

This Old House

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RECTIONS

FUNCTION

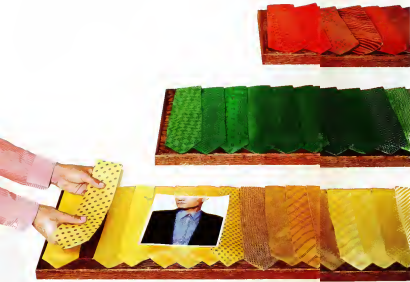
DETAIL

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NOVEMBER 2009

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CORNER This Old House general contractor Tim Gilroy and homeowner Kim Winchester choose new paint colors for the exterior of the Winchester Massachusetts, 19 project house. For more on how the house was stripped of its existing 10 coats of paint, see page 102. PHOTOGRAPH BY KELLER AND KELLER

PHOTO: COURTESY OF THE NEW YORK HISTORICAL SOCIETY; PHOTO: COURTESY OF THE NEW YORK HISTORICAL SOCIETY; PHOTO: COURTESY OF THE NEW YORK HISTORICAL SOCIETY



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PAINT SPRAYER, P. 88

"When I was 16 or 17, I fell off the same roof twice in the same day.... I haven't fallen off another one since."

—TONI RAM, THE OLD HOUSE GENERAL CONTRACTOR



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CLOCKS, P. 52

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GRAB LIFE BY THE HORNS



AND I'M A WORKAHOLIC.



CONTRIBUTORS



In "Pew Old Farmhouse" (page 138), **LEAH NECH** spotlights the restoration of a 12-year-old West Chester, Pennsylvania, farmhouse. "It's a charming re-creation of the kind of 18th-century farmhouse built by the town's English Quaker founders," she says. From the hand-painted fireplace mantels to the hand-painted chandelier floors, the homeowners "were in great luck to keep to the spirit of the colonialists. But they accepted high ceilings, a more open floor plan, and modern conveniences for today's needs." Nech's first book, *American Farmhouses: Country Style and Design*, is just out from Simon & Schuster.

Writer **FRANK MURPHY** reports "Do It Your Self—House Improvement in 20th-Century America," a new exhibit at the National Building Museum in Washington, D.C., to be a how-to manual of restoration of every aspect. "It's the Emerald Hall of Fame for do-it-yourselfers," he says. In "DIY House" (page 138) Murphy writes modern through some of the show's highlights while recounting his own attempts to beat the Victorian-era house where he lives. A woodworker by night, by day Murphy is a business writer for *The Washington Post*.



"These are all sorts of pebbles on your property placed or not," says **PETER WALSH** in "Garden Paths" (page 134). "They develop over time as you walk to the back lawn or the compost pile, or you across the lawn to water a flower bed." In fact, Walsh is turning a new way by there into a landscape on his second, his son Long Island, New York. The longer he spends, a clearing out and edging materials that involve in a path—matted or other—into a valued landscape element. Thanks to the garden editor of *HomeStyle*, Walsh wants a regular update for *HomeStyle* Cottage and Garden.

HOW TO REACH US

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Profile

the best things in life

LETTERS

It's no Eichler

As an avid do-it-yourselfer, my husband is always happy when the next issue of *TCR* comes in the mail. When the July/August 2002 issue arrived, though, it was quite a surprise to see a house exactly like ours featured in "Suburban Renovation" (right). We thought we had bought a unique house. Little did we know it was an Eichler.

We're delighted that we learned more about the history of our house than we ever knew existed. Of course we're proud the July/August issue is our friends and family, and all have commented on what a great magazine *Post Old House* is. We already knew that.

Karl Stein, Irvine, Calif.

Passing the Salt

I read with interest the article "Septic Hoopoo!" (September 2002), especially the section telling what not to put into a septic system. There was one particularly disgusting substance not listed that I recently bought: ramen.

Most septic systems particularly need to be flushed with a salt solution, or brine, to encourage the flow in the main line to the septic tank. In the homes in our town the brine is stored into the attic tank that leads to the septic tank. I've heard that brine, in high concentrations, will kill bacteria that break down sludge. The owner's manual for my new tank says specifically not to pour the septic into the septic tank. Can I re-plumb the septic so that it drains into the downspouts that lead to the ditch along the road?

Joan Lee, Westwood Court House, Ohio

Many manufacturers won't allow you to dump septic backwash away from the house by a septic system or sewage treatment plant. Check your local regulations. There is some question as to whether the only way to save water from water septic systems is to install backwash tanks. Some studies suggest that the solution may even be beneficial to bacteria. According to David Knutli, a soil scientist with Piedmont Environmental Group in Lakewood, Pa., "A properly sized, well-maintained septic system and a well-maintained septic should operate together without trouble."



In "Septic Hoopoo!" you mention a company called ProSept that installs septic systems, but I've been unsuccessful in trying to find them. Do they have a toll-free number or other way I can reach them?

Debrae Bennett, Erie, Pa.

Many readers hope to find the same question. The contact information is ProSept, Brookfield, Conn., 203-339-0677, Gary Mangione, program manager.

Designs and Plastics

The opening photo of "Insulating a Plaster Perimeter" (September 2002) shows the installer using a postcap to a joint. We've found that this can cause the cap to split or allow weather to invade through the nail holes and cause premature rotting. Our installer is about postcaps with glue or silicone. We have been using Liquid Nails with good results.

Secondly, most quality fence-panel manufacturers will double-nail plastic backboards to backing (nails for strength) when using the panels cannot be nailed. Plastic that have to be nailed should be nailed single-nail. A second nail carrier is added in the field after nailing.

Raymond W. Meehan, Minneapolis Power Co.
Bloomington, Wis.

Shower Dishwasher Installation

I own a floating business and was recently called to a customer's house to do a re-plumb (several kitchen floor) area had been intentionally broken by an appliance installer more a big home center so he could remove the old dishwasher and put in a new one. The homeowner had been told by the installer that the this had to be broken up to do the installation.

Art marries technology.

... ..



... ..

If you're partial to art, you'll find it here. From dramatic curves and contoured surfaces to the sleek simplicity of stainless steel. After all, when it comes to appliances, art does matter.

If you're partial to technology, you'll find it here. From sensor-controlled cleaning to true European convection cooking. After all, when it comes to appliances, technology does matter.



Profile

the intelligent change in life

See appliances now

By Dan DeCarlo

A Great Set of Pipes

When the homeowners and TV crew visit the Windsor, Massachusetts, pre-war house, they often remark how beautiful the plumbing job is. (The fine work—once again—of master plumber Ronald Caldwell.) So we asked This Old House plumbing and heating expert Richard Turboway to give us a tour

ing. As Richard puts it, "Make it as easy without making the house fall apart." In one bathroom, rather than hook drainpipes through the joists, as plumbers have been known to do, Caldwell took the longer route—between the joists and around the end. "Ronald's dropped a line all the way to the base-



Master plumber Ronald Caldwell secures a perfectly placed drainpipe, neatly tucked into a cavity, as part of the much-praised plumbing job in Windsor.

"The paradox of our trade is that the better the job we do, the less we get noticed."

—Richard Turboway

and explain what makes this pipework so good. Here's what he told us:

• Everything should be level, plumb, and true—except for horizontal drains, which, of course, should be sloped for drainage.

• Pipes should be neatly tucked into walls and corners so the carpenters don't have to build compensating braces around them. "You'll barely see this," says Richard, pointing to an unobtrusive drainpipe in a kitchen corner. "That's the paradox of our trade: The better the job we do, the less we get noticed."

• A plumbing job also shouldn't undermine the structural integrity of the build-

ing just to avoid compensating the framing," says Richard. "It takes more time and material, but it's worth it."

Richard points out that compensating low-level work against homeowners by forcing the plumber to cut corners—sometimes literally. He suggests homeowners look closely at low bids and ask the plumber how he intends to install some of the more complicated runs. "You want your plumbing job to last until the next major renovation," says Richard. "That means making sure the house around it is still standing, too."

—Alexander London

Your House Portrayed in Clay

Capturing the image of a house for posterity can take many forms: from oil-on-canvas painting to serial photos. But amongst the most examples we've seen are the ceramic models that Lee Knapik makes at his studio in Richmond, Virginia, for place that isn't a 1950s Popstar during the holidays; these twice-fired clay creations they take about four to six weeks to make) render the houses in vivid detail: right down to window leading and exterior molding profiles.

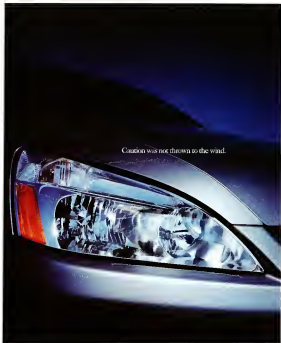
Knapik works from photographs and sketches, or the one model houses from coast to coast—although none from the oldest past. "I once did a house that burned to the ground in the 1950s," she says. "The owner took one look at my model and broke into tears."



did you know...?

The home balloon framing—which refers to a house skeleton of 2x studs running from the foundation to the roof without a break for the seams in between—actually came from apprentices of the building, arrived in 1840s Chicago. When distressed lumber (obscurely called "stubs") began to replace the heavy beams, trunks of post-and-beam construction, skeptics feared that the houses were so shabby they'd blow away like balloons.

PHOTO: JAMES WILSON FOR THIS



While there are situations when moderation should be exercised, redesigning the all-new Accord clearly was not one of them. Consider the Accord EX V-6. It now flows a 240-hp engine, a leather-trimmed interior with heated front seats and an available voice-activated navigation system. Modest? Perhaps not. Scrutable? But of course.

It was thrown to the wolves.



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ON THE JOB



BEFORE & AFTER

CABIN FEELS When Regina Baker and Ted Bollenbach bought their home in Lumburg, Virginia, the property included a derelict, 180-year-old log cabin built from the bark, shown left, quarters to a family of bats and several black snakes. The couple decided to turn it into a guest house, so they dismantled the structure and rebuilt it closer to the main house. A crew of experienced chinkers from Knoxville, Ten-

nessee, traveled north to help with the reassembly. Local contractors capped the cabin with a metal roof, and the owners restored the front entryway (shown right) so that a broken visitor

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A Lesson Learned the Hard Way

BY TOM SHUL, TOP GENERAL CONTRACTOR



When I was maybe 16 or 17, I fell off the same roof twice on the same day—the same way—because I thought I was invincible. I was rigging off shingles with a pickaxe, and I slipped on a loose one and fell 12 feet to the ground, breaking the wind out of my lungs! That should have taught me a lesson, but instead I went back up and owned early shingles on a shingle again. Only this time the pickaxe bit down on a loose one and stuck in the ground not 6 inches from my head. That's how I learned that I shouldn't ever work on a roof with out first installing a safety plank, nailing down some 2x4s close, or wearing a safety harness to stop me from doing. And you know something? I haven't fallen off another roof since.



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ON THE JOB

(TOM TECHNIQUE)

Hanging Heavy Wall Objects

What to do when you have to hang something heavy—like a large mirror—that needs more support than a few business cards provide? Or you're left all alone to install and level an unwieldy object, such as a wall cabinet? In both cases, TQFH panel contractor Tim Skea recommends a two-piece French cleat. Two pieces by ripping a 45-degree cut in a length of 1/2-inch plywood or a 1x6. After measuring and laying out a level line, he screws the bottom half, or cleat, onto the wall at the walls. Next he attaches the top cleat to the hanging object. At that point, he can lift the whole piece into place, setting the one cleat into the other. "It's a lot easier getting the cleats level when you're not holding a 100-pound wall cabinet with one arm," says Skea.



Clearing the Air



Many modern businesses have an air-purifying fan in the wall, but subjective opinions vary. Many owners think they need help a little closer to the source. So he invented Pur-A-Wall, the first-ever air-cleaning light unit. With the price of a lightbulb, a rechargeable metal mesh lets you, clearing air through the filter and sucking up, he claims, 100 percent of the particles that circulate from inside the room. It's quieter than a wall fan and doesn't have to draw the hot air up past your head. Send email for \$990.

patents no longer pending

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ARTISTIC TOOLS: This work of folk art by John Kane (1910-2000), who made pantries of Suburban land from jewelry stores to a candy store, will be on display at the American Folk Art Museum in New York City until December 1. A Brooklyn-born truck painter and letterer by trade, Kane retired in Buell's Bend, Vermont, in the early 1950s, working seven to pick up a paintbrush again. Fortunately, he couldn't leave his work, and a decade later started to paint a series of encaustic vignettes of everyday life in 20th-century America. The one above is entitled "Pushcarts."

My remodeling needed a finishing touch. Asked an expert in an orange apron for advice.



She showed me the light.



Brown/Born Floor Lamp (S&P) 101-997 (S&P 72) and Table Lamp (S&P) 102-255 (S&P 72) Ralph Lauren Print on Manning Coat Rack

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Home Price Pendulum Slows

In the 1990s, the economic boom raised home prices in areas where land was scarce and jobs were plentiful. In the past year, however, the recession has cooled in price increases in some of those same areas. Here, we show the top five and bottom five metropolitan areas in terms of percentage increase over the past five years—and the change they have undergone over that past year.



SOURCE: Office of Federal Housing Economic Development's House Price Index. Data for period ending March 31, 2005.

ILLUSTRATION: JIM LUTHER

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Old Houses Make for Healthier Homeowners

Older homes have always kept owners on their toes facing a leaky roof or a squeaky staircase. But a new study suggests another reason residents stay active, at their benefit. The National Cancer Institute reports that people living in houses built before 1974 are 16 percent more likely to walk a mile or more at least 20 times a month, increasing daily by getting more healthy exercise than their out-board counterparts. That's because older houses are more likely to be located in communities with sidewalks, a tight network of streets, and a business district within walking distance of residences.

Before You Take That Sip



Use the handle and expense of sipping your water to a state-certified or recognized you from finding out whether your H₂O is doing some unwell come contaminants by

a home testing kit, such as the one made by WaterSafe. The inexpensive alternative (\$45) versus the \$150 that a complete lab analysis of some 95 contaminants could detect for lead, cadmium, chromium, pesticides, herbicides, hormones, and oil. Take note, however: Though such kits are cheap and convenient, they're no substitute for lab oil fully designed by the state. Homeowners should use kit results as a guide to help them pick up which contaminants a lab should test for with more accuracy.

it won't shake, but it sure can bake.



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HOUSE CALLS WITH STEVE



Married, With Two Bathrooms

A pair of small baths satisfy a couple's distinctly different tastes

By Heather Emswiler Montano

ABOVE LEFT: The bathroom's modern-line fixtures include a matching vanity with dual granite top, tub, and undermount drain. **ABOVE RIGHT:** In the bathroom, existing cabinets create a spa feeling. A center for floor-up floor glass, still here, means that most of the corner over the tub help make the room feel bigger.

Alex and Michael Johnson's renovated 19th-century rowe home came with a nice new master bath. But when it was time to remodel two much smaller baths on the floor below, they seized the opportunity to transform them into their own personal getaways. "We decided, 'I get one, you get one,'" says Michael. The Alexandria, Virginia, couple agreed that while they'd share their ideas and plans, neither would have a veto over the other's choices. "Our designer, Patrick Sutton, essentially had two clients with very different agendas," he adds. Sutton had his work cut out for him: The back-to-back baths were windowless and dark and shared the same shoebox dimensions—10 feet long by 5 feet wide. "While the right quarters were challenging, they imposed a serious discipline and clarity, forcing Ann and Michael to focus on the one major feature each wanted," comments The Old House host Steve Thomas.

PHOTOGRAPHS BY HOAGLANDER DAVIS PHOTOGRAPHY

Out with the new.
IN WITH THE OLD.

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1. Reduce waste. Last year Toyota built more than one million vehicles. The major challenge is to reduce waste — that is, waste that doesn't add value for the customer. Toyota's waste reduction manufacturing strategy is a three-step process:

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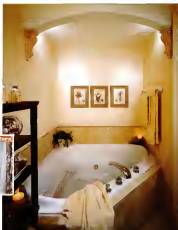
3. Reduce waste. Last year Toyota built more than one million vehicles. The major challenge is to reduce waste — that is, waste that doesn't add value for the customer. Toyota's waste reduction manufacturing strategy is a three-step process:

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FOR HER: A Spa Tub, Soft Neutrals

Ann came up with a nonnegotiable wish list. She had to have a whirlpool tub, no matter how challenging it would be to shoehorn it into the narrow space. She also wanted a serene place to escape to, in calming shades of off white, yellow, and gold.

With Ann's requirements in mind, Stevie set out to free the long rectangle of a room by dividing the space into smaller zones. He used a 5-foot whirlpool tub—one that angled in from the corner—at 45° out end of the room. To balance the dramatic tub, Stevie built a platform at the opposite end of the room where he installed a corner shower unit and the vanity. And soft lighting of different intensities—bathery over the tub, subtle over the tub—further define the two areas. Soft neutral colors and luxurious materials like the honed limestone used for the floor tile and tub surround tie it all together.



Once round the wall, the small space (above) was made to feel grander and more luxurious (above) with a whirlpool tub, limestone tile, and an arched ceiling that defines the space.

before



after



room plan. Before the renovation, the two back-to-back windows (top left) had narrow views, cramped and cluttered. In the end of the night bath, the designer put an angled tub in one corner and positioned the sink and toilet on a platform opposite it to make the room feel bigger and break up the cluttered space.

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FOR HIM:

A Power Shower, Rich Tilework

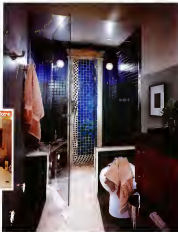
Michael's requirement for outliving his bathroom was simple—a good, strong shower and “a masculine look.” Because Michael loves outdoor sports, Steven used a rain wand to make the room seem bigger. He painted and tiled the walls blue above shoulder height, green below. A “pocket,” made of pale honed marble via set in a slight angle, leads through the narrow space toward a doorway. “You’d feel doorway along the shower wall’s back wall.” It used that painted and tiled design to represent. “The doorway suggests a vista beyond.” Finally, by the time you’ve taken all this in, you’ve forgotten what an awkward space the room actually is. “Polished nickel hardware and a custom mahogany vanity are other masculine choices—ones that make Michael feel right at home.”

The total price of both bathroom baths was \$10,000. So installed are them and Michael with their respective retreats that they use them on a daily basis. In the evening, for a few showers, she is the evening for a bathroom look.

“Having a spacious master bathroom on the floor above allowed Ann and Michael to dream a little when it came time to design their individual spaces,” says Steve. They may even have found the answer to a happy married life, he adds jokingly. “By going to divide small, compact, narrow bath to accommodate on what they wanted. And each gained a bathroom designed with surprising depth and complexity for such small spaces.”



after



The light-colored (white) look previously beautiful (white) as a path of polished marble leads to the glassed-in shower where a false doorway, framed by marble molding and a checkered tile border, creates the illusion of much more space. Polished nickel frames the path into the shower.

PLAN: The bathroom's redesigned bathroom follows the same layout as the old one, but the new frameless glass enclosed shower with an angled tile wall and the tiled "pocket" along the floor make the long, narrow space appear bigger.

Magnifique x2



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HOUSE CALLS WITH STEVE

MOSAIC TILE STYLE

Mosaic tile has been graced for its decorative design and practical durability over many years. While you may think of it as a top-heavy ceramic square that creates a pattern or picture, mosaic tile is actually defined as any tile that measures less than 3 inches square. It can be made from materials as varied as fired clay, cut glass, stone, or metal. Because of their smaller size, these tiles are ideal for use in bedrooms (see page 38), adding color, pattern, and texture to walls, backslashes, and floors. From typically ranging from \$5 per square foot for basic ceramic to \$150 for supared, hand-cut marble. "To keep costs down, you can combine inexpensive standard tiles with more exotic stone-to-contrast design patterns," says Steve Thomas. Patterns come already mounted on mesh squares so you don't have to labor over spacing lots of little pieces. "Just lay the sheet as one big tile," says Steve, "then grout as you would with any other tile." For designs that require more expertise, it's best to enlist the help of a qualified tile setter.

Mosaics come in various patterns and materials. **Mosaics** range from simple geometric patterns, like hand-cut stone squares, to Greek border patterns of tessellated rectangles, white and gray ceramic hexagons, and ceramic squares, a floral motif of irregularly shaped translucent and opaque green glass "bricks."

3

WEEKS

"Sounds Great" and with only three wires to connect, the 3-2-1 is as easy to set up as 1-2-3. **Popular Science**, 11/01

2

SPEAKERS

"...the cars...seemed to move through the entire room: front, to the sides, and behind me—with only two main speakers!" **Fortune**, *Sound & Vision*, 1/02

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Michael Herman, News Radio 1360 WQIA, 12/01

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Ask THIS OLD HOUSE



RICHARD WETHEROW
Plumber & Heating Service



TOM ROCA
Carpenter



JOHN ABRAM
Electrician



EDDIE O'NEIL
Carpenter



STEVE WEBER

WALL-HUNG RADIATORS

I'm planning to add a half-bath to our house, and I'm thinking about heating it with a European-style panel radiator. Can you give me the scoop on these units, and tell me if they will work with my existing cast-iron radiators and single-zone system? FRANK STAMACH, PORT CHARLOTTE, N.Y.

Richard Wetherow replies: The radiators you're referring to are also called flat-panel radiators, and we used them recently at the Manchester project. They're even-possible only with hot-water heating systems and valves—but unlike freestanding or freestanding radiators, the flat-panels hang from the wall, saving floor space. They're often used in bathrooms as towel-warming racks and can be stacked to fit ahead of wall space.

To estimate the size you'll need, one manufacturer suggests about 35 Btu of heating capacity for every square foot of floor area in a bathroom is a good estimate. That sounds about right to me, but check with a heating specialist, who



WALL HEAT Flat-panel radiators are lightweight and sleek, like model projects just 25 inches off the wall & keep you

will calculate the heat losses for your particular bathroom and climate. A hot towel won't make up for an underheated toilet.

UNSTICKING A METAL DOOR

I know that sometimes you have to place a wedge at the edge of a door to keep it from sticking, but what do you do when a metal draft door sticks? My swimming pool doors are wood on the exterior but metal on the interior. The doors stick so badly that the metal is pulling away from the wood. What should I do? E. PULLIN, ARLINGTON, TEX.

Tom Roca replies: Are the hinges right? That's the first thing I check when a door binds. A door with loose hinges rubs against the opposite jamb. Often all it takes is some screws long enough to reach the framing.

If the hinges are tight, maybe the wood has swollen under the metal. The solution in that case is simple. Wait for the third part of the year when the moisture shrinks back to where it belongs. Then sand all the exposed surfaces—top, bottom, sides and inside face—on a coat of oil-based primer and two coats of paint. To do the job right, you'll have to take the door off but when you're finished, there will be less chance of the door swelling when the humidity goes up again.

If that doesn't work, call my brother John and ask if you let's become his door squire.

IDENTITIES

We have an 18-by-18-foot screened deck as a back porch, but all summer we've had a problem with bugs—get this!—trickling into the house—coming up through the screen between the boards. Is there anything we can just over the decking to solve this problem?

THE COPS, THUNDERBOLT, VA.

Tom Roca replies: I hate mosquitoes, too—who doesn't? But neither does your decking. I think you ought to put your mosquito defense line where it won't show: around the perimeter of the deck. Staple a lot of fine-gauge screening between the ground and the underside of the decking—don't leave any gaps at the corners. Then install lattice panels to disguise the screen. If bugs can't get under the deck, they can't get under your skin.

If your deck is too far off the ground to see let



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- Did you already remodel in the last:
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What type of kitchen faucet did you previously use?

- 3-handle _____
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- Single-lever _____
- 2-handle _____
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ASK THIS OLD HOUSE

OK, this year our ASK the Old House is the underside of the deck boards. (Because if we catch whatever falls between the gaps in the decking, you'll have to go back periodically and remove the screen to clean it out.)

FAKE-SLAYS UPDATE

In the October 1999 issue of *This Old House*, there was a article about the new problem and no Dick S. In his TV project house in Billerica, Massachusetts. As the men, Dick said he really liked the recycled rubber shingles on his roof—the ones that leak like slates. I'm thinking ahead in stalling them on my house and wonder how his site building up.

Charles Smith,
Billerica, Mass.

Tom Silva replies:

Update still here for "falsely" shingles and says for it use them again. They were actually made of a recycled synthetic rubber called EPDM, and plastic. "Next time though," he says, "I'll call snow guards." Like slates, the surface of his shingles is relatively smooth, so snow slides off suddenly in great clumps, clattering gutters, porch roofs, and even against passersby. Pad-type or nail-type snow guards will hold the snow in place, away from the eaves, so it can slowly melt. You can add them to almost any kind of roof, including asphalt shingles, but they're much easier to install during the roof-replacement.

Just so you know, the manufacturer now makes these shingles out of recycled SPD (thermo-plastic elastomer), a material that's more durable and stable and has more UV protection than the old formulation. There are now shingles in 12 colors available in five colors.

WILL-WATER SHORTFALL

Love every new New Englander, I got my water from a well. And the pressure is such that you can enter the a slowing, leak a toilet, or run the dishwasher, but never two

at once because the water slows to a trickle. Is this a problem with the pump or my water supply?

Wendy Smith, North Hampton, N.H.

Richard Trothway replies: You could use the "10-step program" event to a daily 10-step to cope with this problem. With 12 steps to the end future. By the time you get there, there'll be enough pressure to use it. Definitely you probably have a combination



FAKESLAYS The shingles used on the Billerica project house are made of recycled rubber and plastic, called to look like real slates, but they can be cut and nailed like asphalt shingles.

at factors working a general year. First, the plumber or water-well contractor he made some poor pump and pressure tests are performing up to speed—usually all just—and that your supply pipe isn't plugged with sand or sediment. (You can find this out by unscrewing the test-bar screen on your kitchen faucet and looking for bits of debris.) If neither of these is the problem, the well is hard to lowering short of water. You'll get some options to fix it, but none of them produces a gratifying result.

The key measure of well capacity is flow rate. According to the National Groundwater Association, the average American household needs 130

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ASL THIS OLD HOUSE

CLOGGED WITH GRIT

I am having a plumbing problem at my mid-'50s ranch house. The mid-water inside screen of the washing machine clogs with sand, silt, and grit, often just weeks after being cleaned out. Get the screens on the faucet elsewhere around the house don't clog nearly as much. Why is this happening?

GEORGE ANN, GOSHAM, TEX

Richard Trethewey replies: As mysterious as this sounds, your house isn't playing tricks on you. What's happening is this: When your washer calls for water it flows through the line at full force, dislodging any sediment that may only be caught by the intake filter screen. On most other faucets, you typically use less water and at less than full pressure, so less sediment is stirred up to get caught in the screen.

To stop the grit from getting into your house, install a "backwaterstop" sediment water filter on the main supply line. The filter has to be flushed periodically to get rid of any sediment buildup, but they're so good—better than the replacement swimming-pool type filters—I think they should be in every house, wherever the water is coming from as well as a municipal supply.

SOURCES FOR OLD PRODUCTS

I'm building an addition to an early 1930s one-story house with a hip roof. The con-

ing house has a metal-tile roof with a stamped pattern. I'd like to match the new roof to the old one, but I can't find a source anywhere. What does *This Old House* do in a situation like this?

NINA G. SECHE, CHALMERS, W.VA

Steve Thomas replies: Locating a source of materials to match what's already on an old house is a real detective job. It's time-consuming and sometimes frustrating. But it's been our experience at *This Old House* that, more often than not, we find what we're looking for.

Your search will be tricky because metal building materials, particularly those on the exterior of a house, are often recycled products, and they're not likely to end up in a reclaimed salvage yard.

So, like any good purchase, first make sure you have a sample or a good cleanup photo of what you're looking for. Then chase it to every every old market, a very hardware store, and every building material supplier you can find. Check with local or regional preservation agencies. Post a photo on an Internet discussion board devoted to house restoration. Look under one of the roofing lists for identifying names or markings—and branch a Web search. Get in touch with an industry group like the Metal Roofing Alliance or the National Roofing Contractors Association; they may be able to put you in touch with an expert who will know



SCAVENGER HUNT Finding replacements to match old building materials, such as these stamped metal roofing tiles, takes a lot of persistence and a lot of luck.

A RIVER CAN RUN THROUGH IT.

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to make sure you find a house that's

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Classic Clocks

Antique, reproduction, or contemporary, tall-case clocks are instant heirlooms

By Dan DiClerico

When Dutch watchmaker Christiaan Huygens invented the pendulum clock in 1656, he revolutionized the world of timekeeping. Until then, clocks were nominally accurate, often losing an hour or more in the course of a single day. Huygens's invention also transformed the furniture scene, as cabinetmakers began to craft elaborate cases to shelter the long movements. The result—the stately and elegant tall-case clock, or grandfather clock—remains as popular a possession today as it was nearly 350 years ago.

From the very beginning, grandfather clocks were symbols of affluence. "They would have been the most expensive item in any household, and so they acquired a sort of heroic status," says Jack Rudwin, director of the library and research center at the National Watch and Clock Museum, in Columbia, Pennsylvania. Besides the sheer novelty of timekeeping, dad's access to retain a minute a day,

This tall case clock by Swiss craftsman James Lee is a faithful reproduction of the 18th-century original, right down to the traditional parchment and brass-painted dial.

trampoline with safety net: \$450

squeaky swingset: \$300

sandbox that fits five, squeezes seven: \$95

the voices floating in through
the kitchen window: priceless



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Make every mile count



THE DIAL

Early dials were often made of engraved brass or hand-painted iron, like the one above, though in this country some were plain painted wood. The square shape gave way to arched dials with "sunrise" displaying the progress of the season, a much-coveted option for early country dwellers who depended on moonlight for nighttime travel.



THE MOVEMENT

Most grandfather clocks are weight-driven, that is, they are powered by weights, suspended on cables, that slowly descend. Movements are defined by how frequently they need winding, usually every 30 hours or 81 days. First re-creation of an early 18th-century movement is by David Lindow of Furnessfield, a pioneer in the art of reproducing clock making.

the clocks were valued for the range of skilled labor that went into them. A clock maker would build the movement, sometimes with musical chimes and quarter hour strikes, while woodworkers milled over the case, adorning them with ornate shell veneers, intricate carvings, or real woodwork through which the surrounding pediments could be admired. Today, 17th-century clocks with their original movements are valued at up to over hundreds of thousands of dollars.

A granite tongue is beyond the reach of most people, but re-creations by skilled woodworkers can often be had for less. From his workshop in Rockport, Maine, James Lee reproduces the Rockport-style tall-case clock first built by James Willard in New England in the early 18th century (an original Rockport stands in the White

HOW THE GRANDFATHER CLOCK GOT ITS NAME

Tall-case clocks had been ticking away for more than two centuries when Henry Clay Work wrote the tale "Grandfather's Clock" the 1876 story tells the tale of a tall clock, bought on the day a newborn grandchild was born, that "ticked" 60 years later when the dear old man died. The song sold more than 800,000 copies, securing the nickname in the national lexicon.

A room so coming for personality
Faux plaster features like the
expert in the orange apron showed me



Potential is a wonderful thing



Faux plaster technique in Fox Hollow Railway in Kiosk. Stained Rock wall in Light/Lichen. Ceiling in Caprice. Tiles in Dry Farm.





A President's Clock

Thomas Jefferson's desire to not having an accurate timepiece to measure the eclipse of 1815 led him to commission one from Thomas Wright of Philadelphia, then a lack of clock-making activity. Jefferson asked that the clock be "as good as hands can make it, in everything useful, but as unnecessary later in the age as a mere ornament." Wright went beyond the call of duty—it was for a president, after all—creating a clock that kept perfect time. Finished with a veneer of mahogany, the clock is made of mahogany and brass, and set a pretty figure in the process. The clock is made of mahogany and brass, and set a pretty figure in the process. The clock is made of mahogany and brass, and set a pretty figure in the process.



THE CASE

CASES ARE typically made of wood and stand anywhere from 75 to 130 inches tall. The wooden cases were viewed as a must. Other models in mahogany. Clockmakers deployed various methods of ornamentation in their construction, decorating them with inlaid ivory, carved lacquer and large ivory, like the holy-wood-wooden models seen here.

Howe] Lee's technique and materials are identical to Wright's, right down to the custom-made mahogany and hand-cut rosewood inlay. But where as Wright's clock was viewed as a must, other models in mahogany. Clockmakers deployed various methods of ornamentation in their construction, decorating them with inlaid ivory, carved lacquer and large ivory, like the holy-wood-wooden models seen here.

In the end, the mahogany clock is also available from many modern manufacturers. Howard Miller, one of the world's largest

clockmakers, offers what a clock "flow clock" is given with metal details, as well as in more traditional materials. "With the addition of modern styles and accents, we're trying to make these clocks relevant to a younger generation," says Miller's production manager Mark Sullivan.

Whether vintage or New Age, a grandfather clock is a rooming presence, its measured tick-tock a heartbeat for the home. "It's the steady keeper of time, standing tall in the hallway," Nye says. "When the house moves, more than any other piece of furniture, it's what they take with them."

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ANTIQUE



Robert Wood made this George III mahogany clock circa 1800. Its square, silvered brass dial and unadorned pedestal reflect the return to classical design occurring in London at the time. See best? Inches tall. Be sure to visually estimate and guesstimate. Price: \$43,000

► **What to look for:** An antique's major decorative clues all are the integrity of its parts. A mahogany case and a "herringbone" in which a later restoration has been admitted to an earlier case.

HANDMADE REPRODUCTION



San Diego-based woodworker Ed Perloff Edwards re-created this classic clock by Englishman Thomas Tompion (the original is in New York's Metropolitan Museum of Art). The design is cast into a burled-maple bowl, with green-lacquered brass leaves and maple-honeycombed corner flutes. Price: \$25,000

► **What to look for:** The most prized reproductions are faithful to every detail in the original, made not only with the same materials but also with identical methods of assembly.

MANUFACTURED



Inspired by the Shaker brothers in 1918, this Mission-style, flat-top case clock was massed in 1899 as part of the company's historic Mission Oak collection. Available in quartersawn white oak or solid black ebony. See reproduction clock in our Mission at the Shaker style, showing function over form. Price: \$6,475

► **What to look for:** Manufactured need not imply inferior quality. High-end factory-built clocks are solidly constructed—year after year—and reward buyers with simple elegance and run on solid brass movements rather than less accurate plastic ones.



Howard Miller's Deane-inspired clock has a quartz movement, which leaves every inch for storage where the weight and pendulum would normally hang. The chimeless clock recalls the "granary" clocks popular in 18th-century England. Price: \$1,145

► **What to look for:** The most prized reproductions are faithful to every detail in the original, made not only with the same materials but also with identical methods of assembly.



This model from Pinney's friends of America's can play "America the Beautiful" or the Westminster chimes (the former, as well as the latter strikes, can be turned off at night). The solid oak case has straight sides rather than the traditional pleated-wald design. Price: \$2,480



The tightly figured white-oak-plaque center of this reproduction clock first drew to the same wood used in the original, made by Thomas Mathew in Connecticut between 1760 and 1800. Other distinguishing features are the fluted pilasters on the base and head and a "lover's nest" pendulum. Price: \$5,600

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1. Shutting down the system

Before performing any maintenance, Richard makes sure to switch off the electrical control and the fuel supply. The disconnect and power switchplate can usually be found at the top of the boiler room or near the furnace itself, while the fuel shutoff valve is near the oil tank or on the incoming gas pipe. Note the location of both in case of a future leak or fire.



2. Cleaning the combustion chamber

In the combustion chamber, fuel enters with air and is ignited, generating heat—as well as carbon soot, water vapor, carbon dioxide, and smoke. A buildup of soot can cause the chamber walls to corrode (see "World-Class Services," page 68). Richard scrapes out built-up soot using a small wire brush. Then he removes loose material with an industrial shop vacuum and repairs the chamber for holes or corrosion before replacing the cover.



3. Inspecting the flue pipe

Richard checks for holes in the exterior flue that could leak carbon monoxide, particularly where the pipe enters the furnace. Small holes can be patched with foil tape, but corroded flues must be replaced. He also adjusts the flue pipe's bracketed damper, which moderates the chimney draw. "A big tall chimney in an old house tends to suck too much air, compromising efficiency," he says. "Our service pros can weight the damper to lessen the draw."



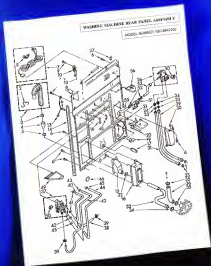
4. Replacing the oil filter

The oil filter (found on oil-powered systems only) prevents sand (ingestion from clogging the oil burner nozzle, which could result in a boiler that shuts down the system. Richard first closes the oil valve. Then he removes the old filter and replaces it, noting where the dirty filter is to be disposed of according to local hazardous waste regulations.

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U P K E E P



5. Changing the air filter

"During the winter all the air that your family is breathing comes through this filter," says Richard. "You can't change it too often but never let it go for more than a year." Changing the filter is something any homeowner can do easily. At the same time, Richard checks the blower belt's wear and tension. (The blower driven by an outside motor means forced air from the furnace through ductwork to warm vents.) A loose belt can slow the blower, compromising efficiency. If the belt detects more than 1/8 inch when pressed, fully it can be adjusted by tilting the motor backward slightly.



7. Cleaning floor vents

The fall is a good time for homeowners to remove floor registers and vacuum out the ducts, which are magnets for dust, pet hair, small toys and food scraps. All of this reduces efficiency forcing you to crank up the heat. "You'll also breathe a little easier without the debris in the air."

U P K E E P



6. Adjusting the burner and testing efficiency

Richard sets up a combustion analyzer, which calculates furnace efficiency by measuring gases in the exhaust flue. He makes sure that the burner's air gases are adjusted for the proper ratio of fuel to air. "You want the fuel that you've bought to be burned before it goes up the chimney," Richard says. He also replaces the orifice, which atomizes the fuel just before it ignites, and checks the flame color and shape. If the igniter has either air or gas, this is a key indicator of status and complete combustion. In a gas system, this is the time when the burner tubes should be vacuumed clean.

Worst-Case Scenario

A furnace doesn't have to be old to develop potentially serious problems. While servicing this five-year-old furnace, Richard Testimony found rapped wires through the wall of the combustion chamber (below), allowing exhaust fumes, which include deadly carbon monoxide, to mix with the fresh air going into the home. The homeowners were understandably surprised when they were told they'd need to replace their furnace to even.

Richard says the damage was caused by a thick buildup of carbon in the chamber. (The furnace had been serviced in 2006, but the service tag didn't indicate that the chamber had been cleaned.) The carbon, a by-product of combustion, creates a net apart that eventually burned through the metal.

Bottom line: Watch to make sure your service pro shows out the combustion chamber annually, and check the tag to see a list of work performed—including adjusting burner settings, replacing parts, and cleaning. "The service tag is like a medical chart,"

Richard says. "It lets you know what was done on the patient." Finally found in a carbon monoxide monitor, which sounds an alarm if it detects dangerous levels of the colorless, odorless gas.



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Double-prong steel rack mounts on the wall and can hold one or more long-handled tools such as shovels and rakes. Lixady Inc./\$15.00

Hang It Up

Roger Cook's tips on storing garden tools—and some products to get you started

By Doug MacKey

You've raked the last leaf and pruned the weekend vines out of their plastic pots, now it's time to get away from garden equipment for the season. If you don't have a sunny shed, carving out an area in your garage is space well spent, says The Old House landscape contractor Roger Cook. Plan to hang as much as possible. This will get some off the floor that are prone to rust, breakage, or becoming lost to the clutter. Depositing one by one, as opposed to covering the walls with pegboard and a variety of racks and hooks, says Roger. A host of specialized organizers (such as those on the following pages) can also be purchased for garden convenience and often a price to spare. "If you take the time to clean and sharpen your tools and then store them properly," says Roger, "they'll last a lot longer." Here's some specific advice from The Old House's landscape

RAKES, SHOVELS, AND HAND TOOLS

- Before putting away tools, wash off dirt and plant matter off the metal base and handle with soapy water. Remove rust with steel wool. Sharpen each a little to substitute and file out any nicks. Spray the metal part of the tool with a lubricant and lightly oil wooden handles with linseed oil.
- Group items by size. Double-prong racks are ideal for stacking several long-handled tools such as shovels and shovels over the other. Roger recommends spacing them 12 to 18 inches apart to allow room for the shovels' stems like pruning saws to hang on high and low hooks between the longer tools. To maximize



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Unbalanced steel screw-in wall hooks offer neat, accessible storage for small and large garden accessories. Lee Valley Tools, \$20.98 for a set of 12 assorted hooks.



To keep hoses and cords from snaking across the floor, wrap them with a reusable vinyl-coated Grip-Tight. The Container Store, \$9.99 for one 65-inch blue cord or two 34-inch red cords.

wall space for single hanging items, he suggests arranging tools as their work heads are alternately up and down.

• Hang short-handled items like crowbars and wrenches together on lay-flat flat or a wire mesh storage drawer or on a shelf. Another option: Magnetic wall strips or a loop magnetic knife holder can lucrily accommodate screw or pipe lightweight tools.

• If storage space is limited, use an old golf bag mounted on a pull cart to snail tools and carry them around the yard. When work is done, just roll the bag into the garage or shed. The downside, says Ragan, is reaching to the bottom of the bag to find a drooped tool. For an improved version, some manufacturers offer compression

rolled wheeled garden caddies. Most hold as many as two dozen long tools in addition to containing smaller tools and accessories.

• Suspended bulky items like lawn mowers or wheelbarrows from heavy-duty metal wall hooks or lose them against the wall. "Just be sure the hooks are screwed to the studs of your shed or garage," says Ragan. That way they can hold the weight.

SEEDS, FERTILIZERS, AND CHEMICALS

• Store large open bags of fertilizer in five-gallon reusable buckets, labeled with an indelible marker, including usage directions. Or cut this information off the package and slip it inside the bucket.

A winning garden cart doubles as a potting soil holder. A steel back plate on the front accommodates bags of mulch or peat and a four-pocket pouch holds small tools and soil probes. Lee Valley Tools, \$79.



The Gopher tool holder with a plastic spring-loaded tool holder into place, making optimal use of wall space. Lee Valley Tools, \$2.57.



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The steel single trucker (top) is made for holding the back lip of a wheelbarrow near the handle. It comes securely in-and-out. Tidy Garage, \$9.95.



A compartmentalized rack is perfect for getting started. It makes room for long-handled tools, shovels, and more. The Container Store, \$29.95.

This multi-use rack keeps your tools in one place as easily as it holds all of your watering tools. The Container Store, \$9.99.

- To preserve open bags of potting soil, peat moss, and mulch, clip the bag shut to prevent spills, and store away from moisture. Or keep open bags in covered trash cans on wheels. For spring planting, you will die the cans and their contents into the yard.
- Store open bags of seeds in labeled small resealable plastic freezer bags, covered glass jars, or plastic containers with snap-on lids.
- Keep chemicals on high shelves out of reach of children.

the pots and stick them on a shelf, separated by rag strips. This allows air to circulate and moisture to drain out. In the spring, wash pots thoroughly to prevent any bacteria from last year's soil from infecting this year's plants.

- Drain hoses completely and check for splits, especially near the ends. Coil compactly, tie, and store.
- Wash out sprayers. Fill the tank a quarter full with water and mix in several drops of detergent; spray for a minute. Then empty out soapy water and hang sprayer upside down to dry. Remember to empty the sprayer nozzle too. ■

78 POTS, HOSES, AND MISCELLANEOUS ITEMS

- To ensure that tart-cores pots survive a frosty winter, empty



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Surge Protection

Don't count on power strips to safeguard your home and fragile electronics

By Jim Collins



Overcoming against a devastating surge of electricity from a lightning strike or an overloaded outlet takes more than a simple power strip.

Not long ago, electrical contractor Alvin Collins was about halfway through the job of completely rewiring a 3,100-square-foot house in Acton, Massachusetts, when the owners decided to save some money and not install whole-house protection against power surges. Sure enough, soon after the house was finished, Collins got a phone call from the distressed owners. Lightning had struck a utility pole near their house, sending a tidal wave of voltage through the wires, past the main breaker panel, and into the house. "It burned out the motherboard in the Sub-Zero refrigerator, fried the temperature controls on the double-wall oven, killed six desktops, two computers, and every GPCF plug in the house," Collins says. "It was an \$11,000 loss."

Many homeowners believe that adequate surge protection begins and ends with plugging their computer into a power strip. Unfortunately, such a

PRIMETIME

Ask any painting pro to share his trade secrets, and careful surface preparation will top the list. The beauty and longevity of a topcoat is decided by the quality of the base coat. So, should you prime? Definitely. But which primer is right for your job? The experts at Kilz® offer this primer on primer.

Q&A

The first step of our house's restoration is exterior painting. How can we get a great finish?

You'll want to start with a primer that's specially formulated to weather the elements and seal and block stains on aged masonry and woodwork. Kilz Exterior creates a strong base coat, provides complete stain coverage to block tannin bleed and mildew stains, and can be used on a variety of surfaces.

We're repainting our children's bedrooms. How can we minimize paint fumes, and cover years of grime, ink and marker drawings?

Kilz Odorless primer is perfect for this job. Its ultra low odor is ideal for bedrooms, and its powerful stain blocking formula covers everything from crayons to water to even damage caused by smoke and fire.

What can we do about mildew stains on our wood siding and bathroom walls?

Outside, Kilz Exterior's mildewcide will inhibit mildew growth on your topcoat, and will cover existing stains. And Kilz Primer, which can be used inside and out, will cover existing stains and prevent future problems in moisture-prone areas.

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Cure-Flaws

Flot paint, walls that linger with odor of blower, basement water stains... If that's what you find in your dream house, don't start packing yet. Kilz Original will tackle these problems, making your house to prime condition.

dans the case. First of all, not all surge protectors live up to their name—they are little more than glorified extension cords. Second, a surge will follow any wire into a house—phone and cable lines included—and electronic fax and answering machines, televisions, satellite systems, computers, and modems. And third, as the secret in the Action model discovered, delicate electronic circuitry has no firewall throughout our homes, leaving common appliances as vulnerable as computers to the effects of surges.

TWO TYPES OF SURGES

A power surge may last for only a few milliseconds of a second, but at its worst, it carries tens of thousands of volts, enough to fry circuit boards, crash hard drives, and ruin DVD and home-entertainment systems. Lightning-induced surges are the most powerful and most less so: A 100,000-amp bolt crashing through a power line will first send a 20-amp surge into a light bulb filament. But a lightning strike has to be less than a mile from the house to cause harm, and in fact most surge-related damage is not caused by lightning.

Far more common, if not as dramatic, are surges caused by downed power lines, sudden changes in electricity use by a nearby factory, or even the cycling on and off of laser printers, electric toasters, air conditioners, refrigerators, and other energy-hungry devices in the home. The damage reflected by these minor power fluctuations can be instantaneous—but may not show up for some time. "You might not even notice it," says Andy Lugo, a consultant with A.M.I. Systems Inc.,

Origins

In 1971, Ray Carpenter was the chief engineer for NASA's space-shuttle design engineering team working in Cape Canaveral, Florida, one of the most lightning-prone areas of the country. At that time, the best protection available for the shuttle's space-age electronics was the use of grounded carbon-lightning rods—a technique from Ben Franklin's time. Carpenter worried increasingly about the possibility of a lightning-induced power surge damaging or knocking out a vehicle. There must be a better way, he figured, and he left NASA in 1971 to find one.

Soon afterward, he founded Lightning Elimination Inc. and helped develop a "charge transfer" technology that became the basis of related technologies for grounding and surge suppression. His company, now called Lightning Elimination & Consultants, still produces a wide range of cutting-edge lightning-protection, surge-suppression, and grounding products. And NASA is one of its customers.

a firm that installs both residential and commercial surge-protection systems. "There's a year or so before your electronic surge working."

THE BEST DEFENSE

Guarding against surges requires a two-pronged approach: a whole-house apparatus to catch the big, dangerous power spikes and an individual circuit (or "plug-in") surge suppressor for vulnerable appliances and electronic devices. Both types essentially act like pressure-relief valves. Normally they just sit there, allowing electric current to flow through them. But with higher-than-normal voltage, the devices instantly divert excess voltage to the ground wire. (The best ones react in less than a microsecond.) As soon as voltage levels return to normal, the flow of electricity is restored, unless the surge was big enough to melt the fuse built into some wires.

Typically, whole-house suppressors are hard-wired to the service panel, a process that takes a licensed electrician about two hours. Whole-house systems should be rated to stop a 40,000-amp surge, at minimum. Because to look for include thermal fuses, and lights or alarms that indicate when a device has taken a hit. Protection for an average home with 200-amp service will run about \$180—including a couple of hours of an electrician's labor. Separate but smaller whole-house units are recommended for the phone and cable lines. Those protect fax and answering machines, televisions, and modems.

By themselves, whole-house suppressors can't stop surges completely; up to 15 percent of excess voltage may leak by that's where

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POWERSTRIP POWER PROTECTOR
What It Does: Stops surges from entering house wiring; protects devices connected to power lines, and cable lines. Look for: A rating between 20,000 and 100,000 amps; internal fuses and thermal indicator lights. **Quote:** About \$100 per unit plus two hours for electrician to install.

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Features: One jack for phone, two AC outlets protect only and protect only indicator lights. Two surge filters prevent interference. **Price:** \$10.

"plug-in" surge protectors come in. These buffers between individual appliances and wall outlets come in a bewildering array of options and prices. They range from \$70 units not much bigger than a computer mouse to \$130 units the size of a pizza box that guard all the components in a home system. But most plug-in models fall into three basic categories: the familiar auto-outlet power strip, the multi-tasking surge protector that can handle phone and cable jacks as well as power cords, and the UPS (uninterruptible power supply), which completely denies electric power of random fluctuations and provides a short-term battery backup in case the power dips or goes out entirely. Expect to pay between \$20 and \$70 for a quality power strip or surge protector, and from \$100 to \$130 for a UPS. (See "Basic Surge Suppression," page 74.)

BASIC PLUG-IN PROTECTION

Before buying a plug-in unit, check that it does the following:

- Meets UL Standard 1449 (second edition)
- Has a clamping voltage—the amount that triggers the diversion of electricity to the ground—at 480 volts or less. The lower the number, the better the protection.
- Absorbs at least 680 joules of energy.
- Protects all three incoming lines: hot, neutral, and ground. Look for "L-N, L-G, N-G" (line to neutral, line to ground, neutral to ground) on the product's spec sheet.
- Surge functioning when no circuits are damaged by a spike.

Both whole-house and plug-in types can get stopped without your knowing it, too, for index or line lights that signal when a unit no longer works.

Even the best surge suppressor can't do its job if the house wiring isn't properly grounded, then too. "Whatever a good ground, the current may feel low-number wires and end up inside your modem or fax machine," says Tom Novich, director of home development at Intertek Inc. Technology, a maker of surge-suppression equipment. Absent good plug-in surge-protective electronic devices into the same power strip with line protectors, air conditioners, or other appliances with large motor loads. These products that own low-level power surges that will affect all the devices sharing the strip.

Insurance companies don't typically give discounts for surge-protected homes, but investing in

protection may very well pay for itself, and then some. That's what the owners of the house in Astoria discovered—on late "When Allen Gallett moved to the surge-damaged site, he spent an hour and a half installing a whole-house system that included a panel

mounted, whole-house surge suppressor and similar devices for phone and cable lines. The new wall covers (\$1,000) are now safe from surges, as are the region's 500-Zero video camera (\$1,300) and all of the house's other electronics. Total bill from Gallett: \$1940. ■

Big Promises

The packaging on better surge protectors contains eye-popping promises about the amount of money you'll be reimbursed for any equipment damaged because a surge protector failed. Some will guarantee \$75,000 worth of protection, but they're pictures designed to make devices offering \$5 million payments. This is usually another fine print—you can collect only if you prove and document that the damage was caused through the fault of the surge protector, a nearly impossible task. The better way to compare products is to look at their specifications and their compliance with relevant UL ratings.

For more information, go to www.theft.com or American Online. Keyword: This Old House and type "surge" into the search box.

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Grout

It's what's between the tiles that counts

By Jefferson Kolie

When grout does its job—locking tiles tight, keeping out water, and giving floors and walls a finished look—nobody pays much attention. It's only when grout fails, becoming stained, cracked, or falling out altogether, that people take notice. But grout deserves more respect. "Not only does grout fill the voids, it makes the floor, wall, or countertop stronger by bonding the tiles together and preventing the edges of a tile from chipping and cracking," says David Goodness, the tile contractor for The Old House's Restoration project.

CEMENT-BASED GROUT

Grout comes in two basic types, and the choice of which one to use depends not on the tiles but on the width of the joints between them. Narrow joints of 1/8 inch or less call for sanded grout, a pulping mixture blend of Portland cement and powdered pebbles mixed with water. Joints wider than 1/8 inch get unsanded grout—the more uniform, but with one caveat. The sand helps hold up the grout and keeps it from shrinking as it dries.

Three decades ago, when he worked in the business, Goodness says, "we'd go sell powdered grout in a bucket of water and every week it'd go." But white cement-based grout was harder and prone to cracking. It also dried irregularly, leaving color variations. Today's grout's two polymeric additives, which assure color quality and increased flexibility, allowing for joint widths of up to 1 1/4 inches. These wide joints come in handy for accommodating irregularities in the substrate tiles and for bridging the varying thicknesses of tiles in some personal installations.

Despite their improved performance, however, all construction grouts are porous and subject to staining. That's why manufacturers



Grout is forced into the space between tiles with a rubber float called a float. The excess is wiped away with a wet sponge, leaving joints filled to just below the surface. After the grout goes rock-hard, the tiles are polished with a soft cloth to remove any "grout haze" left behind.



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Rechargeable batteries can be charged up to 1,000 times, but they won't last forever. So, when the rechargeable batteries in your power tools, laptop computers, cellular and cordless phones, camcorders and remote control toys no longer hold a charge, recycle them! You'll be helping the environment. Simply take your spent rechargeable batteries to a participating retail store. Visit www.rbc.org/tob or call 1-800-8-BATTERY to find the collection site nearest you. Remember, the job's not done until you recycle!

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and matures somewhat stoking growth that it has caused for a couple of days and is completely dry. Seals come in two varieties: nonstain-forming and penetrating. The first type is prone to peeling or peeling cloudy when residual moisture from masonry assembly pushes to the surface of the tile. Penetrating sealers, which seal beneath after soaking into tile and grout, are preferable. Goodman sometimes invites customers to save on labor costs by sealing the grout themselves. "I give them some caution cards as a disposable handy, along with a can of sealer, and make them promise not they'll finish the job."

EPoxy GROUT

There are some settings—namely those exposed to acids and grout—in which even an additive-enhanced, sealed grout falls short. Such harsh conditions call for epoxy grout. Made up of two parts, resin and hardener, epoxy grout comes in both sanded and unsanded varieties and is impervious to most chemicals and acids. Early epoxies were unforgiving and difficult to apply, and had just a 45-minute pot life. The modern form has to cure but does so by embracing by many of its users, and scatters in the bathroom. The new generation of epoxies comes in grout in the bathroom, which makes for quick cleanup with water and requires no work delays. Because epoxy can dissolve porous surfaces, such as polished quarry tiles or limestone, these

For more information:
Go to: www.thisoldhouse.com or America Online keyword:
This Old House and type "grout" into the search box

CHOOSING COLORS

When it comes to grout color, there are three approaches: contrasting (e.g., white grout with black tile), complementary (green grout with green tile), or neutral (a shade of gray or white). While it can be tempting to go with an eye-popping combination, David Goodman likes to steer his clients toward the neutral option.

"You may not be ready to live with gray," he says, "but chances are you won't hate it, either."

If you do choose a bold color, grout up a sample section of tile on plywood and live with it for a few days. "I tell people to look at the color in lots of different lights—natural, incandescent, fluorescent," Goodman says. If you make a mistake, unsanded cementitious grout can be abraded or polished after it cures (sanded or epoxy grouts will have to be removed). "However, it's a pretty tedious process," Goodman says, "so why not make the right choice the first time?"

should be sealed before grouting. But in areas resistant, barbers, and dentistry make epoxy grout the best choice for applications such as kitchen counters, backsplashes, floors, and other heavy-duty areas. Epoxy grout is expensive—at least as \$1 per pound, compared with \$1 to \$2 for cement-based grout—but there is an upside to the cost differential. Sanded Portland cement grout has a shelf life of only one year, while two-part liquid epoxies, if they are not subjected to freezing temperatures, will last forever in their sealed containers.



1. THERE ARE PLAYS MORE IMPORTANT THAN HOME.

Grout Types

While cement-based grout is more common, epoxy grout stands up better in some high-traffic areas, like kitchens.

Portland Cement Grout

- Comes as powder
- Available sanded or unsanded
- Must be sealed for stain resistance
- Easy to apply
- Inexpensive
- Muted earth tones
- Cures to a matte finish

Epoxy Grout

- Comes as two liquids, resin and hardener
- Available sanded or unsanded
- Stain and acid resistant
- More difficult to apply
- Costly
- Wide range of colors
- Cures to a shiny finish



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Choosing & Using Paint Sprayers

They can lay down everything
from latex to lacquer—but no
one sprayer can do it all

By Clayton DeKorne

Paint sprayers have an obvious advantage: They can spread paint, stain, and clear finishes faster than any brush or roller. But just as important is their ability to apply an even coating to uneven surfaces like window shutters and door balusters—little ground for brush dips. And because sprayers atomize liquid into a fine mist, they can create a mirrorlike finish on cabinets or furniture where even minor brush marks are unacceptable.

Sprayers aren't always the best choice, though. Small jobs seldom justify the tedium of cleaning them (sometimes a simple can of spray paint will do), and a brush is better at giving you control where neatness counts. But when a sprayer makes sense, success depends on choosing the right one for the job and mastering a few techniques. Start by considering what you'll be spraying and what finish you'll use—sprayers vary a lot in the thickness of the finish they can handle, the amount of paint they deliver, and the overspray they produce, among other factors. Generally, there are two categories: sprayers that use air to atomize the finish and airless sprayers. Both have advantages and disadvantages, and there is a wide range of quality and price within each category.

PHOTOGRAPHS BY DAVID HANSLY



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Choose Your Weapon

Airless

These sprayers push the finish through a nozzle at high pressure (as much as 2,200 psi) without using air from a compressor. They deliver finishes of any thickness in a hurry.



Cup Gun

Pros: Inexpensive (quality models start at \$100). Better than hose through pressure (1-100 to 2-100 psi) to handle thick latex paints as well as stains.

Cons: Don't have power or spacing for big jobs, but expensive models (1-400 to 1-500 psi) sprayer and can't handle thick paint.

Best for: Craft projects and small painting jobs.



Diaphragm Pump

Pros: Will handle most paints without thinning and spray large areas efficiently. easier to maintain and less expensive than piston-pump sprayers (quality models start at \$200).

Cons: Overweight (weigh as low as 10 pounds) and slow ("effort" is a trade-off)—sometimes less than half the paint ends up on the work, not good for interior.

Best for: Deck, siding or house painting.



Piston-Pump

Pros: Most powerful sprayer type, can spray high volumes of any coating quality.

Cons: Overweight, most expensive (quality models typically over \$1,000)—renting for about \$70 a day is a better option.

Best for: House painting.

Air Spray

These sprayers use air pressure from a compressor or a tank to atomize the coating into the tiny droplets that create a very smooth finish.



Air-Compressor Gun

Pros: If you already own an air compressor, all you need is a gun and a hose (about \$125 for good-quality ones); produce very smooth finish.

Cons: Has the greatest versatility of any rig, can't spray thick paint.

Best for: Painting furniture and cabinets—anything you can hold in a closed spray booth.



High Volume/Low Pressure (HVLP)

Pros: Good for interior use (low pressure [5 to 10 psi] under 2000 cfm) and a very smooth finish; also range over \$200 to \$500 for better finish (see Hacking).

Cons: Can't spray thick paint.

Best for: Painting inside cars, cabinets, moldings and doors.

PICKING THE RIGHT GUN TIP

Most spray guns have interchangeable tips.

Which are you choose depends on the coating you're applying and the rest of your work (see Manufacturers use a numbering system that's easy to decipher. The first digit refers to the width of the spray or fan from 12 inches away, and the rest of the number denotes the size of the opening in thousands of an inch. For example, a "017" has a 10-inch-wide fan and a .017 inch orifice. (See our general guidelines for office tips needed to coatings, but consult the manufacturer's literature.)

Leaves, shells, stains, and water seals: 000 to 013

Stains: 015 to 019

Oil-based coatings and exterior latex paints: 013 to 017

Exterior latex paints: 015 to 019



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Ready, Aim...

Spraying tips from painting contractor John Dee



Preparation

Mask off everything (windows, doors, etc.) with taped-up plastic or plastic to shield from overspray and protect yourself with a respirator, goggles, and hood. For the toughest finish, stir down the wall right before painting. John Dee prefers quick-drying naptha- or oil-based finishes which help the paint dry before it sags, and allows quick clean-up for water-based coatings.



Fan Settings

Some guns have an adjustable tip which allows you to change the fan and shape of the fan of paint it puts out. Test your gun before spraying to find a shape and volume that helps you control the overspray but still gives off paint, effective coverage.



Hand Position

Put the gun straight at the surface, holding the tip about 12 inches away. If the gun is angled, the spray will be thicker on one side than the other. Move your arm, not your wrist, to keep the gun straight.



Spraying Motion

To avoid buildup, when spraying off one side of the work piece and start to release the trigger and the spray has passed the other end. If you're painting a wall in other outside with no edge, keep moving your arm before pulling the trigger and release it before you finish the motion. Clean up each pass about an inch before sagging or thin spots.



The Box-Coat Technique

John Dee builds up thin coats of finish using a spray pattern he calls the "box-coat technique," in which he lays down the paint and horizontally then vertically. The method works across dry wall or plastered doors and cabinets. Choose the tip so the fan sprays in a vertical line for the horizontal pass. Then turn it 90 degrees for the vertical pass.



Cleanup

Paint that has dried in a painter's hose or gun can cause clogs that make the sprayer sputter and splutter immediately after use. Remove the tip and soak it in the appropriate solvent (water for water-based coatings, oil for oil-based) then clean out through with the same solvent. Then run water through the hose and cup until all the paint is flushed out and the solvent runs clear.

CAUTION

Unless sprayed correctly at extremely high pressure, if your finger (or any part of your body) gets too close to the tip, paint can be sucked under the skin. If this happens, seek emergency treatment immediately, as it will be sure to form the dose (provided you have an injection wound). The spray may not look all that serious, but most coating materials contain dangerous toxins that must be removed.

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There's something about an old home that makes your heart. Where others are dilapidated, you are charmed. You also envision ways you'd like to make it fit today's lifestyle.

Well, in this issue, oldhome lovers can learn a few new tricks from the construction of a new home. The materials might be new, but the ideas are timeless.

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HOMEOWNER'S HANDBOOK

STEP-BY-STEP PROJECT SERIES



A stair runner will only dress up a staircase, it makes it quieter and safer. Installing one requires a few standard, reusable tools and about a day's work.

Installing a Stair Runner

A step-by-step guide to putting down this magic carpet

BY JEFFREIGH KOLLE PHOTOGRAPHS BY REBECCA CINCLEAR



Start on empty nest
with one stylish, plentiful nest.



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ACE

Getting Started

A stair runner—carpeting that shows off the gleaming wood on either side of the stairs—has lots of benefits. It provides a bit of traction, absorbs daily wear and tear, cushions the occasional slip, and quietens the thunderous footfalls of exuberant teenagers. Not to mention the way a runner dresses up a staircase.

In the following pages, carpet installer Tom Wolfe, with Koko Blockleken & Sons, shows how to install a machine-made runner. A 25-year carpet pro, Wolfe cautions not to rush the job. "Every few steps, stop and ask yourself—or, better yet, your spouse—"Does this look right?" If not, fix it before you go further."

What to Buy... and How Much

CARPETING Most machine-made runners are made of wool, polypropylene, nylon, or blends of synthetic and natural fibers. Durability and price are determined by the density of the pile.

How Wide? A runner should be about 8 inches narrower than the staircase measured between a baluster and the skirting board.

How Long? For waterfall installations (see illustration below right) add the tread depth to the riser height, multiply by the number of treads on each straight run of stairs, and add the height of one riser. Do the same for an up-turned installation (below right), but add 2 inches to the depth of each tread. (For winders, measure the tread of its deepest point. See "Making the Turn," far right.) Then tack on a couple of extra feet, in both cases.

PADDING The pad beneath the runner cushions wear on the treads and adds a luxurious feel. This is no place for foam padding. Ask for a firm pad of synthetic or natural fibers, no less than 1 inch thick and weighing at least 30 ounces a yard.

How Much? Divide the total number of treads by three—that's how many yards of padding you'll need.

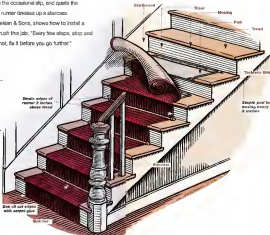
TACKLES STRIPS Tackless strips—thin pieces of plywood filled with angled rows of sharp pins protruding through the top side—have largely replaced carpet tacks. When carpeting is stretched over the strips, these pins grab its backing and hold it firmly in place. Each strip comes with its own roller for installation, spread it tacks apart.

How Many? One per step, plus a few extra.

DECORATIVE STAIR RODS Although they no longer serve a functional purpose, rods add a touch of elegance to any stair runner. They are available in a number of styles, metals, and finishes, in both tubular and solid forms, with matching brackets to hold them in place and decorative details. If you want. Expect to pay at least \$20 for each simple brass rod-and-bracket set.

How Long? To determine minimum rod length, add 2 inches to the width of the runner. Rods can be longer, with a wider bracket spacing, if desired.

How Many? One set for each tread.



Installation Options

Waterfall
(requires clipped pad corners)



Upholstered
(padding slightly longer runner)



Step by Step

1



Lay out and fasten tackless strips

- Subtract the width of the runner from the width of the staircase (between baluster and skirting) and divide by two.
- Lightly mark that distance out from the skirting board end from the balusters on every tread where it meets the stair.
- For each tread, use sheet-metal snips to cut a tackless strip 2 inches shorter than the width of the runner. Its run then's a nail within a couple of inches of each end.
- Place a scrap piece of strip flush against the riser. Center the cut strip—pins angled toward riser—between the layout marks. Butt it against the snips and nail (above).

4



Attach runner to treads

- Line up runner between layout marks on first tread. Push it hand-tight toward tackless strip.
- Press front edge of knee kicker on center of the runner about 2 inches back five times about every foot until only one hand, using the other hand to keep the kicker's shaft level (above).
- Hit kicker with knee. Runner should engage tackless strip and become taut. Repeat every 2 inches, side to side.

TIP: If runner bulges and doesn't lie flat against the tread, lift it straight up off the strip and begin again.

2

Fit carpet pad

- Cut carpet pad the same width as the tackless strips and 3 inches longer than the depth of the tread.
- But pad to front edge of tackless strip. Front edge of pad is lined with 1/2-inch staples spaced every 3 inches.
- Pull pad tight around nosing and staple every 2 inches into underside of nosing (leave).
- Cut pad where nosing and top of riser meet.

TIP: When using the structural method, clip 3 inches off the corners of the pad where it curves around the nosing. This helps ride the pad.

5

Fasten runner to riser

- Use carpet tool and rubber mallet to pack runner tightly between the tackless strip and the riser (above).
- Near both ends of the tackless strip, staple the runner into the crease where riser meets tread.
- Staple each edge of the runner 2 inches above bottom of riser (for upholstered installations, staple edges to riser then staple runner to underside of nosing every 3 inches).
- Repeat Steps 4 and 5 up to last riser.
- At top of last riser, cut runner tight to the underside of the nosing or molding. Dado edges and end with glue and staple into top of riser and along edges every 3 inches.

TIP: Staple carpet directly to stairs, never through the pad.

3

Secure runner to first riser

- Check end of runner with tacking square. If not square, mark, then cut along backing with carpet knife. Dab red edges with latex carpet glue to prevent fraying (leave).
- After glue dries to touch, unroll runner up 3 or 4 treads, making sure 1/8" between the layout marks.
- Push end of runner against floor at bottom of first riser.
- Staple up runner between the layout marks.
- Staple end of runner to bottom of riser every 3 inches.

TIP: Push stapler through the pile and against the backing before pulling trigger.

6

Install rods (optional)

- Attach felts (if any) to outside of each rod bracket.
- Place a bracket against either edge of the runner at the intersection of the tread and riser.
- Hold them in place and mark the locations of the screws below. Drill 1/2-inch pilot holes at each mark.
- Screw screws backside to tread and riser.
- Mark and cut rods to length with a tubing cutter or hacksaw.
- Press rod into crease where tread and riser meet. Secure both ends in the brackets.

Tools



1 **Electric stapler:** Best at carpet stairs or rental center.

2 **Electric stapler with 1/2-inch narrow-crown staples:** Spring-powered hand stapler; lock the safety switch to penetrate pile and backing.

3 **Carpet knife:** Change blade frequently when cutting the runner.

4 **Carpet tool**

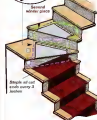
5 **Rubber mallet**

Also Needed:

- Sheet metal roller
- Flaming square
- Tape measure
- Latex carpet glue
- 1/2-inch carpet tacks: for temporary holding runner pieces on wider stairs
- Tubing cutter or hacksaw: for trimming carpet wide

Making the Turn

Winders—stairs that turn a corner as they step up—throw a bit of a curve at anyone installing a runner. That's because a runner can't bend from side to side; it has to be cut to cover each triangular tread and its adjacent risers. Each piece overlaps the other at the risers, making the carpet look as if it's been folded like a bedsheet with a hospital corner. Just follow these steps:



At riser A, mark and cut the end of the runner carrying up the stair by cutting diagonally from the top of the riser at the outside turn down to the tread at the outside landing. Glue, staple, and knee-kick the runner as in Steps 3 and 4. Staple out end to riser every 3 inches. Pack and staple, as in Step 5.

For the first winder piece, measure from the nosing of runner tread B to riser C at their vertical points as the outside turn to the length, add the height of riser A, plus 3 inches. Cut a rectangular piece of runner to this length.

Lay the cut winder piece on tread B. Place its lower corner at the on the outside of the turn against the outside edge of the installed runner. Hold corner to riser A temporarily with a carpet tack.

Smooth and the winder piece against risers and tread. Push it to the parties of risers A and C that are exposed on the outside turn as about the same size and

the ridge at riser A is close to vertical. Measure the winder piece along the line where riser A and the tread below meet. Lightly rub the edges of the piece on the tread. Mark the back of the runner at both ends of the crease.

Remove the tack from riser A, flip the piece over, and set between the risks. Dab out edges with carpet glue.

On tread B, cut and nail a tackless strip so its ends are one inch from the layout line (see Step 1). Install pad as in Step 2.

Staple winder piece to riser A, as in Step 3. Knee-kick it to the tacking strip. Cut the portion exposed near C along a diagonal line from the top of the riser at the inside turn down to the tread at the outside turn. Staple the cut and to the riser every 3 inches (back and stable as in Step 5).

Repeat for all winders. Once straight run resumes, follow Step 4.

LETTER FROM THIS OLD HOUSE

Trade Deficit

By Tom Silva

One of the things that sites come up over lunch at *This Old House* is the fact that fewer and fewer kids are joining us in the building trades. It's becoming a crisis, especially as we look to retire and pass on our knowledge to the next generation. Without fresh blood, it's you, the nation's homeowners, who will suffer. How will you find qualified, experienced contractors and subcontractors to work on your home in a reasonable time frame for reasonable prices?

This is no small matter. Even sure, homeowners in some areas are having to wait way too long for the best people and pay a lot more money for their work. There are already just not that many two-year waiting lists. Sure, you can always find someone who'll come monthly, but in the market is that the guy you really want? Would you choose the spongers who had plenty of openings or the one whose name is booked for weeks to come?

I don't really know why young men and women aren't coming to work as carpenters, plumbers, landscapers, roofers, painters, or any of the other skilled jobs that go into building and renovating houses. I suspect they were told that it's more or more prestigious in an instant to work in a climate-controlled office than to work outdoors in crafting something with their hands. For a lot of people, that's probably true. But, sadly, there seems to be a general prejudice against people who do hands-on work, and it's taking its toll.

That's too bad, because I could spend hours telling you just how great this job is. For one thing, your location and your tasks change every day. And even better, 10 or 15 years down the road you can drive by a place you've worked on and say, "Hey, I built that!" and know it's going to stand for another hundred, even two hundred years, if you did it right and took pride in your work.

I think if homeowners want to continue to get good workmanship, they should find a way to encourage some talented kids to follow their passions. The building trades are wonderful areas of expertise for someone with an artist's mind and a craftsman's hands. Maybe if we let our young people know how fun, lucrative, and rewarding this job really is, we'll be able to bring some of the best people into the business and continue the tradition of craftsmanship that *This Old House* is all about.



TOH general contractor Tom Silva likes working with the kids—and believes lots of younger folks might enjoy it, too.

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This Old House TV Project
[Winchester, Massachusetts]

What stands between the Winchester house and new paint? Ten tenacious coats of the old stuff

stripped bare

By Jefferson Kelle
Photographs by Keller & Keller

From a distance, the house in Winchester, Mass., site of the current *This Old House* TV project, is a picture of yellow siding and white trim. However, closer inspection reveals a craggy clapboard landscape of cracks, chips, and flakes where 10

layers of paint on the siding and trim at the Winchester project, posing contractor Jim Clark (shown here), and his crew used a newly developed, non-toxic stripper that breaks the bond between paint and wood.





Steam Removal: developed in Canada to strip the finishes from gutters, it sprayed onto the clapboards by crew foreman William Gleason. Project contractor Jim Clark says, "If you're stripping your own house, keep an escape route open from a house until after you've sprayed all the siding and removed all the paint, just when the machine will under and you can see it again to paint the house."

Blowdown: When left on overnight, the stripper leaves the paint on a surface off-white with a pebbly finish. After all the old paint is gone, the crew will give the house a quick sanding with 80-grit paper.



coats of paint, applied during the 50-year life of the house, are full on, by degrees. "The clapboards are cypress. I think—a full 10 inches wide and 1/4 inch thick in the center," says TOH general contractor Tim Silva. "Beautiful wood in great condition, except that it won't hold any more paint." Thinking contractors Jim Clark reasons, "We could leather out the faded areas with scotchbr and sandpaper before priming and top-coating, but a year or five we finish, the fading and chipping could start again. So all the paint has to go. That means a lot of work, but when we're finished, we'll have a half-million surface that will hold new, even coats of paint for a long time to come."

Dealing With Lead

Stripping paint from any house built before 1978 carries the question of lead. Given the number of coats on the Winchester house, Clark had no doubt about the presence of the heavy metal. In the past, getting rid of lead required using a licensed—and costly—abatement contractor to remove and dispose of the lead-laden paint. But that's changed in Massachusetts, according to Jim Roberts, an environmental analyst with the state's Department of Environmental Protection. "Massachusetts has recently adopted federal Environmental Protection Agency (EPA) guidelines that exclude lead paint removal from a residential abatement house. The idea is that if it is easier for homeowners to dispose of lead, they will be more likely to remove it from their homes." For Clark and crew, it means that they could do the work—if they took the mandated safety precautions—and that all the paint they removed from the house could simply be bagged up and dumped into the trash.

Testing Different Methods

There are three basic methods for stripping paint—grinding, applying heat, and using chemicals. All of them are hard work because the same barrier that cause paint to adhere makes it hard to remove. Clark and his crew considered using several different methods (see "Some Ways to Take It Off," opposite) on the Winchester siding before making a final choice. All three approaches have advantages and disadvantages. But every paint stripping job is a little different, and past experience, along with some on-the-job testing, helped Clark decide what would work best for the Winchester house.

For instance, grinding—using power washing disks or clayboard sanders—is very efficient at taking that's in good shape, but it generates lead-laden dust. Although the tools can be fitted with a vacuum hose, the last thing Clark wanted, in a check-to-pull neighborhood like Winchester, was to release any lead-contaminated dust. "The work was scheduled for high summer," says Clark, "when everyone has their windows wide open. On top of the dust, there's the constant lead scattering under the tools make."

Heat and chemical strippers were also given a try. The big downside of most heat methods is the risk of fire. "Any stripping contractor can tell you a story let's head of a house burning down," says Clark. "A few fires at the end of the day, there's no matter under a dry clapboard"—first warning, unless.

Chemicals are less straightforward because of the different types. The old standard, methylene chloride, is effective but very toxic stuff. Also on the market are some "environmentally friendly" strippers, some of which work better than others. "It's acetone," Clark says, "but it means that the least toxic chemicals are the domestic, and some of the average household products I've tried don't really work well."

(continued on p. 100)

Some Ways to Take It Off

All these methods remove paint, so the choice at the Winchester house was determined by what would work best under the house's particular conditions. Here's how Jim Clark saw the field.



Grinding

General: sanding disk or clayboard sander
Pros: Fast, efficient, leaves no residue on surface, relatively inexpensive (no chemicals to buy).

Cons: Only works on nonporous siding like clapboards. In inexperienced hands, can scar wood. Siding creates airborne dust that's a lead concern and requires a HEPA filter mask. Some siding requires constant repositioning.



Power-Washing

General: Available in different formulas, depending on paint type
Pros: Universally quick to apply and non-toxic. Can be sprayed or brushed on. Most dissolved paint adheres to proprietary paper, which is pulled off.

Cons: Mixed results, often resulting in one-step application paper to extra coats.



Burning

General: gas or heat gun
Pros: Relatively fast, thorough, and inexpensive (no chemicals to buy).

Cons: Can release some lead along with smoke, so a respirator is recommended. Biggest danger, though, is fire (often delayed when an surface under a clapboard ignites).



Methylene chloride-based chemical strippers

Pros: Very powerful and effective chemical. Sprays or available as non-spraying gel that adheres to vertical surfaces.

Cons: Tools—must be used with chemical-resistant gloves, goggles, and goggles. Requires ventilation indoors, and some formulations are flammable. Has also been classified by the EPA as a potential cause of cancer in humans.



Extreme heat

Pros: Very fast (about 30-60 seconds exposure), low operating temperature won't ignite wood, removes all paint with one pass. Requires no mask, gloves, or goggles. Inexpensive to operate (no chemicals to buy).

Cons: Not yet widely available. \$500 initial cost.



Steam

Pros: The best—requires no gloves, mask, or goggles. Can be sprayed or brushed on and removed well.

Cons: Slow-acting (one hour minimum heat left on overnight) before as effective as methylene chloride.

Final Choice

Ultimately, it was a new product that won the day at Winslow—a water-based chemical stripper called *Remov-It*. It doesn't attempt to dissolve the paint, as other chemical strippers do, but instead breaks the bond between paint and substrate. Clark adds, "The best thing about the product, as far as my crew and I are concerned, is that it's nontoxic. No gloves, MSDS, toxic stains or even fumes, no safety glasses. Spray it on in the late afternoon, let it sit overnight, and by morning the paint comes off in sort of rubbery sheets. We scraped it off easily with long-handled, 5-inch-wide putty knives." Most areas of the building took two coats of the stripper—not surprising, considering the multiple layers of paint. The power of the *Remov-It*—about twice that of another chemical stripper, Clark feels, outweighed by an environmental benefit.

As luck would have it, when the house was three quarters finished, Clark was shown a revolutionary tool that may change his mind about how he strips paint from here on. It was called steps to help up the substrate behind the paint, totally loosening its bond to wood or masonry. "The Silent Paint Remover" lasts in a constant temperature of only 500°F—well below wood's combustion point. "Hold it over an area for 30 or 35 seconds, give it a quick scrape, and all the paint layers come off down to the bare wood. It's lightning fast," says Clark. "We'll use it on the front of the house and the garage." Soon as he is out of school, the internet device is available on the Web (www.stepsremover.com) to test for \$22 a day or to buy for \$399.

As with all stripping methods that involve scraping down to bare wood, more sanding is necessary before the first coat of primer goes on. "Serpents have a tendency to burrow the wood, making it too smooth and shiny to take paint," says Clark. "We always fill all the surfaces with a random-coarse sandpaper and 50-grit paper to get good tooth for that first coat of primer."

Picking the New Palette

While the exterior paint was stripped, homeowners Ken Whitmore and Julie Lussane searched for new, historically accurate colors

Whitmore and Lussane discuss the color candidates to DCH general contractor Tim Liles. Rather than relying on stock paint color chips, they used some of colors being considered and paint swatches on the siding.



Following the EPA's new guidelines, Massachusetts has reclassified red lead-based paint now as hazardous only, which can be discarded with the rest of the rubbish. In the past, a licensed hazardous contractor had to be called in. Check with your state's Department of Environmental Protection (DEP) to see if similar laws apply in your area.

for their Colonial Revival house. Ken consulted a book by Roger Moss called *Paint in America: The Colors of Historic American Interiors* (Princeton Press, 1994). It's arranged by house periods, with each section showing appropriate colors for an era. "It's like one of those 'don't put red in the kitchen' or whatever," she says. "I flipped to Colonial Revival, and there were lots of interesting colors."

Brace and Kac narrowed the range to five colors: limber-bloss, gray, russet, and greens. Armed with perforated pins, they hit the stores of their neighborhood. "We didn't want to rush, and we didn't want to clash with any of the houses around us," Ken says.

DCH owner carpenter Peter Altman has this to offer: "Once a paint is on the building, it looks several shades lighter and brighter than what's on the postage stamp-size chip you get at the paint store." The best way to gauge true colors is to invest in quarts of the chosen paint to consider, paint part of the building with each, then stand back and look.

After a trip to the local paint store, Ken painted six swatches of seven colors for clapholds and five for trim. "It came down to a final choice between some gray for the body with ocean-colored trim, or a greenish-gray with dark, bottle-green trim," she says.

Jim Clark helped with the final decision, painting a section of claphold and window and shutter with each combination. "In the end, we chose the green-gray for the clapholds, cream for the trim, and dark green for the shutters," says Ken. "It was a lot of work, but you know, it took us a while to find the right house. Why wouldn't it take us time to find the right colors?" ■



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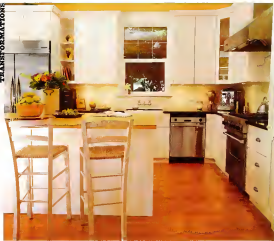
New owners and a lot of sweat equity give modern dimension to this cozy Craftsman By Jeanne Huber

It takes a special person to see sunshine and possibilities in a house filled with blue. But Monika Schnarre did the day she first wandered through a tired Craftsman in the pricey Point Grey neighborhood of Vancouver, British Columbia. The 1913 house was blue on the outside, from the foundation to the roof. It was also blue on the inside, with blue shag carpet, blue wallpaper, and blue kitchen cabinets and countertops. And it was blue in spirit. Sadly in need of updating, the kitchen was not only dismal but tiny. Plus, the original plumbing and wiring needed replacing, and 6-foot-2-inch-tall Monika couldn't stand up straight in most of the space offered by the under-the-eaves upstairs bedrooms. The 1913 layout was a problem for modern tastes too: The sole bathroom and small master bedroom were inconveniently located off the kitchen.



ABOVE: The house's inside-outside blue decor and sufficient floor plan led to go **BEFORE:** The upstairs was expanded with cable drawers and the exterior brought into focus with red paint and a new stone veneer on the foundation.

PHOTOGRAPHS BY ROBERT KENNEY



Not surprisingly, the house had sat on the market for almost a year, while her progenies sold in a matter of weeks. But Monika fell in love anyway. The first floor's 10-foot-high ceilings, shoulder-high wainscoting, and arched wall overlooking oak wood paneling were such a contrast to the nondescript '70s house she'd been raising Sam, the place needed fixing up, but, says Monika, "it had bones and character."

Her boyfriend, James Linden, who loves tinkering with old things, was smitten too. But as the son and grandson of builders, he realized how much work the house needed. Although the price had slowly dropped from \$135,000 to \$100,000 Canadian, they negotiated it down to \$400,000 (roughly \$300,000 American)—the lowest price this year in the neighborhood. James, who was just ending a career as a professional hockey player, figured he'd have plenty of time to fix up the place. Monika, an actress, thought she would, too. "I'm always between jobs," she says. Their next goals: a modern, efficient kitchen and a spacious master bedroom suite. They also wanted more functional guest bedroom spaces.

Floodlight light streams into the newly expanded, modernized kitchen space, which replaces the depressing blue wall. Open to the family room, it features a beautiful built-in, professional appliance, and a cozy breakfast nook.



Monika and James swapped the guest suite for the living room just below theirs. Her boyfriend, James Linden, meticulously stripped the oak mantel of its layers of blue paint.



On the ground floor, they moved things around. The old master bedroom became a family room, and the wall between it and the kitchen was removed. And by incorporating the old porch and moving the basement stairs from the back of the kitchen, they cleared the way for a breakfast nook plus a powder room. Upstairs, they decided to grow the house up—not by adding another story but by maximizing the skyline. By adding gabled dormers, James and Monica gained enough headroom for two good-size bedrooms, a bathroom, and a spacious 13 by 26-foot master suite.

Ground-floor demolition came first. Monica, whose total remodeling experience consisted of painting and helping James install laminate floor in a bathroom, brought her own crew. When

they ripped up the old carpet in the living room and exposed the oak flooring, they found an accent niche that angled toward the wall. Speculating that it pointed to an old fireplace, they passed on until they found the lock-up opening. "There was no fireplace or damper, just a chimney and a brick hole," says James, who hired a mason to put in a new hobbit. "Tearing down the bearing wall between the kitchen and the family room meant installing a 17-foot-long beam 6 inches thick and 18 inches tall. Monica was headed out to go seeing auction just as James and a friend began moving the beam into place. Naturally, the trapped us to assist. The memory will make their hair. "Here I am, dressed up with full makeup and a skirt, and I'm lifting a Puritan beam onto a ladder," Monica says.

When they moved on to the second-floor demolition, James worried about cutting a big hole in the roof, especially since it was February in a city that averages 45 inches of snow a year—most of it in the winter. Instead, he built the new roof before removing the old one. James and Monica first restored the look and plan of the existing walls, exposing the second-story framing and allowing James to pinpoint where he needed support for the new dormers. Strategically, he ribbed holes in the roof with a chainsaw and chiseled the vertical supports through them. After the new roof was built, James used the chainsaw to remove the old roof in planks, which he and Monica tossed through a window opening onto a Dumpster below.

In hindsight, the couple found some aspects of getting the house back together more gratifying than others. "Cleaning up the outside walls appears was a thrill," says Monica. "Scaffolding them and covering them with drywall was just a big mess."

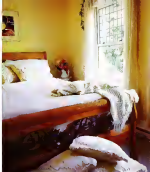
"It was hard on Monica," James says. "She'd come home from work looking like a million bucks, and 45 minutes later she had her hair all over it and was asked to wash it out and towel it. Plumbing seemed to take forever. "I would come back from an hour of fitting and say to James, 'What have you done?'" Monica recalls.

To late by late they tackled the finishing details. They replaced the burners and balustrades on the staircase, because they were too low and no longer worked. James and his brother also replaced the worn trim with Brazilian cherry, which they had used as spacers flooring. To surround the fireplace they had uncovered, Monica made her own tile, using a friend's kiln. They reinstalled the original oak mantel, which had been consigned to the basement when an earlier owner's remodeling. James crafted a new mantel for the dining room fireplace.

A crew of carpenters worked with James to frame the dormers, a cabinet company installed the kitchen, and an electrician roughed in new wiring. But otherwise James and Monica did the work themselves, with occasional aid from friends or family. "I have a knack for figuring out how things go," says James. "but I'll always check with my friends in the trades to be sure."

The couple spent about \$100,000 (17.5% on the remodel). With the high-end accent values in their area, their sweat equity is worth a lot. But the house can't be calculated just in dollars. "People tell them how great the place looks. "They think the dog floor looks original in the house," James says. "There's me in the ultimate complement." ■

The upstairs renovation created two comfortable guest rooms (one shown right). The rear of the house (shown here) was enhanced with a generous new deck and simple landscaping.



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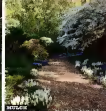


garden paths

By Peter Walsh

From brick and stone to gravel
and mulch, simple walkways
can add character—and
convenience—to your yard

Pathways made from large
stones like those shown
above are relatively easy to
install and require little
maintenance.



BEAVER

BEAVER

A path of mulch, gravel, or dry leaf straw can season the muddy route from driveway to backyard, formalize a well-worn shortcut, or lead to a quiet clearing in the woods. But a path doesn't have to be practical. It may frame a beautiful tree or shrub, or guide the eye through the garden. Or it can simply be an invitation to slow down, its only real destination being the next step.

DESIGNING A PATH

"A garden path should take advantage of your environment," says Tim Old House landscape contractor Roger Cook. He suggests raising one by a natural focal point, such as a tree or bush, or following a bend in a stream. Curves help encourage a leisurely pace, and lead a lot of mystery by hiding what's ahead. They also can make a small space, such as a side yard, seem bigger. Then a long, straight path can look graceful, especially if it follows the gentle undulations of the earth. But don't get carried away climbing every hillside. A winding path—and side-path should run straight up or down more than a flat, per 10 feet of length. On uneven terrain, incorporating aggregating gravel back into the design or adding a few steps will enable the path to cut and fill more gradually.

Another variable to consider is the path's width. A 2-foot-wide path is fine for a side path, but for one to stroll side by side, a path should be at least 4 feet across. If a lawn mower or wheelbarrow will take the path often, allow a berth of at least 30 inches.

Before breaking ground, make a rough sketch using a string or a garden hose. "Then walk the path to make sure you can live with it," says Roger. "Nothing is more frustrating than putting in a walk and then having to tear it out because you don't like it." Once you settle on a design, use spray paint or powdered lime to draw the final outline.

CHOOSING A MATERIAL

When selecting a path material, Roger prefers to go native. "Crushed clamshell looks great on Nantuxet, but it's not at place



CRUSHED CLAMSHELL FROM THE BAY: Garden paths range from relatively simple border-line mulch and gravel arrangements to intricate brick, terrystone patterns and curving stone and gravel designs. Aggregates: Glass-embedded cast concrete pavers set in stepping stones on a sand-filled hillside path.



CRUSHED CLAMSHELL FROM THE BAY: Garden paths range from relatively simple border-line mulch and gravel arrangements to intricate brick, terrystone patterns and curving stone and gravel designs. Aggregates: Glass-embedded cast concrete pavers set in stepping stones on a sand-filled hillside path.

a hundred miles inland," he says. "You want the path to blend in with its surroundings." They entrance not only to the natural landscape, but to the house, too. Play off of other materials used on the property, such as a brick foundation, a stone or tile roof, a fireplace, or a fieldstone walk. There are five general categories of material to consider.

Plant materials, such as shredded bark mulch, cedar chips, and pine needles, are the quickest way to create an aesthetically pleasing path, particularly in a woodland setting. These materials are cool and quiet underfoot. But they can also become messy when wet, so avoid using them near the house where they can get tracked inside. Recycled plant materials—plus, almost always available for free from municipal recycling centers—are also plant materials that can be replanted regularly as they decay pass.

Large rocks (also called flagging or flag) of slate, granite, and

limestone are an equally natural choice, but require much less upkeep—once in place, the heavy stones are there to stay. For a path laid stepping stone style (with grass or plantings in between), larger stones should be used at least 18 by 24 inches in size and setting them to a considerable gap—usually 6 to 8 inches apart. Prices range at about \$1.75 per square foot for \$2.50 per foot.

Landscape aggregates—chips, loose surface materials like pea gravel, crushed river rock, and crushed granite shell—work well on uneven solid surfaces, such as a paved driveway to a backyard deck.

Cricket is ideal. Street is available in endless variety—drugs \$8 per square foot path go into collections to create a road and sidewalk running upward of \$13 per square foot. And even simple bricks prove versatile, since they can be laid in various patterns, including running bond, herringbone, and basketweave. Just make sure to use water-resistant paver bricks rated S3, for severe weathering. These bricks cost between \$10 and \$13 each, depending on style, even on using five bricks per square foot of pathway in most cases.

One reason this is gaining popularity is **pressed concrete**—in

"SET LARGE INDIVIDUAL STONES TO YOUR OWN GAIT, AND TO HECK WITH EVERYONE ELSE—IT'S YOUR PATH." —ROGER COOK, TOWN LANDSCAPE CONTRACTOR

And, with their distinctive crunch, they're equally at home in design beds in a garden. In heavily wooded areas, aggregates allow one to break through the surface without stepping on each of the surrounding path. Choose stones between 14 inch and 16 inch in diameter—small enough to walk on, but big enough to avoid getting caught in the holes of them. But be aware that aggregates must be replenished periodically. On average, \$10 to \$40 buys one ton of natural stone or shell—enough for a 30 foot-long, 3-foot-wide pathway.

For high traffic areas, a continuous, level surface of **cast concrete**

the form of pavers and stepping stones. "They're available at all home centers," Roger points out, "and they come with great stain options." They're also made to mimic everything from brick and granite to cobblestone and pebbles—and they clean out fast.

INSTALLING IT RIGHT

Some remarkable paths can be created in just a few hours. Top off a trail through the woods with a load of pine straw. Or do no more than lay down stepping stones. Simply lay them out, trace around each



PHOTOS: GARDEN (TOP LEFT) BY TIM OLD HOUSE; (TOP RIGHT) BY ROGER COOK; (BOTTOM) BY TIM OLD HOUSE



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stone with a spade, remove the underlying soil and sand, and fit the stones in place.

But a path isn't suitable for the long term requires a level, well-compacted base, which means excavating, grading and laying a base of crushed stone for most details, says "Laying a Flagstone Path," right. Most paths also require edging. Installed after the base material, edging helps keep individual beds, stones, and pavers packed tight. And it prevents small aggressors from migrating so readily onto the lawn or into nearby flower beds. "Steel or a limestone edging goes in quickly," says Rager, "but a good lawn can pop it out and you'll have to tap it back in place." And although at first you, order or installed edging—and even pressure-treated azek—will eventually rot, Rager prefers to edge with pavers, cobblestone, or beds laid in a soldier course (a row up-on-end). "It's more time-consuming and expensive, but it stays in place," he says.

It's also a good idea to install a layer of landscaping fabric between the compacted fill and the finish surface material. The porous material allows water to drain through, but keeps sand and gravel from digging down into the pack.

FINISHING TOUCHES

To help a path blend into the natural surroundings, fill in spaces between stepping stones, beds, or pavers with low-growing plants such as dwarf mondo grass (*Ophiopogon japonicus*), creeping monarda (*Didymopanax*), or sturdy lemon thyme (*Thymus citrardens*), which adheres its leaves when stepped on. Good plants companions to stone's borders or camouflage edging material include ivy turf (*Liriodendron*), wild rice (*Zizania*), and red-wood acorn (*Urtica angustata*). (For more suggestions, see "Ground Covers," October 2002, page 124.)

To "age" newly laid beds or stone, brush on some mature "tea" here and there. This concoction—made from composted manure dissolved in 1:5 parts water—will encourage moss to grow, and quickly make a walk look like it's been there for years. With a well-laid path, it's only a matter of time before that illusion becomes a reality. ■

For more information

Go to www.thisoldhouse.com or visit the Online Library. The Old House and the Garden path in the March box.

Laying a Flagstone Path

Professional landscaper Michael Duffy wanted to dress up the rough trail from his backyard to a stream at the edge of his property. Attention-based landscaper Michael Duffy wanted to dress up the rough trail from his backyard to a stream at the edge of his property. Attention-based landscaper Michael Duffy wanted to dress up the rough trail from his backyard to a stream at the edge of his property. Attention-based landscaper Michael Duffy wanted to dress up the rough trail from his backyard to a stream at the edge of his property.



1. CLEARING THE TRACK

Duffy's crew removed the landscaping from the path using fluorescent spray paint to mark the path's perimeter. After clearing the track of leaves and digging out underbrush, they excavate it 4 inches of soil (mud and topsoil) and packed it along the path for use in bordering planting beds.



2. LAYING THE BASE

The two main path of heavy flagstone requires no edging, but it demands a stable, well-drained base. The crew fills the excavated track with 4 inches of crushed stone. They use a level (shown) and pack it down with a plate compactor.



3. ADDING SAND

Before setting the 12-inch thick flagstone stones in place, workers add 2 inches of heavy construction sand to cushion the stones and prevent them from settling. They compact the sand by hand with a metal trowel (shown) to approximately 1 1/2 inches of depth.



4. SETTING THE STONE

The crew arranges the flagstone in an informal pattern. After the pieces are together, they use a plate compactor to settle the stones. They use a level (shown) to check the stones and use a trowel to fill the joints with the sand in place.





With a wide range of materials, including stone, stainless steel, and wood, manufacturers are turning out ever more beautiful designs, in a wider range of materials, including stone, stainless steel, and wood. Many of the new lavs are also problem solvers, shaped and scaled to better accommodate the space you have to work with, no matter how big, small, awkward, or short on storage. (Be warned, though: Standout looks and special features command more than standard prices.) For a range of sinks worth a closer look, read on.

sink sensations

New designs that solve bathroom space problems—with style

P

lanning to remodel a bathroom, or just want to give one a fresh, new look? Think sink. It's the focal point of the bathroom, much the way the sofa is in the living room. As a result, manufacturers are turning out ever more beautiful designs, in a wider range of materials, including stone, stainless steel, and wood. Many of the new lavs are also problem solvers, shaped and scaled to better accommodate the space you have to work with, no matter how big, small, awkward, or short on storage. (Be warned, though: Standout looks and special features command more than standard prices.) For a range of sinks worth a closer look, read on.



A lot of space in three dimensions: The slim, 18½-in.-wide-by-16½-in.-deep rectangular basin can be floated on top of (or recessed into) a counter, console, or cabinet. Made of acrylic by Calmarco. \$495

small wonders

A space-saving mini sink makes a big style impact in a tiny powder room or half bath.



31 WHIL HARBOR Introducing just 10 1/2 in. wide by 14 in. deep. This rectangular sink saves space two ways—making room for a door swing and for other fixtures along the same wall. Made of white vitreous china. By Kohler; \$125

32 TRADITIONAL CHARM Set in a detailed pedestal, this shell-shaped basin with its integral backsplash looks like a crown. And it takes up almost 24 1/2 in. from floor to side. Made of white vitreous china. By Kohler; \$645



33 MODERN CLASSIC A reproduction of a 1920s design, this white ceramic pedestal sink looks equally at home in a period or contemporary bath. At 19 1/2 in. wide by 15 1/2 in. deep, it fits in almost anywhere. By A.P. & Co; \$120

34 COOL REALITY Our best image of tomorrow's materials gets thrown a curve with this rounded, cast-iron stainless steel sink. Only 18 in. wide by 10 1/2 in. deep, the wall-hung design is as cool on walls and decks. By Neo-Metro; \$1,155

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At 36 to 44 inches wide, these models can accommodate two people at a time.



1) SURTLE COLOR: This 2 by 16 1/2-inch gray enameled-steel-on-iron console top measures 42 in. wide, offering a lot of counter space for bottles. It also provides a handsome backdrop for the order counter basin and square legs. Each model is black-finish. By Kohler. \$3,175.

2) OLD-WORLD CHARM: Based on a 19th-century French design, this 42 1/2 by 24 1/2 by 24 1/2-inch double-basin iron-powder porcelain console with Queen Anne legs will add a somewhat to a master bath. By St. Thomas Creek. \$2,395.

3) SCULPTED WOOD: Made of kiln-dried redwood with a water-resistant top, this 36 by 44 by 24 1/2-inch double-basin sink is both functional and decorative. It has a built-in soap dish and chrome console legs. By Image. \$4,500.

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TOP DRAWER Here's a vanity with the look of an antique dresser. The matching cabinet—a perfect place to keep towels—is topped with a marble counter and back splain and an undermount vitreous china by Elj Roberts. \$470.

PLAIN AND SIMPLE A study in rectilinear design, this square-off-white porcelain sink sits neatly on a small (20½ by 21½ in.) white vanity cabinet that hides toiletries away behind a single door. By Waterworks. \$210.

EURO STYLE This well-mounted sink has a generous half-circle freestyling deck (24½ by 22½ in.) and integral basin, which opens to foot above its chrome soapcase and accessory rack. By Gerber. \$150.

HIDE QUIVER A match-countertop, with its ceramic undermount basin, hugs the contours of this pink cherry vanity. It includes two banks of drawers for maximum storage. By Gerber. \$600.

PHOTOS: KENNETH COLE; PHOTO: JEFFREY MAYER



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DIY

NATION

Americans' love affair
with do-it-yourself
inspires a new
museum exhibit

By Frank Ahrens
Illustrations by Jason Schneider

The shelve wasn't big, but it was driving me crazy.

I moved into a apartment in a Washington, D.C., row house three years ago. About 10 years earlier, someone had replaced the old hardwood floors with carpeting (bad), but the place still had high ceilings and exposed brick walls (good). To the right of the fireplace was the rooming space: an 18-foot high alcove, 10 feet wide and 3 feet deep. The perfect spot for my books. What I needed was shelves.

I spent days on the radio eyeballing the stores while rifling through furniture catalogs, looking for the perfect shelves. They were all wrong. Too narrow, too short, too dark, too expensive, too flimsy. When, most covered up the speech that said, these people mortgaged real brick walls.

Suddenly, the perfect solution hit me like the backhacks from a power-law staff gun. "It's do it yourself."

With this declaration, I proudly joined a long line of Americans doing back to the first-class jobs on their own. It was a possible in the North Carolina told me.

This lack of attitude is practically a national holiday. After all, our country was thrown up first and with a nearly unshakable abundance, a new and domestic idea hammered together out of necessity. There was no assembly manual to consult; the Founding Fathers did it themselves.



A hands-on attitude is practically an American birthright. After all, this country was thrown up first and with a nearly unshakable abundance, a new and domestic idea hammered together out of necessity. There was no assembly manual to consult; the Founding Fathers did it themselves.

Back then, DIY meant making your own tables with an axe. But as America grew and prospered through the 19th century, people could afford to live in houses built by others. The rising industrial middle class had something new—factory time—and the manufacturing of tools, paints, and other building supplies were right there to help them fill a job project to benefit their homes. By the time the 1930s rolled around, do-it-yourself had blossomed from a neighborhood hobby to a burgeoning cultural phenomenon.

For evidence, see a cool look no farther than a new exhibit at Washington's National Building Museum: "Do It Yourself: Home Improvement in 20th-Century America" attempts to "put the attention into a historical context," says Carolyn M. Galbraith, who organized the idea and wrote the exhibit's catalog. By telling the story of the project and products that made us and how we used to transform their surroundings, the exhibit "illuminate[s] relationships between architecture, design, domestic life, consumer culture, and the history of technology." It sounds modern, but Galbraith says her inspiration was simple: "I look at a friend, and all my friends were facing up their houses."

Although DIY began to take hold in the case of the 20th century (the phrase "do it yourself" first appeared as late as 1912), it really picked up steam after World War II, when a booming economy put home ownership within reach of unprecedented numbers of Americans. The road for home buyers to individualize their houses—and, by extension, themselves—started with every cookie-cutter suburban built. But later, when the tower leaders of Levittown, or New York's Long Island, America's first modern suburb, seemed to compromise one of the original features—its owners' owners' owners, they had a hard time finding one in its back, 1947 condition. Generations of Levittowners had demolished their houses with lawns, sidewalks, gardens, and other urban features. They looked on themselves as rugged Americans and Goyan's rebels. To drive through Levittown today is to see nothing but a monotonous suburb. Nearly every house looks different from the next.

The driving force behind all this activity was the rising GI. "Go do it," said, back from saving the world from fascism, armed their energy and expertise to the home front. Women, too, were eager to apply the skills of skills they had learned working in shipyards and munitions factories. "There was a sense that they were not there who sang a war, and they brought that spirit into their domestic world,"



The first real connection to a powerful one in the history of DIY. "This fact that your father told a heavily on you, and you can expect it to yourself—it gives you a sense of control even if you don't know what the hell you're doing," says *The Old House* senior producer Bruce Irving.

workshop and several workshops. The project experienced a last party setback early on, when I left the garage door open for too long and somebody stole my power tools.

says *The Old House* senior producer Bruce Irving, who grew up in a family of tool-wielding veterans. "These were tough, accomplished people," Irving says. "It didn't sit well with their self-image to always have to consider come in and take care of the problem as their house."

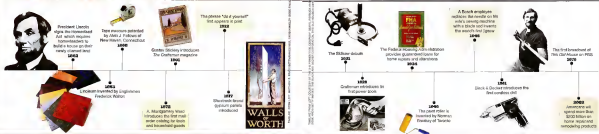
My concerns were less complex. I just needed some shelves.

As an urban dweller, the only work space I had access to was a garage, so I had to scale up ambitious accordingly. Instead of building the shelves from scratch, I decided to make ready-made parts and make something unique—much like the folks in Levittown.

The shelves would be made of 1x12 maple boards, purchased at the local home center. They would be held up by 10-foot-high 2x6 post standards, attached to the wall on-edge and passed to black. Both the supports and the shelves would be attached. The shelving on it would be anchored by base cabinets with frosted glass windows.

The process was a laborious one, so I measured the boards at the apartment, then carried them over to the garage to saw them. Back and forth, up and down, for two solid weeks and several workshops. The project experienced a last party setback early on, when I left the garage door open for too long and somebody stole my power tools.

Great Moments in Modern Do-It-Yourself History



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But even that couldn't dim my enthusiasm. The simple act of sewing wood unlocked a sort of inner creativity I didn't know I had. It also triggered powerful memories. I heard my father's voice in my head, admonishing me the way he did when he first showed me how to use a power saw: "Blessed heart, cut down," and "Only a poor craftsman blames his tools."

The Dad-I-did connection is a powerful one in the history of DIY. "The fact that your father had a hand on you, and you can repeat it to yourself—it gives you a sense of control even if you don't know what the hell you're doing," says Irving. Indeed, basic carpentry was considered as the way to a happy marriage and family, if you watch the media images during those early postwar years. David's Dad is his woodworking, confidence, pipe-smoking, and affirmed by beaming wife and children.

More than that one television program my house nearly required UN supporters to write the dispute between my parents "Blue!" "Marcel!" "Blue!" "Blue!" "Nuclear town!"

But despite those early depictions of Men as a smiling helpmate, women have long been a driving force behind the DIY movement. Throughout the 1930s and '40s, consciousness recognized them as the imagination behind many home-improvement projects, especially in the wake of wartime design and decoration. By the 1970s and the rise of the women's movement, she finally began to reflect the fact that more often than not, women wielded the tools, too.

The late '70s saw another dramatic development: the advent of the home-owner career, which did more than anything in the history of DIY to democratize the movement. Suddenly, regular folks had access to the same tools and materials as the pros, complete with friendly, apron-wearing clerks to take the mystery out of using them. Before help-yourself retail warehouse like Home Depot, which opened its first store in 1979, "there were sort of one-stop shops at hardware stores who would hire you if you asked questions that only a professional could possibly want to know about," says Russ Morash, whose knowledge at the early career episode led him to create The Old House for television that same year. The show, he says, "was a response to a feeling I had that people wanted to learn how to do things themselves, and they had no one to turn to."



The history of the woman-do-it-yourselfer reflects society's changing attitudes about gender roles. In wartime, she was essential and kept America's economy moving. In the suburban heyday of the 1950s, she was the picture of safely domesticity. Today, she's no longer in the workshop.

the tool looked pretty good, up close, some final carpentry adjustments emerged. Near time, I'll really up in advance on the first pieces of lining and joining. In the years since, though, the project has paid an unexpected dividend.

"Nice shelves," someone raves during the first time I'll say.

"Thanks," I'll reply. "They took longer than I thought." (Once how I only suggest that I took them.)

"What," they'll respond. "You look great!"

It takes over that to an affluent culture like ours—and especially in an overabundant, underappreciated (any like professional) workshop—the building of shelves with one's own hands is a remarkable feat, one to be revered.

As we enter the 21st century and American houses become ever more complex, no doubt the urge to do it ourselves will grow even stronger. In these frantic times, we're driven to carve out some of our own where we can, marching our brains and hands against computerized appliances and wireless home networks. Unlike our forebears, today we do it ourselves because we choose to, not because we have to. After all, we could afford to have someone else do it—and they might do a better job—but it wouldn't be nearly as satisfying. *

"She's a beautiful woman, improved in 20th-Century America," mentioned in part by The Old House Workshop, will be included in the National Building Museum, in Washington, D.C., from October 15, 2002, through August 31, 2003. For more information, go to www.ohw.org.

I could have used some-one to go to myself. After two weeks of work, \$400 in materials, and a replacement power drill, the shelves were finally finished, but they were neither (a) stable nor (b) level. My idea to nudge the shelves and standards was a good one, but my tools weren't accurate enough to assure a snug fit. To fix the stability problem, I anchored each shelf to its standard with 3-inch metal L-brackets. I told myself that combining wood with metal gave the piece a Po-Mo mixed-media look. (To level the shelves, I drove thin wedges between the standards and the very out of plumb walls. [Hey, even Norm can do this every once in a while.]

To run the load-bearing capacity of the shelves, I climbed on them. They held. The books and TV went up, my CDs filled the cabinet. From at least 3 feet away,



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A NEW OLD FARMHOUSE

This 20th-century homestead is infused with the spirit of colonial times

By Leah York Photographs by Tria Giovan



To create the illusion that the Chatham County, Georgia, house was added on to over time, the exterior of the various parts are stripped up and down. The white walls of the new wing, which houses a study and a master suite, are lined with stone facades, adding the look of period homes in the area. (Homesowner Beth and Peggy Brantley Jones) also replaced the existing archway



all friends to gather at. She also wanted to combine two adjacent upstairs bedrooms into one larger guest room and add another full bath to create three bathroom suites. Bob, an insurance broker and weekend gardener, had only one request: a master bedroom on the first floor, to enjoy the surrounding garden views.

To discuss their plans, the Bradleys turned to Barry H. Light, the architect responsible for the renovation of their second home, in Georgia. Knowing the couple as well as the job, Light had a few ideas of his own to offer. As long as they were adding a master suite, he suggested, they could make it a single-story wing with a study for Bob. And considering how much Peggy loves to entertain, why not add a big screened-in porch off the kitchen, plus a patio outside? The renovation would continue to reflect the Colonial style, influenced by Peggy's ideas. Over the years, she had amassed her own archive of historic-house photographs and magazine clippings of period details she'd admired. For any specific references she lacked, she had all of historic Chester County to crib from.

These panels replicate a push door (left), which is used for informal dining, and a two-pane (right) with a new cap for a copy from their work on 18th-century public houses to look up the figure both rooms are finished in the Colonial style.

paneled woodwork, random-width oak floors, and six-over-six windows. In the kitchen, there were rough-hewn ceiling beams and a walk-in cooking fireplace, now placed with a tiny window that in historical versions was intended to give the bread-baking hearthside light to work by.

A New Owner's Vision

By the time Peggy Bradley saw the house, nearly a decade later, it was for sale. A Colonial Williamsburg buff, Peggy was instantly drawn by the house's colonial-era spirit, conveyed by its appearance to architectural detail. And she had big plans for the house: once she and her husband, Bob, purchased the property—nearly 50 miles to a 4,000-square-foot home. Her plans included converting the formal dining room into a living space, since the two original main-floor parlors, at 11 by 13 feet each, felt too cramped for large groups



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GET THE FEELING

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WILSON: At one end of the large kitchen are dining and serving areas, with heavy upholstered curtains on front of a large double door. The kitchen's walls are fireplace features, a wrought-iron pot rack and a top window like those built to bring light into a colonial coach's stables.

"We were always coming off to one museum house or another," recalls local contractor Joe Wallace of the frequent field trips he and his subcontractors made in order to replicate various architectural and decorative elements. "Details were important to Peggy, so having actual period pieces to check out and sketch was a big help. She'd know of a place that had the strap hinges she wanted copied or the

beaded pendant for the windows." One of her favorite details found on any one of the new parlors—rooms that Light originally hoped to open up. "I would have knocked out the wall between them to integrate the chaotrophic feel of such closed spaces," Light says. But Peggy had other plans. Inspired by the interior of a tavern in Colonial Williamsburg, she had a scaled-down replica of a cage bar made for the back parlor. "That's how they looked up three liquor in those days," she explains. The food parlor would be used for intimate dining. Now they're affectionately known as the tavern and pub rooms, respectively. "They're wonderful little rooms that are full of character," Light acknowledges.

beaded pendant for the windows."

The new wing's expansive master bedroom—with two sizable dressing rooms, an en-suite master bathroom, a bathroom back, and his and hers dressing rooms—incorporates 10 different historical references, by Wallace's count. The most elaborate of these was the formidable back fireplace. Flanked by a pair of beehive corbels and topped with a painted cartouche, it evokes the principal hearth used

in early New England farmhouses. "Peggy originally wanted that fireplace for the living room," recalls Light, "but it would have taken up a whole wall." He persuaded her to go with a more understated paneled fireplace in the living room and reserve the distinctive brick hearth for the 850-square-foot bedroom suite, where its scale looks right and it adds a cozy touch.

GETTING THE EXTERIOR RIGHT

One of the major dilemmas of a restoration like this is knowing where to stop. "Peggy was constantly coming up with ideas," says Wallace, "which got to be outrageous at times, especially when we'd see how nicely some new aspect turned out."

Using 21st-century construction practices and working with modern materials made each rough factor and error that it would have been 200 years ago, of course. The cow wing's exterior, for



The kitchen's ornamental island combines a six-burner cooking and granite surface with ample freestanding cabinetry, metal-fitted walls, wrought-iron linens and it hangs. An electrical codebreaker and a wrought-iron pot rack, displaying copper cookware, hang from the ceiling.



apart, a wood-frame construction with diagonals front and back and sides being on two gable ends. Nearby 18th-century farmhouses, on the other hand, were built with walls of folkstone laid and finished by hand, and often later surfaced. "An old adobe on Lakehouse wouldn't have had just one facade," explains Peggy. "To get the entrance look right, Wilbur and his crew used a combination of new and salvaged Pennsylvania folkstone—the same located by Peggy from a recently demolished barn of appropriate vintage. The stonework was done in period style, with thick, scribed mortar joints.

across The addition's master bedroom is decorated with rule wallpaper and a graceful blue poster canopy that both look true to the period. The space is generous enough to accommodate two seating areas—one earlier into a bay window; the other counts up to the fireplace (opposite).

buildings and landscaping, which has changed the look of the property from rural house to true farmstead, ultimately took three years. "When we started, we just wanted to add on a bedroom wing," says Peggy. "But it evolved into much more. We end-ventually ended up building our dream house." ■



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Norm's Notebook

Cutting Holes in Paneling

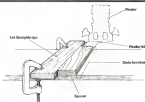


There are a few things you can count on when installing sheet paneling, and one of them is that you'll have to cut holes to accommodate switches and switch boxes. To mark the location of cuts, rub chalk on the front edge of each box and push the pins of its place against it. This leaves an outline of the box on the back of the panel.

To make the cut, you need to drill through the back of the panel to provide scores for a fine-tooth pigsaw blade, but first, lay the paneling face down over a scrap of plywood. This prevents the face veneer from splintering in the bit punches through. Now use a 1/8-inch or 1/4-inch spade bit to drill two holes—one near a corner of the chalk outline, the other just the corner diagonally opposite. Then poke the pigsaw blade into each clearance hole from the back of the panel and make your cuts.

Simple Bucks to Hold Up a Door

After the beams we're rehab or repair on This Old House have called for work on the doors. Most of that work goes done on the edges, whether it's planing a back edge of a door that sticks or facing with the hinges so it will hang right. But doors are unwieldy, at best, when you put them up on edge, so I hold them in place with a pair of door bucks, made on the job with some 1/4-inch plywood and a few scraps of carpet. The carpet protects the finish while the plywood base keeps the door from tipping. And because the bucks hold the door up off the floor a bit, my back feels a lot better at the end of the day.

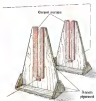


Quick-and-Easy Dados

I don't know how we ever came to call a flat-bottomed groove a "dado." But, like the term or not, it is a neat, handy way to join pieces of wood at right angles to each other, which makes them especially useful when you want to build fixed shelves into a bookcase or cabinet.

Dados for shelves are typically cut with a router guided by a straightedge. The problem is how to get that straightedge clamped at exactly the right place. My solution is to make a simple spacer out of a scrap of shelf stock, which I cut precisely to match the distance between the raising edge of the bit and the outer edge of the router base. Rather than measure that distance—it can't be done accurately enough anyway—I use the router to make a template for raising the spacer. First, I clamp a straightedge to a scrap of scrap wood and then use it to guide the router in a straight cut across the scrap. (Be sure to use the same bit that will be cutting the dados.) Next, I use this template to cut the groove on my table saw to rip a spacer that will fit perfectly between the edge of the cut and the guide.

To use the spacer, I just lay up an long edge with the marks I've made on the stock, drawing where the dados will go, clamp the straightedge tightly against the spacer's opposite edge, then remove the spacer. That way, when the router base slides along the straightedge, my dados will be right where I want it.



Norm's Notebook

Clean Cuts in Old Plaster

A person who endlessly runs into old wood-lath-and-plaster with a reciprocating saw inevitably has a list of collateral damage to expect. Here are a few ways I minimize plaster's tendency to fall off or crack when I cut it.

First, I switch off the orbital motion if the saw has that feature. It's too aggressive for the flexible lath strips. Next, I use a 6-inch blade and hold it at a low angle relative to the wall. This reduces the danger of cutting through a hidden pipe or wire or loosening the lath from the studs. (The best blades for this work—often, not surprisingly, plaster blades—have small teeth

that nibble rather than gouge, and they cut at both diagonals to further minimize vibration.) I always make the initial bevel cut diagonals the lath before the vertical cut. This helps to prevent cracks from radiating up the wall.

I can't guarantee that every cut you make can be done cleanly, there are a lot of variables here. The most important factors are the thickness and condition of the plaster and the lath and how far the cut is from a stud or the corner, the best. But following these suggestions can save you from a lot of extra plaster-repair work.

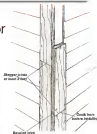


Beveled Joints for Corner Boards

Working in the cramped environment of a home, and I've learned that anything you can do to defend against it is worth the effort. Even lath changes help, like beveling the horizontal joints between two corner boards when a single board isn't long enough. But joints may be easier to make, but

they're more likely to open up and close on moisture. If a level opens up, most of the end grain is covered and the gap is less noticeable.

Bevels are so easy to make I'm surprised they aren't used more often when joining wood pieces. Making the joint requires just two angled cuts—one at 45 degrees to the right, the other 45 degrees to the left—made so that the top piece overlaps the bottom. For looks, I stagger joints on the neighboring boards by at least 3 feet and try to keep the joints up high where they are less visible and are protected by the cover. When sanding them, I hit both ends with a flat board of caulk to seal the end grain and hold the joint together.



Crosscutting Gauge

When I was framing houses as a teenager, I spent a lot of time in front of a stack of 2x4s, sawing them to the lengths my father had written on the cut list. Measuring and end cutting a few studs isn't a problem. But when I had to do a hundred of them, all exactly the same length, measuring out by eye took too much time. So I learned to make a simple marking gauge to speed the work. Typically it would be a length of 1x2 with a 2x4 block nailed across one end. The block was positioned so I could look it over the end of a stud and see the end of the 1x2 to make my cut mark. To cut a 6-foot stud out of an 8-footer, for instance, I'd end the block 6 feet from



the end of my gauge. Using it took less time than measuring for my age, even as I figured out thinking. To make the gauge even more useful, I'd nail a second block to the other face of the 1x2 so I could put one end over to mark studs of a different length.

DIRECTORY

WHERE TO FIND IT, PAGE 152 • TV CLASSICS, PAGE 153 • TV LISTINGS, PAGE 154



PHOTOGRAPH BY ANATRE UNITS PHOTOGRAPHY



Technology, p. 76: A single power strip won't protect from electrical surges that devastate surges of electricity.

Assurance Power Converters (APC), West Kingston, RI, 877-800-4272.

www.pc.com. Uninterruptible power supply (UPS). Back-UPS VS 100 by APC. Whole-house surge protector. Power Guard, Fort Worth, TX.

Specialized products—
Laptops: SurgeProtector Notebook Surge Protector P/NoseProt by APC. Computer network ProtectNet Thunder Port Surge Protector (for 10Base2 LAN equipment) by APC. Telephone, computer, or fax line: MAX 3Tel by Fortinet. Home entertainment and audio/video systems: MAX 3100 by Fortinet.

MATERIALS: GROUT pp. 82-85

Tile contractors: David Gendreau, Needham, MA, 508-328-8125. The Tile Lady, Dublin Park, Carver Heights, OH, www.tilelady.com.

Tiles: Arctic Tile, New York, NY, 800-880-8444; www.arctictile.com. Our thanks to Jan MacLanahan, Arctic Tile. Great Carrizo Building Products,

Seal Beach, CA, www.carrizo.com. Building products.com. Our thanks to Todd Isaacs, general contractor, New York, NY, 212-806-4207.

TALKING SHOP PAINT SPRAYERS pp. 86-90

Cop gun: Wagner Power Painters, Wagner Spray Tech Corporation, Minneapolis, MN, 800-666-1525, www.wagner.com.

Dispensing pump: #75250K by Campbell Hausfeld, Harrison, OH, 800-426-0481, www.chp.com.

Paint sprayer: Truair 640 by Truair Tool Inc., Franklin Lakes, NJ, 800-926-3342, www.truair.com.

MYLP USA-MYLP 1005, Apollo Sprayers, Inc., Vista, CA, 855-900-4837, www.hip.com available through Advance Machinery, Newcastle, DE, 800-323-2326.

Our thanks to Chuck Semerario, Sherman Williams Company, www.shermanwilliams.com.

PHOTO: MICHAEL LEWIS

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Talking Shop, p. 86: Painting pro John Deane a sprayer to hold up his coat.

HOMEOWNER'S HANDBOOK: INSTALLING A STAIR RUNNER pp. 92-95

Carpeting and steps: Kelly Bookstein and Son, Winchester, MA, 800-720-5166, www.kellys.com. Stair rods and brackets: Zoro's Choice, Madison, WI, 800-792-1525, www.zoro.com.

WINCHESTER TV PROJECT: STRIPPED BARE pp. 102-106

Price estimator: Jim Clark, Clark Painting, Sudbury, MA, 978-463-1891. Paint suppliers: Racore, Inc., Newport Electronics and Technologies, Delta, BC, Canada, 800-663-9174, www.racore.com.

Pro: Jany Paint Removal Systems, Diamond Chemicals, Inc., New York, NY, 212-869-6150, www.projany.com. Massachusetts DEP guidelines for residential lead disposal: "Getting the Lead Out" fact sheet, www.state.ma.us/dhp/hwpl/disposal/index.html. Inland pest supplies: Silver Pest Resources, BGA/Viking Sales, Patchogue, NY, 516-363-0749, www.inlandpestresources.com.

GARDEN PATHS pp. 114-121

Landscaping architect: Joanne Konecny Garden Design Inc., Allentown, PA, 610-330-8752, www.gardendesigninc.com. For further information: Essential Landscaping

(The Old House Books, 2002), order by phone (800-327-6381) or online (www.theoldhouse.com).

For more information on plants suitable for pathways and borders: www.sprules.com.

Our thanks to: Euse Zornemann and Mike Michael for their master "art" recipe.

SINK SENSATIONS pp. 122-126

Open—

RCM31. Kerosene console with metal legs, Solo Corp., Watertown, NJ, 800-969-7446, www.solocorp1.com. Available through Silvers & Ketchum, Fairfield, NJ, 973-743-4732.

Page 123—

Zoro 40 Slim Vinyl Basin by Castlino, available through Hensley, Tuxedo, NY, 516-223-0493, www.hensley.com.

Page 124—

30 Elite Handpan, Pochet, Chandler, AZ, 800-335-3262, www.pochet.com. Standard in use: Available through Davis & Ward, New York, NY, 212-393-9435.

30 Sealed corner pedestal, Kallies, Kallies, WI, 800-452-5147, www.kallies.com.

30 #824861480 Mosaic pedestal by AF & Co., available through AF Supply, New York, NY, 800-366-2194, www.afsupply.com.

30 #936 Neo Basin, NeoMosaic, City of Industry, CA, 909-391-0600, www.neo-mosaic.com.

Page 125—

31 Kallies console table, Kallies, Kallies, WI, 800-452-5147, www.kallies.com, available through Davis & Ward, New York, NY, 212-393-9435.

31 Double Bowl console, St. Thomas Common, Napa, CA, 415-336-6001, www.stthomascountry.com.

31 Kjo ma by Kjo, available through P. Craftsmanship, Miami, FL, 305-391-1335, www.pcraft.com. Also available through Arctic Tile, New York, NY, 800-360-8444.

Page 126—

31 Michael Smith for Country ranges, Kallies, 31 Poch small vanity, Waterworks, Danbury, CT, 800-999-8421, www.waterworks.com. 31 Roundoff wall mount, Barclay Products Ltd., Gortett, IL, 847-344-1234. 31 Dine

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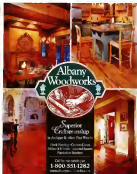
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