains within the ladder's width; otherwise you could tip over.

Scaffolding

Scaffolding is typically used when the height or width of the work area makes using a ladder impractical or when the load is too heavy for even a Type IAA ladder. Installing siding, applying stucco and completing masonry projects often require the use of scaffolds. Most DIYers do not own scaffolding, but it's easy and inexpensive to rent. (If you do not have a truck or trailer to transport scaffolding, ask the rental service about delivery.)

Scaffolding sets come in two varieties: rolling (typically used indoors) or fixed (for outside projects). Locking casters prevent the wheeled models from moving during use. Of







Before starting your next big project, make sure you've got the right tool for the job. Look for these incredibly handy new tools from Kreg on the DIY Channel's upcoming season of 'Cool Tools' with Chris Grundy.



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Learn more and watch the



On a job site, OSHA requirements state that when using ladder jacks, the plank may not be higher than 20 ft. from the floor or ground. This is good advice for DIYers, too.

LADDER PRECAUTIONS

Each time you use a ladder, inspect it to ensure that it's in good working order and free of any grease, dirt or oil that might cause you to slip. Make sure that all of the mechanical parts operate smoothly. As you set it up, follow these rules:

- Open stepladders to their full width, and make sure that the cross braces are locked in place.
- Never use a stepladder as you would an extension ladder (folded flat and leaning against the wall).
- A ladder's legs must rest on a firm, level surface. This is usually not a problem indoors, but outdoors you may need to shim one or both of the legs with wood or another flat, hard material. These supports must be able to bear the combined weight of the ladder, the person climbing and any materials and tools. The supports should also be large enough that the ladder's legs won't slip off of them if your weight shifts the position of the ladder slightly. Ladder levelers, short extensions for the legs of extension ladders, will do the same job without the risk of slippage.
- Extension ladders must extend at least 3 ft. above the highest support point (such as the gutter or roofline) to provide a handhold when stepping from the ladder to the roof and to allow for extra contact area in case the ladder shifts.
- If your ladder's legs must rest on a slope (as mine did when I was hanging my parents' gutters), be sure to block behind the ladder by driving stakes, such as pieces of pipe or rebar, deep into the ground. The little metal teeth on the feet of the ladder are not enough to keep the ladder from slipping.
- No matter how well you position your ladder, it never hurts to have a spotter, especially if the ladder is leaning against a curved surface, such as a tree.
- \bullet Never move a ladder while standing on it. Always climb down, move the ladder, check its stability and then climb back up. MT

course, scaffolding should never be moved while people are onboard.

As with ladders, be sure to inspect scaffolding before every use. Check that it is clean and dry and that all parts, such as the locking pins and cross braces, are working and tightly secured. If the unit is 10 ft. or higher, add guard rails and toe boards on the top section to help prevent a fall. On mobile units 10 ft. or higher, outriggers must be used.

When climbing up or down a scaffold (or a ladder), always maintain three points of contact (two feet and one hand, or two hands and one foot). Use a rope or other

hoist to raise tools and materials, or have a partner hand them up to you so you can keep both hands free for climbing.

Other systems

For a midsize project where renting scaffolding is impractical, consider these alternatives:

- Place a plank (2x10 or larger) on the rungs of two facing stepladders, but not higher than the second step from the top of each ladder.
- Install ladder jacks (photo, above) on two extension ladders to hold staging, a third ladder or a plank (again, 2x10 minimum).

In either case, the plank should not hold more than 25 pounds per square foot, and no more than two people may work on such a setup at one time.

If you need a really long span, or if you are working in a space too narrow for scaffolding or ladder jacks, consider renting a pump-jack system. This is a set of two poles, either wood or aluminum, secured to the ground and braced to the building at the top. A plank is raised and lowered by foot-operated jacks.

For roofing work, you can use roof scaffolding or a "chicken walk." Similar to ladder jacks, roof scaffolds are angled braces that support a plank. (They must match the pitch of the roof.) A chicken walk is a long board laid up the pitch of the roof with shorter boards nailed or screwed to it to provide footing (similar to the rungs of a ladder). Both roof scaffolding and chicken walks must be fastened to the roof or secured by 3/4-in. manila rope (or an equivalent).

You'll find more information about scaffolds and ladders at the Occupational Safety & Health Administration (OSHA) Web site (see SOURCES ONLINE). Manufacturers also offer safety guidelines online. Louisville Ladder's C.L.I.M.B. Academy, for example, has training films and DIY tests where you can see results instantly. Some of the precautions may seem like overkill, but trust me, avoiding falls is worth every effort. \diamondsuit

Club member Mike Tavis is a DIYer who lives in Minneapolis, Minnesota.

SOURCES ONLINE

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

American Ladder Institute www.laddersafety.org

Cosco Home and Office Products www.coscoproducts.com

> Ladders.net www.ladders.net

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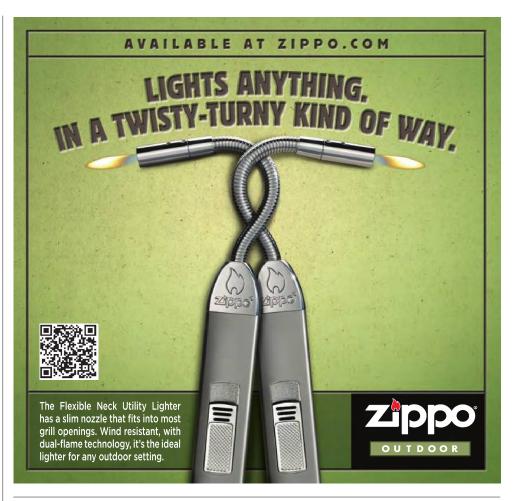
www.louisvilleladder.us.com

OSHA

(Occupational Safety & Health Administration) www.osha.gov

> Werner Co. www.wernerladder.com

Wing Enterprises (Little Giant Ladder Systems) www.littlegiantladder.com





Walking on Wood

BY MIKE BERGER

Building a boardwalk is a quick, easy way to create a stylish path



oardwalks have been a part of American history for close to 150 years. Originally designed to help railroad passengers avoid wet or sandy conditions as they walked to the entrances of luxury hotels in places such as Atlantic City and Virginia Beach, boardwalks have become an iconic part of American scenery.

Closer to home, a boardwalk is a great option if you're considering building a ground-level walkway over stable soil. (Though a boardwalk can also offer a dry path across wet or swampy land, the construction of that type is far different and best left to professionals.) Because a traditional boardwalk rests on the ground, it requires no footings or concrete — a simple base of leveled, compacted gravel provides plenty of stability for its pressure-treated sleepers. In fact, a boardwalk is so simple to build that you'll only need a shovel and a wheelbarrow, a level, a saw and a drill-driver to complete the project.



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Start by removing the sod from the area where the boardwalk will rest. Use your spade to carefully shave off any high spots in the soil.

INSTALLING A BOARDWALK



To prevent weeds from growing up through the spaces between boards, install landscape fabric over the soil. Do not use a plastic barrier — it will not drain properly.







To create the proper base, cover the landscape fabric with 4 in. of gravel, keeping it level as you go. Lay three pressure-treated boards to serve as sleepers facedown on the gravel — we used 2x4s for edges and a 2x6 for the center — and then check for level one more time.



Install the boardwalk's decking (in this case, 5/4x6 cedar boards) by screwing the individual boards to the sleepers below. Allow a 1/8-in. space between boards for drainage, and drive two screws at each point where the board rests on a sleeper. Once construction is complete, apply exterior-rated stain and waterproof finish to maximize your boardwalk's longevity. \diamondsuit

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MEMBER FORUM

Tip Trader

BY MIKE BERGER

Home and workshop hints from Club members



Proper Hole Placement

When Club member Ken Plante of Castro Valley, California, was building a storage cabinet for his 100-plus router bits, he wanted a quick and accurate way to drill all of the holes that would be required to store them. So he created a holeplacement index. To use it, he measures and drills the first hole in the series; then he flips down the index so that its point rests in the hole he just drilled. The index's spacer block is the same width as the required spacing between holes, so all Ken has to do is position his drill press bit against the block to achieve even hole spacing.

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 Mike Berger 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.



Shop-Made Corner Cauls

Club member James Floyd of Klamath Falls, Oregon, uses 1-in.dia. sections of PVC pipe to create corner cauls for gluing up boxes. He removes a quarter of the pipe's circumference; then he cuts the cauls to the lengths he needs for his specific project. James notes that the cauls also help to keep glue off of the band clamps during assembly.





Comfortable Gardening

To make his gardening tools easier and more comfortable to use, Club member Anthony Siegmann of Liberty Township, Ohio, uses 1-in.-dia. schedule-40 PVC pipe to extend their handles. Because the pipe's inner diameter is just a bit smaller than that of the implement's wooden handle, he first uses a heat gun to soften one end of the pipe. When the pipe is warm enough to stretch, he slips it over the wooden handle, allows it to cool and then cuts it off at a comfortable length. Finally, he uses a file to remove any sharp edges. \Diamond



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HYDE® 14-in-1 Multi-Tool Hyde's ultimate do-it-all tool scrapes paint, cleans rollers, opens cans, pulls nails and even has screwdriver bits in the handle. Keep one with you while you work and another one handy at home.

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

Pioneer Steel buildings are economical, versatile, durable, maintenance-free and easy to erect. Providing high-quality steel buildings to suit any budget. www.pioneersteel.com, 800-668-5422.

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HandyWorks

BY JENNY STANLEY

Your vote will help decide who wins this month; next time, enter a project of your own



On a mission

Club member **James Young** of Sterling Heights, Michigan, handcrafted this Mission-style chair and matching ottoman out of quarter-sawn white oak. He attached the legs of the chair with lock-miter joints and used dowels for all other connections. A 9-degree slope to the arms adds comfort and style. James finished the wood with two coats of Minwax antique oil and topped the chair and ottoman with handmade cushions that complement his living room's decor.



Fresh front entry

After removing an overgrown arborvitae in front of his house, Club member **Jeffrey Rondeau** of Woodbury, Minnesota, wanted to incorporate a sitting area into the newfound space. So he covered the existing concrete stoop with this curb-appeal-boosting open-air porch. Jeffrey used pressure-treated 2x6s and vinyl deck boards with hidden fasteners to create a picture-frame-style pattern that required time and effort, but the result is worth it. "We really enjoy our



new porch and have received many compliments on it," he says.



Lawn tractor transformation

Making use of new and used iron, Club member **James Zacher** of Rugby, North Dakota, crafted this impressive custom loader for his Cub Cadet lawn tractor from scratch. "The parts came from a machinery salvage yard," James says, adding that the main cylinders were once part of a baler, the bucket cylinders came from the power-steering mechanism of an I-H combine, and the hydraulic pump was taken from a pull-style swather. To complete the project, James hired a local shop to make the hoses.



Inspiration strikes

When lightning felled a walnut tree on his property, Club member **Roy Judd** of Fountain Valley, California, decided to put the wood to use. After letting it dry in his barn and then having a local lumberyard plane it, Roy built this rustic outdoor bench. He cut a thick slab for the seat and attached four square legs; then he hand planed two small sections for the L-shape backrest. "The eight spindles were the fun part," Roy says; he used a neighbor's antique belt-driven lathe to turn them. "I take silent, personal pride in that I took an act of nature and created something useful," he says. \diamondsuit

CRITICS' CHOICE AWARD

WINNER: Lou Minna of Northville, Michigan PROJECT: "Mantel to the Max," April/May 2011 PRIZE: Lou will receive an official certificate and a 56-piece Universal Mechanics Tool Set from Craftsman. Congratulations, Lou!



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.

ON A MISSION
FRESH FRONT ENTRY
LAWN TRACTOR TRANSFORMATION
INSPIRATION STRIKES

Voting for this issue will end September 30, 2011. The winner will be announced in the December 2011/January 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

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

GoodWorks

HANDY applauds those who extend a helping hand



Library for DIYers

Imagine having access to 2,500 affordable tools. Residents of Colorado do, thanks to the **Center for ReSource Conservation's ReSource Tool Library**. The organization accepts donations of unwanted or seldom-used tools and then lends them out for small handling fees with the purchase of an annual membership (\$25 for an individual). More than two dozen similar tool libraries exist in the United States, so look up a location near you to start checking out tools or donating your extras. \Diamond





Check out your local tool library to start checking out tools!

PHOTOGRAPHY BY JONATHAN CASTNER

MEMBER FORUM



MEMBER-TESTED SEAL

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.

Member Tested

BY ROSS TANNER, PRODUCT TEST EDITOR

473 Club members tested more than \$62,929 in products



PATIO DOORS

MEMBER RATING: 8.9 BEST FEATURE: PERFORMANCE

Simonton Windows Inc., 800-746-6686, www.simonton.com

Offering a combination of custom styling and energy efficiency, Simonton replacement patio doors (starting at \$1,100) feature popular hardware and a choice of grid patterns, exterior colors and interior wood-grain laminates. The durable, low-maintenance doors boast fusion-welded vinyl panels and various energy-efficient glass options, including region-specific Energy Star glass packages.

Eric Cichy, Fergus Falls, MN: "Simonton replacement patio doors have excellent style features such as locking hardware and track covers. I've installed many patio doors, and these rank among the best."

Mark Reed, Pataskala, OH: "The Simonton Patio Door is a great value for the price. Its quality, craftsmanship and appearance are far above any other patio door, and it immediately improves your home's energy efficiency."



OSCILLATING TOOL KIT

MEMBER RATING: 9.5 BEST FEATURE: PERFORMANCE Bosch Tools, 877-267-2499, www.boschtools.com

Offering the ability to cut, grind, scrape and sand, the versatile corded Bosch MX25EK-33 Multi-X Oscillating Tool Kit (\$199) provides versatility and power for remodeling, woodworking, carpentry, floor installation and more. It features a powerful 2.5-amp motor, a variable-speed dial, constant electronic circuitry to maintain speed, a durable accessory holder with 33 easy-to-change accessories, and a ball-jointed cord swivel. The tool's small, more ergonomic circumference and soft pads enhance comfort and control.

Diana Martin, Otis, OR: "The attachments are easy to change, everything stores in a nice case, and the tool can adapt and assist in many different jobs."

Mark Righter, Blachly, OR: "I used the scraper attachment to take off three coats of paint, the sanding attachment to get in close corners and the wood-cutting attachment when laying flooring. I was able to use one tool for the whole project!"



ACRYLIC-BLOCK WINDOW

MEMBER RATING: 9.5 BEST FEATURE: EASE OF INSTALLATION Hy-Lite, a U.S. Block Windows Co., 888-256-2599, www.hy-lite.com
Hy-Lite acrylic-block single-hung windows (starting at \$325) are fully operable to allow for ventilation and privacy. They feature a limited lifetime warranty, vinyl-frame construction and specially developed mold- and mildew-resistant caulk that provides a beautiful finish. The windows are available in two block styles and three vinyl-frame colors; you can also have them custom-built.

Howard Nillis, San Antonio, TX: "The window fit perfectly with only three shims, making it extremely fast to install. I like the security of double locks."

Bryan Pike, Goldsboro, NC: "My family thought the Hy-Lite window was a great addition to our bathroom. I liked the ability to open it without the bulkiness of a large privacy window."



MEMBER RATING: 9.6 BEST FEATURE: APPEARANCE i-lighting LLC, 888-305-4232, www.i-lightingonline.com

The I-Lighting Outdoor Lighting System adds illumination, safety and security to a deck and deck stairs. The kit can be installed with only a drill, a 7/16-in. drill bit and a hammer, and it includes wiring, LED light fixtures and mounting hardware along with color-matched screws and wire staples. The simple plug-and-play wiring harnesses make installation easy, and all of the wiring and connections are sealed. The unit plugs into an outlet and includes a PhotoEye that will automatically turn the lights on at dusk and off at dawn.

Paul Crutcher, Rineyville, KY: "My family was amazed at how easy the lights were to install. They just snap together with no need for wire pliers or tape, and the lighting is simply beautiful."

Kelly Hanna, Terrell, TX: "The lighting system is well-thought-out and has the easiest installation of any system I've used. The light shines in three directions, putting out more light than a conventional design."



BUCKET ACCESSORY

MEMBER RATING: 8.6 BEST FEATURE: QUALITY Bercom International LLC, 877-464-1170, www.handypaintpail.com

The Handy Bucket Builder (\$8.99 to \$9.99 each) is a unique accessory that allows you to put 5-gallon buckets to work in a variety of configurations. Each accessory features a slot to hold a 2x4 and can be attached to the top and bottom of a bucket so you can stack buckets to form legs for sawhorses, workbenches, tables, etc.

Tom Weiss, Huntingdon Valley, PA: "Handy Bucket Builders easily fit in the trunk of a car and can form a sturdy, portable bench that holds 200-plus pounds. These things are pure genius!"

Michael Klice, Waterford, NY: "They stack together for easy transportation and can be set up in minutes to create a work surface of whatever length you need."

POWER WASHER

MEMBER RATING: 9.7 BEST FEATURE: PERFORMANCE Generac Power Systems Inc., 888-436-3722, www.generac.com

Generac's new residential 3,000-psi power washer (\$399) features a 212cc overhead-valve horizontal-shaft engine. The engine has a low-oil shutdown function to prolong its life and delivers 2.7 gpm for DIY cleaning tasks.

Other features include an ergonomic spray gun with a soft grip and an easy-to-pull fulcrum spray trigger, two 3/4-gallon soap tanks, five quick-click nozzle tips that are easy to change without turning off the unit, a 30-ft. hose and a two-year limited warranty.

Michael Payette, Westbrook, ME: "The Generac 3,000-psi power washer starts easily, runs excellently and has plenty of power, eliminating the need to scrub vinyl siding with a brush. The best feature is that it has two tanks."

Chris Lilly, Delaware, OH: "I like the quick—click nozzle feature along with the grommet nozzle holders to ensure they are not lost. The setup puts nearly everything you need on the cart."



MITER DUPLICATOR

MEMBER RATING: 8.3 BEST FEATURE: EFFECTIVENESS
Affinity Tool Works LLC, 866-588-0395, www.affinitytool.com

Cut perfect complex miters with the durable Bora Angle Master Miter Duplicator (\$72). The tool easily duplicates all inside and outside angles from 70 to 180 degrees. A graduated scale tells you the angle measurement as well as the angle of your cut. Simply duplicate the angle, lock the thumb knob, split the Angle Master and transfer the cut angle to your saw.

Kevin Kronewitter, Newark, MD: "The Bora Angle Master Miter Duplicator allows for the transfer of exact angle measurements to a variety of tools, saving valuable time, and it's built to last."

Joe Cesta, Redfield, NY: "This tool is simple to use and accurate. The miter duplicator allows you to measure and cut once because the fit is always perfect, even on compound joints."

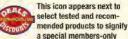
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YOU CAN BE A TESTER

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 Product Testing Program in the left-hand column of the home page. From there, you can fill out the form online.



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CEILING GRID COVER

MEMBER RATING: 8.8 BEST FEATURE: DURABILITY

Armstrong World Industries Inc., 877-ARM-STRONG, www.armstrong.com

Instantly upgrade an industrial-looking, stained or yellowed drop-ceiling grid with Armstrong StyleStix Ceiling Grid Cover (\$1.25 a lineal foot). Its rigid PVC construction allows for easy snapon installation, and its elegant detailing adds architectural interest to 2 x 2-ft. drop-ceiling tiles.

Keith Michels, Effingham, IL: "The grid cover was very easy to install and is extremely durable, and I liked the option to paint it. It is perfect for anyone who wants a classier look to their ceiling tiles."

Dan Bateman, Hobart, IN: "Armstrong's StyleStix Ceiling Grid Cover was a snap to install, and everyone who has seen it has commented on how great it looks."



Russell Berlan, Mentor, OH: "The scrapers were useful for pulling up peel-and-stick floor tiles and glued-down carpet. The 2-in. scraper dug out hinge mortises without a chisel and hammer."

Jim Himmelberg, Lincoln, NE: "The Spyder Scraper makes a laborious task much easier by removing dried adhesive from concrete, wood and flaking paint. It saves me time and energy."

SCRAPING TOOLS

MEMBER RATING: 8.3 BEST FEATURE: QUALITY

Spyder Products, 888-471-2239, www.spyderproducts.com

The Spyder Scraper (\$34.99 for a pack of three) is a powerful scraping tool that works with any reciprocating saw, eliminating the need for manual scraping. Three sizes are available (as a set or individually): The 2-in. scraper performs precision scraping and chiseling on tough materials such as ceramic tile adhesive, thinset and vinyl tile; the 4-in. general scraper works well on materials such as glue, linoleum and drywall mud; and the 6-in. scraper is designed for soft materials and maximum volume removal of materials such as paint, rubber-back carpet and wallpaper. Blades can be resharpened as needed.



William Manning, Acworth, GA: "The Echo Bear Cat 3-in. chipper/shredder has an easy-to-start motor and produces finely processed mulch. It's ideal for urban yards, and the pneumatic tires provide easy movement."

CHIPPER/SHREDDER

MEMBER RATING: 9.1 BEST FEATURE: QUALITY Echo Bear Cat, 888-625-4520

www.bearcatproducts.com

The durable and easy-to-maneuver Echo Bear Cat SC3206 3-in. chipper/shredder (\$1,099) turns leaves, twigs and pruned branches into mulch and compost. Powered by a 206cc Briggs & Stratton overheadvalve motor, it has two reversible blades that will chip a 3-in.-dia. branch or bundle of branches and eight serrated shredding knives for leaves. Other features include two 8-in, pneumatic tires, separate chipping and shredding chutes, solid, welded construction and strong motor mounts.

Eugen Hul, Palm Beach Gardens, FL: "The amount of mulch I got from my yard work was more than needed, so I shared with my neighbors. The machine is easy to store and has reduced my costs for mulch."

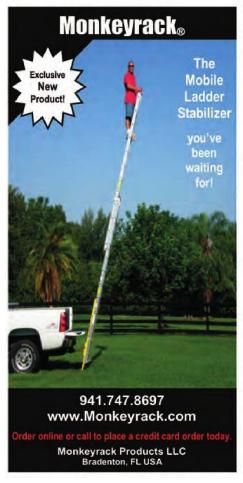


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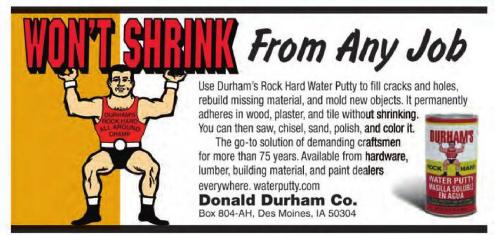
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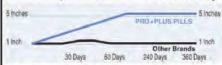
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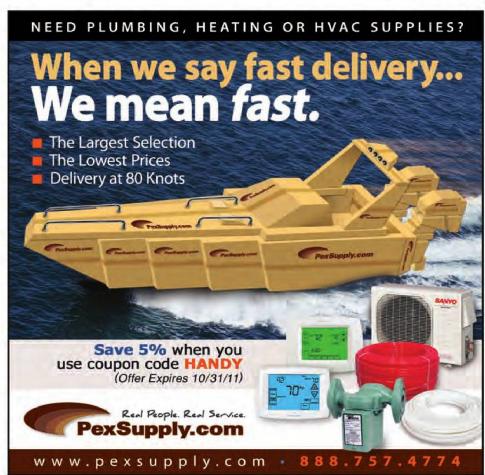














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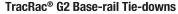


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NO PURCHASE NECESSARY TO ENTER OR WIN. Making a purchase will not improve your chances of winning. See the official contest rules at www.HandymanClub.com. Submit your entry at www.HandymanClub.com or send your name, member number (if available), address and phone number on a postcard to: Great Giveaway, CRID #3932, P.O. Box 3428, Hopkins, MN 55343.

Member Benefits

Make the most of your HCOA membership

Snapshots From Vegas



HANDY's Managing Editor Mike Berger (left) and Club member Bob Phelan prepare to shoot a video review of the Skil 1830 router with plunge base.



Club members Tami Love (left) and Greg Majoros test drive Ryobi's new 18V One+ Handheld Reciprocating Pruner.



Ryobi's lawn-and-garden expert, LeeAnne Hooper, takes members of the Handyman Club of America and the National Home Gardening Club on a tour of Ryobi's latest outdoor power tools.



these tools and more at the National Hardware Show.

PHOTOGRAPHY BY VIVIAN BERNETT

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Cub Cadet Z-Force S zero-turn riding mower Mitchell Zeller, Aloha, OR Check out this issue's GREAT GIVEAWAY on p. 65.

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Monday - Friday, 7:30 a.m. to 8 p.m. Saturday, 8 a.m. to 4:30 p.m. Central Time

> WRITE to the Club **HCOA Member Services** P.O. Box 3401 Hopkins, MN 55343-2101

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Trends in High Places

BY CONNIE BASTYR

Improvements in materials and engineering have raised the bar in ladder design

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Ladders are universally recognized to be indispensable for a broad range of applications.

mong all the tools in a handy person's arsenal, the ladder has perhaps the widest range of applications — and interpretations. To subscribers of superstition, a ladder conjures thoughts of danger and really bad luck. To firefighters, it is a lifesaving tool. As children, we all knew ladders as routes to fun — a tree house, a bunk bed or a jungle gym. But to tradespeople and homeowners, a ladder simply represents accessibility.

Ladders are downright omnipresent, which makes tracing the origins of these ancient yet basic structures such a challenge. They have no recorded beginning or single inspiration. The first models were merely the natural outcome of people's ability to problem-solve. Need to reach the fruit on top of that tree? Climb the tree. Need to scale a high ledge in your cave? Cut the tree, crop its branches and prop it against the rock. Need stability? Try using two limbs with sticks strapped across them. According to ancient cave art, that's how it's done.

For centuries, tree parts lashed together to form two rails with some cross members offered adequate footing. For more complex climbing needs (constructing towers and cathedrals, etc.), builders devised scaffolding and longer ladders — initially of wood or bamboo. As milled lumber became available, people made ladders out of boards — a bit less crude and more stable than stick ladders.

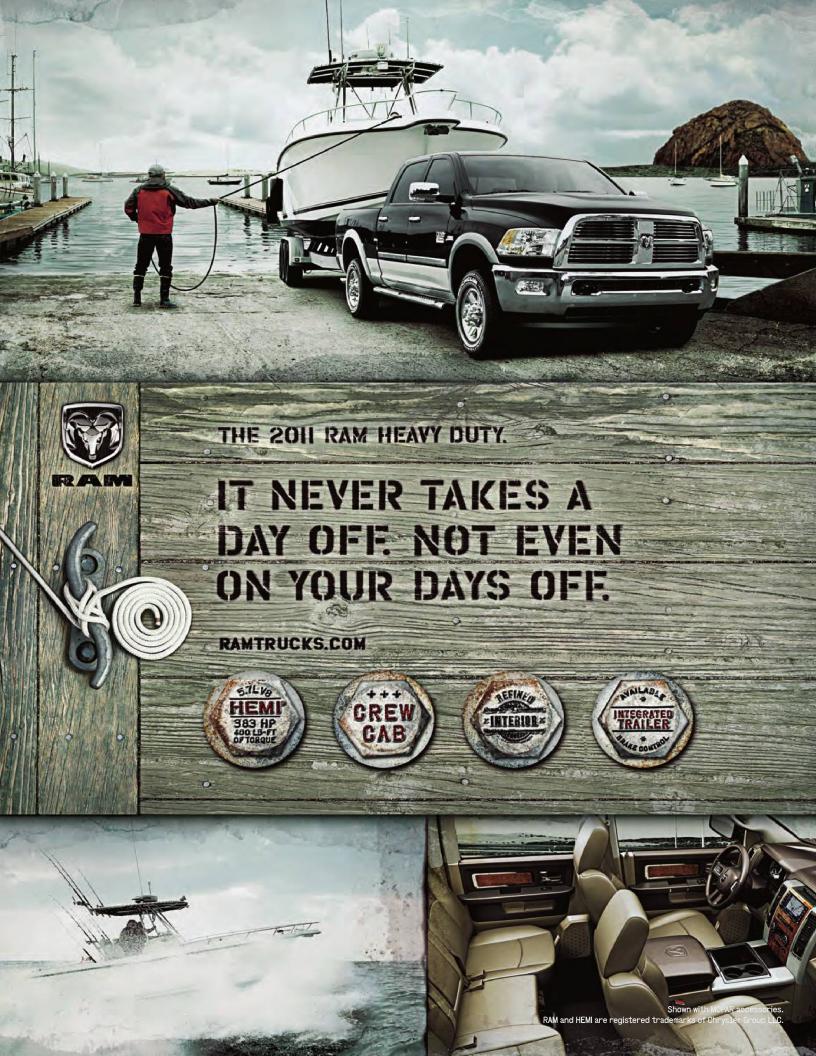
Until the end of the 19th century, only homemade and site-built ladders existed, so the commercial production of ladders is a relatively new development. At 110 years old, Michigan Ladder Co. claims it's this country's oldest ladder manufacturer. Of course, its ladders were originally constructed of wood. The first company to manufacture aluminum ladders was born of a request from Oslo, Norway: That city's fire department asked the Aluminum Company of America (ALCOA) to develop an alternative to its heavy - and combustible - wood ladders. (Imagine the strength required to maneuver a 50-ft. wood ladder!) ALCOA declined the offer, but Sam Carbis, an employee of the company, thought the idea was viable. He resigned and formed the

Aluminum Ladder Co. in the 1930s. Both it and Michigan Ladder Co. are still operating today.

The aluminum extension ladder was a lifesaving advance in firefighting; its strength, light weight and water-resistance made it ideal for industrial use as well. However, rationing of aluminum during World War II caused a setback in production — until the postwar housing boom, which drove ladder sales and design to new heights.

Despite aluminum's advantages over wood, it has one big drawback: It's a keen conductor of electricity. The search for a safer alternative led Louisville Ladder to introduce a fiberglass stepladder in 1946. Durable, lightweight and nonconductive, fiberglass ladders are climbing in popularity among homeowners and contractors.

In response to safety guidelines and customer needs, manufacturers have stepped up design and engineering of all types of ladders. Having evolved from simple sticks to hinged models that contort for versatility (think Little Giant), today's ladders meet elevated standards to help us climb high safely. \diamondsuit



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