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This Old House

JUNE 2005

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DECK**
for your
house

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**PORCH
SWING**

Plant the
**PERFECT
LAWN**

**Ideas for
a Great
Outdoors**

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FROM AN
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AOL KEYWORD: THIS OLD HOUSE



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Guide to roofing materials



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I wasn't born to cageed.

I never fantasized about spending weekends at the home improvement store.

I am a mother of two, but not just a mother of two.

I am a mom to a whole lot of teenagers.

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Get a vintage look without setting foot in an antique store.



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CONTRIBUTORS



The millions of *His Girl* devotees like **Thomas J. Sains** as much for his raucous humor as his compassion and his wit. It's not a secret around here. "The guy of *His Girl* has something a lot of people don't have: just a plain, unadorned, no-frills wit," said one of his fans. And he's not alone in his view. "His wit is so broad-based on the one hand that it's so subtle on the other," said another. "His wit is so broad-based on the one hand that it's so subtle on the other," said another. "His wit is so broad-based on the one hand that it's so subtle on the other," said another.

[illegible]

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MAILBOX



back. Here in Southern California, considerable efforts and funds have been directed toward the restoration of native plant species in canyon and woodland habitats, which are endangered by the encroachment of nonnative plant species such as ornamental grasses. In landscaping our yards, we have a responsibility not to cause additional harm to dwindling native plant habitats.

JOSE E. BARRERA, CITY HEIGHTS CALIFORNIA
PROJECT, SAN DIEGO, CALIF.

RECTOR: I have no doubt that the people of this country will support the president.

For growers, weeds have become a real problem in parts of the country. However, not all detrimental grasses are invasive, and even those that are may spread against your will. Some are local, but seem well-beloved in another due to differences in climate, season length, or growing conditions. To find out which grasses are acutely harmful for your area and which ones to avoid, consult with your local cooperative extension service or view the U.S. Department of Agriculture's *Plant Database* at plants.usda.gov.

STAR LINEWORK PAYS OFF

A big thank you for "Stair Tread Giveaway" (Upkeep, March). I recently moved into a house with attic stairs that had a missing spring and broken pivot arm. I could not find either same on the stairs, and trying to match a spring is virtually impossible. After reading your article and doing some research online and by phone, I located the original manufacturer and model, had the parts shipped, and am happy to say that my attic stairs are now in full operation. Without TDSmagazines, I would still be stuck trying to find a solution.

JENNIFER SCHWARTZ, THOMAS W. LEE, AND BEN

punch list

- **Directory for Laurelin, "The Envelope Please," April:** For website address for the "Culinary Inspired" website: www.mountainsinspired.com
- **"A Tale of a Cities," April:** Call or e-mail the contact for the Great House 2006 House Tour in Denver should be www.greathouse.com

CLEVELAND HOUSE TOUR

Thank you very much for including the Forest Hill neighborhood in "16 of the Four Cities" (April), your article about regional home and garden tours. Since it appeared, we have received a number of calls from people living in the Cleveland area who were unaware of our secret treasures. Modern Italy here in East Cleveland/Cleveland Heights. We are very proud of our neighborhood and are always happy to "show off" whether in person or in print. Thanks for noticing this special place we are pleased to call home. <http://www.italyincleveland.com> (large sign all to attend one June 26, 2005 tour)

JERRY M. DELOE, PRESIDENT,
FOREST HILL, HEBREW RECONSTRUCTION SOCIETY
CLARE AND DELOE, OHIO

SPEND IT ON THE WINE

Rather than paying for a wine cooler like the one in "The \$25,000 Refrigerator" (On the Job, April), I built an insulated, climate-controlled 1,300-bottle cooler over just a few weekends, and I have no prior construction experience other than what I've gleaned from *The Old House*. For a few thousand dollars, anyone can buy wine racks and a cooling unit. Doing it yourself means plenty of money left over to buy wine to fill the cooler.

JOHN LEWIS, PRESIDENT, 1977

DISCLAIMER NOTE: *©2004, Cengage Learning*

See "The New York Times," *New York Times*, March 2003, page 58 for more information on this book. A little later.

DELUKE, RUTH-ANN

"Splendor in the Grass" (Lantern Press, April) using the prices of ornamental grasses but explored pathways of their invasive spread.



Road grip.
The most basic law of nature.



This rugged Subaru Outback® XT. Lower center of gravity. 200-horsepower Symmetrical All-Wheel Drive standard. Just put it where you want it.

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subaru.com

[FROM THIS OLD HOUSE]

A Flood of Talent

WHO WOULD HAVE GUESSED, when down to the basement for the laundry and found water doing this upstairs over across the eaves from the corner out toward the center of the room. We've had a couple of big rains lately and my first thought was that a downspout had come loose, letting the water come in through the foundation. I pulled up the damp eaves and it puffed as quickly as a duck's wings, and proved that a couple of the floorboards underneath, between the waterlogged sleepers that rise the finished floor off the concrete slab, steadily water bubbled up. Bubbling up it all looked like some kind of mucky, swimming, muddy soup, what with the roach and the wasps circling in. They roared and whined. Turns out I didn't have a basement. I had a swamp.

Right away I could see where a lot of water from a handful of spots the concrete floor had been poured so that it leaked up, letting crafted, more and not (and roach and wasps) percolate into the room. Later, while digging up, I noticed it was also possible that my little bowl/basement came from half-inch holes that had been poked through the slab in dashboard fashion.

I can't say why some contractor waiting for some previous owner to shovel a floor so shallow or decided to use a flat drill/point, but I can say that it wasn't the first time I'd killed all the well-dressed, job-wise men and women in the building trades had nearly moved from the endangered species reserve to their last crack in a black ink, rotten.

Have you had this feeling, too? Then our open recruitment lets, whether why they asked apprentices, men at night, to work at night, then on the last 70th anniversary project, hoping to pass along some of their skill and wisdom. It's also why The Old House is awarding a scholarship for the building arts. I'm donating it because I don't want a new pot in the same house I own. And I'll encourage you to do the same. Think of it as an investment, should you have a problem that warms on a rainy day.

That said, enough of the rain. Let's now think of winter days and of a good thick lawn, of a handsome dock perfect for entertaining friends and of summer evenings on a porch swing. Actually, let's not think; let's read, instead. Our money begins on page 83.

For more on how you can contribute to the The Old House scholarship for the building arts, write us at scholarship@theoldhouse.com.



Water, worms, and roots in the cellar? With your help, trade-college grads and job-tested apprentices will have the know-how and skill to keep them out.

Sam Clemens
SCOTT KIMBLEWICK
EDITOR

theoldhouse.com

JUNE 2012 The Old House 17

At Trane, we believe that you should be comfortable in your own home. So we've brought together an elite group of dealers dedicated to making you as comfortable as possible. These independent "Trane Comfort Specialists" will work with you to determine your heating, cooling and air filtration needs, then recommend the system that's right for you. It's customer service you can rely on, and it's all just a click away at Trane.com/Residential/DealerInfo.



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WILL MAKE IT A LOT MORE COMFORTABLE
AT YOUR ADDRESS.

AROUND THE HOUSE

IDEAS • TRENDS • TECHNOLOGY • TIPS • MONEY • TOOLS • GADGETS

High Voltage

Lightweight power
without the pesky cord

Imagine a circular saw so perfect, the most burly handy lady could use it with ease while the likeliest contractor could make 100 2x10s out of big 2x10s all day long. Now guess to the right.

Milwaukee Electric Tool's new saw is part of a sleeker line of cordless tools powered by a 28-volt battery that weighs less than the standard 18-volt. Thanks to the same lithium-ion technology fueling cell phones and iPods, these mighty batteries hold enough juice to run the big guns: reciprocating saws, hammer-drills and deck-cutting band saws. They offer up to twice the run time and allow the tools to go full bore from start to finish without any fade in power.

Milwaukee's V28 line offers other features the editors of *The Old House* haven't seen before, too. A strip of LED lights on the battery pack reveals how much power is left. Unlike your old sawgun, which gets sluggish when it's time to recharge its NiCad battery, the Milwaukee lever slider sparks and feels the same until the battery stops clunk in its tracks. The Milwaukee battery won't overheat and lose power, and it's not affected by cold weather either.

You'll pay about 50 percent more for a V28 than you would for traditional cordless counterparts and up to four times the price of corded models, but as an incentive to replace those dinosaurs at a quicker rate, Milwaukee offers a better deal on its combo kit. —Mark Powers



We cut the V28s to the test, running them with the circular saw cutting 1x6 joists with pinpoint accuracy and cutting through double-4x4 joists with the SawStop. It was just the welding the heavy-duty pins in inserts but without having to worry about 200 lbs. of weight.

For more information, visit www.milwaukee.com.

Power Generation



HORSEPOWER SAVVY

The latest line has it that the circular saw was invented in 1853 by one of their own, 29-year-old David H. Bailey. He reached the edge of a fish disk, attached it to a spinning wheel, and cut a sliver.



THE WEAP FACE

Chadwick's H. Bailey Jr. is a first experimental ball in a game, created in 1947 for Black & Decker, was little more than four ball sections of D-cell batteries held together with plastic wrap.



SCREWDRIVER SAVVY

When cordless drill drivers came out in the 1980s, screwdrivers, drill bits, and bit holders followed suit. Robert Pink, carpenter out the nails out sometimes and fit them into the cracks of their cordless drills.

TROUBLE IN THE TROPICS

Is Your Wood Legal?

When you stroll the home center's lumber aisle, saving money is likely more on your mind than saving the planet. But you can help by simply choosing wood that hasn't been illegally harvested from tropical rainforests, which are increasingly being devastated to feed global timber demands.

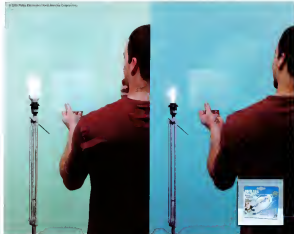
How do you know the difference between the good stuff and the bad? Some major retailers, including Lowe's Home Improvement and The Home Depot, have partnered with conservation groups to do some of the investigative work for you. Both companies ensure that all their wood is certified by a third party, such as the Forest Stewardship Council, which sets international standards for sustainable forest management, as being harvested in an environmentally responsible manner.

But that doesn't mean consumer doesn't find its way onto the shelves at your local lumberyard or hardware store—much of it coming from Indonesia, where the government has estimated that at least 70 percent of the timber is logged illegally. While many U.S. lumber companies have voluntarily stopped importing wood from that country, the Rainforest Action Network and Greenpeace recently accused one major distributor of "flooding the U.S. market" with wood bought from Indonesian mills that had histories of trafficking in illegal timber.

To avoid buying wood from imperiled forests, first look for a label from the Forest Stewardship Council, which certifies the wood was legally harvested. If the wood doesn't bear the FSC label, ask the salesperson where it came from. If the answer is Indonesia, the Congo Basin, or Brazil, it may have been imported illegally, says Brent Olson, a spokesman for the Rainforest Action Network. Next, check the wood for growth rings, which indicate seasonal growth cycles due to seasonal climate changes. Many species of tropical woods don't have growth rings because the weather in rainforests is constant year-round. And it all also tells, ask for lumber grown only in the U.S., where stricter logging laws are enforced. —Ashley Wondol



Thousands of acres of tropical rainforest are lost each day to illegal logging in the Brazilian Amazon, home to a third of the world's rainforests.



Maybe it's not your paint.
Maybe you need new lighting.

Philips Natural Light Plus. To see true color you need the right light. Philips Natural Light Plus gives you remarkable light that is vibrant and natural—so the color of your paint, fabric and other décor looks true. You've worked hard on your home. Bring out the beauty with light.

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[TIPS]

Add Vanilla to Paint

Does the smell of wet paint offend your nose? Add a tablespoon of vanilla extract to a gallon to help cut the odor. If the paint is white or ivory, use one drop of lemon extract per gallon.



[ORIGINS]

Before the spring-loaded tape measure came along, builders used wooden folding rules, which were slow to unfold, incapable of hooking to the end of a piece of lumber and moved out at 90 degrees, making measurements of long runs difficult.

Inventor John J. Fowler of New Haven, Connecticut, changed all that with his invention—a demountable cloth-belt hooked on a telescopic metal case that would slide into place when fully extended and easily reeled when not in use, courtesy of tightly wound springs.

Do you know when Fowler's tape measure debuted? Number 70,805—April 10, 1915.

A 1065 © 1995 © WTS © 1995
Turn to Origins page 25 for the answer.

PHILIPS LIGHTING: PHILIPS LIGHTING; VANILLA: JEFFREY M. HARRIS; MEASURING TAPE: JEFFREY M. HARRIS

WE HEART PALM

Coconut trees create a new flooring solution

Naturally dried burlap has long been an eco-friendly flooring alternative to forest-harvested lumber. Now, there's a more richly colored option with a striking grain pattern for the green set aside. Used as maple and dark as cherry, the exotic wood flooring known as Dunpalm is made from plantation-grown coconut palm trees imported mainly from Southeast Asia. In the past, farmers would discard taller palm trees once they'd reached about 80 years and stopped producing nuts. But San Francisco's Ayre Flooring and plywood company Smith & Pong saw an opportunity in the refuse. Since only the outer third of the one-foot-diameter tree is hard enough for use, the company layers and laminates together three sheets of palm to form a 3-inch board. Not only does the flooring look and feel like solid wood, the top layer is thick enough to withstand up to five sandings, which should make any savvy homeowner say, "How 'bout them coconuts!" —Chris Welch/GQ.com

Dunpalm flooring sells for \$899 a square foot and is available both unfinished and prefinished. For more information, go to dunpalm.com.

[SAFE HOUSE]

Compromised Cords

You see it every year: A temperature alert, air conditioner logs their refrigerator window ledge battle. And for the crash of Fourth of July traffic, overheating a mouse breath mints the paper demands from these high-wattage appliances are put too much stress on every extension cord. In 2004 alone, the U.S. Consumer Product Safety Commission estimated that improper use of extension cords caused about 500 fire-related visits to emergency rooms. To be safe, Underwriters Laboratory (the independent testing organization recommends using 10-gauge extension cords, thicker 16- or 18-gauge cords like the ones you get at the supermarket can become overloaded and spark fires.

Additional safety protection is on the way: A/C conditioner manufacturers agreed not to turn on the plug of all new units will either include circuit interrupters (GFCIs) or leakage current detectors (sensors) (LCCs), both of which sense the arcs to shut down in the event of a electrical or short circuit. So stay cool and breathe easier. —C.J. Hughes



PHOTO: JAMES HAMILTON FOR GETTY IMAGES

10 USES

BUNGEE CORD

During World War II, U.S. troops used heavy-duty bungee cords to parachute lands into combat. Decades later, their veterans used them to go on from fall bridges. Their families also used them, who typically use the smaller, tubular sheet rubber ropes to tie down lumber in the back of the pickup. You can also use them to:

- 1 Handle extension cords to hook them above your tool bench.
- 2 Lash lumber together to keep it from spilling out of your arms when carrying it.
- 3 Hold a picture frame together when gluing it in less of a hot clamp.
- 4 Secure garage-car lock against thieves.
- 5 Store drop-cloths by winding rolls together.
- 6 Secure utility-cabinet doors by coiling the cord front and handle to the other.
- 7 Stabilize a chair's newly slant cross-brace by wrapping the cord around all four legs.
- 8 Secure the lid of your toolbox if the latch breaks.
- 9 Train climbing plants such as bougainvillea to grow on a trellis not the fence by tying them back.
- 10 Patten fans over your patio furniture in the event of a summer storm. —C.J. Hughes

Choose bungees with strong braids and use inside cars and the only and make sure not to stretch the cords. Even if their recommended bungee is they don't snap back at you. When in doubt, wear two bungees.



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Pella® Designer Joints™
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The sealant between the glass and your Pella® window frame that allows you to change your window's position without the need of a single pane.



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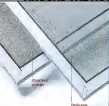


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Anti-lock, of course. Bigger rotors.
Bigger calipers. On your mark.
Get set. Stop. Fordvehicles.com



THE NEXT SUPER DUTY



TruScene

NO-SEE-UM SCREENS

New metal mesh blocks bugs, not views

Your insect screens shouldn't be more obnoxious than the bugs it's protecting you from. Enter TruScene stainless steel screens with a nearly invisible mesh, from Andersen Windows. TruScene's holes are 40 percent smaller than the typical screen's, and though that means more wire, the mesh is finer and less an irritant to the eye, so those minuscule holes will keep even the tiniest bugs at bay and won't impede your view of the backyard. Another benefit is their low profile from the street, which should make aesthetically minded homeowners happy. That's more than we can say for the flimsiest screens that hole one or the nose.

—Christopher D'Geroni

TruScene screens are available only for casement windows, but Andersen expects to release double-hung versions by early fall. Your typical 30-by-48-inch casement screen will run about \$55. For more information, visit andersonwindows.com.

Outdoor Tables That Cook

Simple outdoor kitchens for your old house

Just in time for barbecue season, a new cadre of grill tables with built-in grills brings cooking and dining outdoors. Now you can flame-broil tasty burgers, sear a meat steak, or sit around an open fire toasting marshmallows from a slide in your own backyard.

For the budget-conscious home aficionado, check out Chair Boat's Coffee Table Fire Bowl, below, with a wood-burning pit. Its puny \$200 price belies its stylish looks, and its angle-tiled edge provides plenty of room for a few drinks and things. Find it at ebay.com.

If you're after a more refined dining experience, check out the Ultimate Underneath Table, a cast-iron table with a fire pit and removable grate in the center for roasting seafood. The table and four matching chairs are available at theultimateunderneath.com for \$1,234.

Another for your own backyard: Boshara Cook N-Dine's Japanese-inspired design combines a brick table with an electric stainless steel cooking surface in the middle for \$3,335. See cook-n-dine-usa.com for dealers.

—Ashley Kordale



QUESTION ANSWERED

- Q** **1996.** The concept, though, didn't catch on with the public for another 10 years, when Stanley Works introduced a steel tape designed by Hans Plesniel. Tape measure manufacturers have since gone gung-ho, adding Mylar coatings, impact-resistant casings, voice recorders, digital readouts, laser pointers, and ergonomic grips, all in the name of making the tool easier to use, longer lasting, multifunctional, and even convenient to hold.

Photo: Peter Lindbergh; Photo: Peter Lindbergh; Photo: Peter Lindbergh

Where did they hide all the speakers?



No other speakers could do this: more channels, you see, is what a small home improvement store is all about. That's the beauty of the new Yamaha Digital Sound Processor. It delivers rich multi-channel surround sound from one elegant component and is designed to fit snugly with a full-screen TV display. Simply put, it's a home theater. Enhance your viewing experience. And bring the conversation home.

There's got to be a hole in it. For more information and a demonstration at a dealer near you, visit yamahausa.com.

YAMAHA

What Dads Really Want

In the 33 years since Father's Day became a national holiday, dads have traveled their love-sons for rockies, seeds, and man-made golf tees and then stashed them in the back of a closet. To avoid yet another disappointment, we asked the dads at The Old Man's what gifts top their wish lists. We suspect you might like such presents yourself. If so, we humbly suggest choosing a gift suitable list, such as leaving these pages out in a conspicuous place—say, on the glow. —Amy R. Nugent

Bosch 30-in. dual-bevel slide miter saw with laser backing system
boschtools.com, \$599

I don't have a lot of space, and I don't want a big blade. The sliding option lets me safely cut wide boards as opposed to just inserting something and trim.
—MARK POWELL, TOP TECHNICAL EDITOR



Lie-Nielsen low-angle block plane
lien-nielsen.com, \$45
I've been using a new-type block plane for years, but there's something about holding a really well-made tool like this. It's heavy, so you really mean you know that you're capable of doing something better.
—TIMOTHY BARNES, TOP BUILDING AND TECHNOLOGY EDITOR



Festool's 125 3-inch dual-rotation orbital sander
festool.com, \$325
This tool has a great ergonomic design, and if you hook it up to a vacuum, it's virtually dust free. It sands, buffs, polishes, and even grinds with less effort and less noise.
—TOM LUGA, TOP GENERAL CONTRACTOR

Ridgid Viper Cordless Pro Series 1005 with three jaw attachments
ridgid.com, \$479
The jaws on this clamping tool clamp down on 100 lbs., making a water-tight seal around copper pipe without welding. The new cordless version is lightweight and easy enough to get into tight places.
—FRANK WICK, TOP PLUMBING AND HEATING EXPERT



Canon Rebel EOS 3000 XT with portable printer
mellotron.com, \$915 and \$149
Digital photography has become very important to my business. I use show pictures to people instantly, share the images, and with a small portable printer I can produce high-quality prints at the job site.
—ROGER CEEK, TOP LANDSCAPE CONTRACTOR



Genetti Wade's chisel set with a leather tool roll
genettiwade.com, \$245
This would be a great upgrade to the set of chisels I currently have in my carpenter's toolbox for those fine-finish assembly jobs.
—NORM JAGGER, TOP MAJOR CARPENTER



Silky Hayate 420, 12-foot extension pole saw
silkyusa.com, \$349

Though better than breaking my back filling them a tree, when a professional arborist every time I need to trim hard to reach branches is far less expensive. The super-sharp saw with its telescoping aluminum pole will let me safely do the work myself. Now all I need is a hard hat.
—JOHN SPURD, TOP LANDSCAPE ART DIRECTION



Senco's PC 1010, portable air compressor
senco.com, \$170
It's quiet, small, and lightweight. I'm about to do the trim work in my house and it would be as much easier to get around from room to room with this 20-pound compressor versus the 50-pound version I use for flooring.
—KEVIN O'CONNOR, TOP ROOFER



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Introducing the Accent™ door, a new way to look at the door. Accent™, a unique collection of decorative door hardware is matching, stylish, durable and finished. Price perfect for ensuring quality and timeless beauty. All backed by a lifetime Schlage® warranty.

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SCHLAGE
ACCENTS



Farm Fresh

A tiny rural kitchen expands with its country character intact

WHEN IT COMES TIME TO TACKLE a major project, who doesn't leave the hardest part all the rest? After seven years of living in an 1880s farmhouse in the nearby San Francisco area of Petaluma—known back when as “The World’s Egg Basket”—Kerry and Don Davison finally faced up to a kitchen overhaul. The Davisons had bought the farmhouse on five overgrown acres from a widow who had lived there since 1917. The kitchen, they figured, was probably last touched in the 1940s, when the white enamel Occidental range was installed. In order to design an addition that would allow for an expanded cooking and eating space, Kerry called on her architect son, Colleen Mahoney. The vision was to keep as much of the kitchen’s original character as possible while pushing out walls to include a larger dining area, a computer desk, room for the refrigerator that was washed in the mudroom, and plenty of custom storage cabinets given an aged look with a distressed paint finish. Kitchens included the existing 10-foot ceiling, for flyers (which were doctored under vinyl), double hung windows, creating entrances to the dining room and mudroom, and, of course, the old gas range that had become part of the family. “It belongs in this house,” says Kerry.

With a little extra over the sink, painted but panel cabinets, and an island that resembles a farm table, the renovated kitchen has a vintage look that blends with the rest of the World House.

BY SALLIE BRADY PHOTOGRAPHS BY MATTHEW HILLMAN

The Plan

Turn a cramped prewar kitchen into a comfortable space for eating and entertaining.



The homeowners grew so attached to the Occidentia rings in their original kitchen, LEFT, they wanted to preserve it in the renovated space. ABOVE: The new island is painted to match the rest of the workspace and is finished top with a clear coat of polyurethane.

WHAT THEY DID

- 1 Doubled the square footage.** By bumping out for a single-story addition in the back of the house, the country kitchen went from 13 by 12 feet to 12 by 25.
- 2 Place rooms for the fridge and other appliances.** A previous renovation had converted an adjacent back porch into a mudroom, but it still held the refrigerator and some storage cupboards. Relocating the kitchen island room for the fridge, plus a new wall oven and dishwasher.
- 3 Achieved more work surfaces.** Counter space in the old kitchen was so limited, says Kerry, practically all you had to work on was the "dormboard." New counters run the length of the range wall, and a new 5 by 6-foot island provides additional food prep space. The countertop to the right of the sink was also revised to a depth of 20 inches.
- 4 Reconfigured the windows.** To make the range the focal point of the room, it was centered on the long wall and flanked by two new double-hung windows. Two more windows were installed side-by-side on the back wall to brighten the eating area.

(Design inspiration on page 78)

BEFORE



AFTER



PHOTO: JAMES HARRIS



Photo: Roger Bond/Robert Adamsky Architects; Photo: Robert Adamsky Architects; Photo: Robert Adamsky Architects

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BUTTONS AND CAPSULES ARE LOCATED ON THE

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Tread on Me

Low-grade, multiple synchronous plaques from the subcarotid or common carotid artery

A sheep-chore in her Maine backyard led homeowner Barbara Feder-Beth to devise a chaotic solution—she grew more plants with woolly and craggy forms. "I didn't want to have to mow again!" she says.

A DOTTED LINE OF FLAGSTONES OR A COVINGED RIBBON of gravel may be an invitation to get out and enjoy the garden, but too often it's just a green path covered by a ringed wall that dirt. There are, however, plants that withstand scorching nearly as well as *Amaranth* and can stand hard-as-pine elements and their otherwise lush surroundings: tough, low-growing, creeping perennials that will take root along a cypress "P" for them second-pine pavers, at the base of the mailbox, next to the driveway, or around the edge of a pond," says Tracy Hightower, a horticulturist and the founder of Seedless (seedless.com), a grower of creeping perennials. Some are even tough enough to stand in for paved surfaces. "Blue meadowrue thrives in your patio flow and just not furniture," says Hightower. "Or plant the car on a carpet of miniature blue harem."

There are plants suitable for moderate to light foot traffic (twice a day to twice a week trappings) and even heavy foot traffic (three or more times a day). While most grow just grasshopper high, they may spread anywhere from 2 to 12 inches a year, so much the plant to the space it fills. Some variegates, such as ornamental dipens, have denses of culms that flower pink, white, or yellow, come with an added bonus, releasing a scent when stepped on.

Crooking grasses are generally like well-dressed soil and a 20-20-20 liquid fertilizer during growing season. Stems, such as sugarcane and bamboo, are propagated by dividing the root ball. Others multiply every time they're stripped on and a leaf node breaks off, takes root in the soil.

To help green up your gray (or ground-down) spaces, check out our list of recommendations on page 40.



Heavy Foot Traffic

FULL SUN

Blue Star Creeper (*Desfontainia*)
Rapid-spreading perennial with blue flowers. Works well around rock decks, patios, and in rock gardens.

Country Park (*Stachys pedunculata*) or **Unwind** (*Stachys*)
Tough, light green-leaved creeper with white flowers. Good for patios and walkways.

Creeper Thyme (*Thymus praecox* 'Elfin')
Tightly matted gray-green foliage forming tufts of pink flowers. Drought-tolerant, good between flagstones.

Green Carpet or **Impatiens** (*Impatiens*)
Indestructible, low-growing groundcover with white flowers. Turns red in winter. Excellent in walkways.

Miniature Thyme (*Thymus serpyllifolius* 'Elfin')
Smaller variety of creeping thyme with gray-green foliage, pink blooms. Tolerant to drought and shade.

Resistant (*Phlox subulata*)
Bleeding groundcover mat of dense, green-gray leaves, yellow flowers. Excellent for dry problem areas and pathways.

Woody Thyme (*Thymus serpyllifolius*)
Hard-working, ornamental groundcover with fuzzy gray-green leaves and pink blooms, clusters as it spreads. Excellent on flagstones and pathways.

PARTIAL/FULL SHADE

Parakee Grass (*Parakee*)
Groundcover with white flowers. Turns red in winter. Excellent in walkways.

For more gardening ideas:
talskitchen.com/john

Moderate/Light Foot Traffic

FULL SUN

Devil's Claw (*Devil's Claw*)
Compact, low-growing plant with dark green leaves, yellow flowers.

Irish Moss (*Cladonia*)
Moss-like groundcover that creates a mat of wet and dry, white flowers. Flourishes between stones and in rock gardens.

Miniature Daisy (*Helianthus*)
Compact, low-growing daisy with tiny white flowers. Good between paving stones or in border areas.

Pink Pung Bean (*Antennaria dioica*)
Creeping mat of fine, gray leaves. Fuzzy pink blooms. Good for rock gardens and patios.

Spicy Orange Thyme (*Thymus* x *Spicy Orange*)
An airy, ornamental with needle-like leaves, orange, fragrant pink flowers. Attracts butterflies.

Maroon (*Stachys*)
Compact, creeping groundcover with deep purple flowers. A favorite for rock gardens.

White Haven (*Phlox subulata*)
Low-growing mat of bright green leaves, white flowers. Ideal for rock gardens and between pavers.

PARTIAL/FULL SHADE

Baby Tears (*Soleirolia selene*)
Tender mat of dense, green-and-white leaves, pink flowers.

Creeping Jenny or **Moneywort** (*Lysichiton*)
Low-growing, fast-spreading, bright green leaves, yellow flowers.

Creeping Spineless (*Vernonia*)
Tough creeper with flowers. Works well between pavers or in woodland settings.

Miniature Bush (*Brodiaea*)
Low-growing, tiny, greenish plants. May not produce one. Flourishes around ponds.

Miniature White (*Veronica*)
Tender mat of dense, green-and-white leaves, white flowers. Works well between pavers or in woodland settings.

Parakee Grass (*Parakee*)
Groundcover with white flowers. Turns red in winter. Excellent in walkways.

Resistant (*Phlox subulata*)
Bleeding groundcover mat of dense, green-gray leaves, yellow flowers. Excellent for dry problem areas and pathways.

Photo: The Garden of Eatin' & Drink' & The Garden of Eatin' & Drink'



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FROM TOP

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FLUSH-ON LEFT
Ornate, 10-by-12-inch square panel

FLUSH-ON RIGHT
Ornate, 10-by-12-inch square panel

STAMPED LEFT
Ornate, 10-by-12-inch square panel

STAMPED RIGHT
Ornate, 10-by-12-inch square panel

VICTORIAN
Ornate, 10-by-12-inch square panel



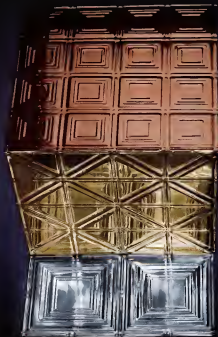
Pressed to Impress

A century old, stamped-tin ceiling panels are still winning metals

BY C.J. HUBBES PHOTOGRAPHS BY FLAMEN PERNOV

IN THE YEARS AFTER THE CIVIL WAR, when steel was cheap to produce and easy to come by, it quickly became a favorite material for ceilings. The pressed-metal panels—dubbed “tin” for their resemblance to tin roofing—provided a decorative look for less than the cost of wood or ornamental plaster. Plus they were lightweight, simple to install, and added a measure of fire protection to the wood-frame buildings of the day.

Today, tin ceilings haven't lost any of their appeal. The detailed patterns, stamped out to deep relief by heavy presses, come in a wide variety of shapes and sizes, including large and small field panels, borders, moldings, and corner moldings. And they remain as practical as they are artistic—useful for hiding damaged ceilings, as backdrops, or even on walls in wallpaper—and easy on the wallet, costing as little as \$5 for an unframed 1-by-2-foot panel. Some designs are new, and all of them look sharp.



To learn how
an Ivy and
New York
for example,
turn to
Wicksman,
p. 121

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PHOTOGRAPHY

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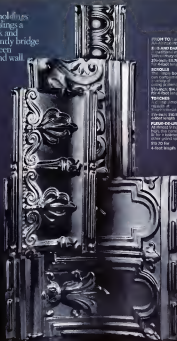


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 ceiling or wall
 moldings
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TRICHES
 1-1/2 inch high
 1/2 inch wide
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 1/2 inch wide
200-000-0000
 for 4-foot length
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 At 1/2 inch high
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HOUSE CALLS

SKYLIGHTS

The skylight skylight does double duty: it lets in light to brighten a room and lets out heat and moisture from the ceiling and bathroom floor. Other windows in the room.



Take It From the Top

An architect's bright ideas for using skylights

STORY AND ILLUSTRATIONS BY GUD DICKINSON

WHETHER you want to let your house see the world, but they're not the best way to bring light into your house. That's because, except for a few fleeting moments at sunrise and sunset, the sun is a reflected—which means the best way to capture light is from above. And the most effective method for doing that is with skylights.

Like so many building products, skylights have graduated to the "luxury" category, available in a wide variety of shapes and sizes, with all sorts of options. The most basic division is between fixed and operable skylights; the latter, while more expensive, add comfort by giving you, too, an escape route out of the house. There are also pyramid skylights, copper-clad skylights, skylights that switch from clear glass to tinted, and ones that close automatically at the first hint of rain. But whatever type you choose, here are some basic guidelines to follow if you want to get the maximum benefit from a

Gud Dickinson has been a freelance architect for 25 years and lives in Madison, Connecticut. His wife, book, "The House You Build" Making Your House Choices to Get the Most Out of It, has just been published.

Photo: iStockphoto.com

June 2005 The Old House 57



CENTERED SKYLIGHT
LEAVES MOST OF THE
ROOM IN THE DARK



SKYLIGHTS THAT LOSE
WALLS TO FORM THEIR
WELLS ALLOW LIGHT TO
REFLECT AND BRIGHTEN
MORE OF THE SPACE

• PLACEMENT WITHIN THE ROOM

How well a skylight succeeds at brightening a room depends on where it's placed. Typically, skylights are centered in the ceiling, but "flooding" a skylight in the middle of the room actually minimizes the amount of light it brings in. Light simply spills straight down to the floor, and little of it reaches the rest of the space. But if you let the wall form the back or side of the skylight well—or both—light will bounce off the wall and reach farther into the room (see illustration, left).

It's best if you sit the skylight against the back wall of the room, opposite any windows. This means out the light coming into the room, bouncing down on glass and ceiling, it never ceases to see into and out of the space.

STANDARD FRAMED OPENINGS



SPRAYED OPENINGS



SHAPE OF THE SKYLIGHT WELL

In theory, the better you set your skylight, the more the sunlight disperses and the greater its impact on the space below. But if the skylight is set into a deep shaft, that defeats the purpose. Light gets trapped in the shaft and doesn't project into the room. So it's a good idea to slope, or angle, the sides of a skylight well to maximize its effectiveness. If you have a cathedral ceiling, you can accomplish the same thing by spraying the framed opening for the skylight (see illustration, right).

Controlling Heat, and Other Considerations

Cutting a hole in the roof to let in light also invites in heat and, all too often, leaks. Here are ways to avoid some of the common problems associated with skylights.

BUILD IN SHADE Light is great, except when you don't want it. Like early on a Saturday morning. If you don't plan to wake up with the sun, make sure your skylight frame has shades built in, along with all manufacturers offer this option. Shade shades are motorized, offer up and down controls.

KEEP OUT RAIN Commercial skylights are great for ventilation, but you don't want one open in a rainstorm. Skylights that are too high to be closed manually come with a long wire that runs a cable to close the window. Manual skylights work at the touch of a switch for auto-

matically more money. You can get an automatic closing system, keyed to a sensor that can tell if it's raining and close the window for you.

SEAL AGAINST LEAKS While skylights are much less leak-prone than they used to be, you still need to take some extra waterproofing precautions. To avoid leaks, skylights should be set as high as possible in a roof and away from any other roof planes. In roofs with less than 15 to 20 degrees of pitch (about roofers call a 4-in-12 pitch, meaning that the roof rises 4 inches for every 12 inches it runs) the skylight will need to have a gasket—or extension of the skylight

flange that extends it above the roof plane so it can be better sealed against rain, snow, and ice. If you are joining two or more skylights together, make sure they are far enough apart to allow for proper flashing, or use prefabricated flashing kits designed for combined skylights.

PROTECT YOUR FURNITURE The downside of having so much light is that it can make many fabrics and painted surfaces fade. You can get skylights with UV-inhibiting glass, but it's a good idea to think in advance about placement of furniture, paintings, and other objects that would be hurt by too much sunlight.

(Continued on page 37)

GRAB LIFE BY THE HORNS



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Night Light

Skylights can also illuminate your home at night, by adding flood-lighting, such as sconces or lantern-style lights. While the skylight well, you can take advantage of the same rule that applies to natural light: Light will bounce off the sides of the skylight well and spread throughout the room.

Skylights have been around since colonial times, but dormers caught on because they were easier to weatherproof.



PLACEMENT WITHIN THE HOUSE

The farther away skylights are from windows on the perimeter of the house, the more effective they will be. This applies to improving ventilation as well as increasing light. One particularly good spot is at the top of a stairwell (see illustration, above). From there, light can spill down through the center of the house, brightening each of the rooms.

In fact, any double-height space will maximize a skylight's impact. In many newly built houses, for example, there are large, high-ceilinged spaces for family rooms, living rooms, and entries. Strategically placed skylights, set toward the inside of the house and as close to the roof peak as possible, maximize the sense of openness and light. ■

For more on skylights, visit house.com and type "skylight" in the search bar.

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Getting to the Roots of the Problem

Weeds don't stand a chance when you attack them with these tools

BY JASON CARPENTER
PHOTOGRAPHS BY MARK WEISS

ALTHOUGH WEEDING LAYS A MAN'S pride and joy. Used many weeds at the point of cleaver start sticking their heads up all over the place, like the gophers in Gullyhead. So you go on a mission to eradicate the soil一寸寸, along with my other fast-spreading, sunlight-hogging, nutrient-sucking plants that clutter your poor Kentucky longstem.

There are plenty of ways to deal with weeds, including those throwers that suck them, Chinese grass that eat them, polyethylene films that smother them, and high-pressure water cannons that drown them. But the most tried-and-true method is elbow grease with the help of traditional hand weeders, which cultivate the soil as they remove your floor into grass.

There's a hand tool for every weed seed, whether it's removing them from cracks in your walkway or extracting them from between the more beloved plants in your flower bed. Weeders come short-handled, long-handled, and with a variety of head shapes that attack the problem from different angles. On the following pages, you'll find tools that will have you ripping out weeds instead of your hair.

CHUCK WEEDER

A one-third-point blade is designed to push weeds from cracks and corners of paths and walkways. The head is attached to a short handle or long pole. *By Jason Carpenter*



The hoe was the first distinctly agricultural tool. Early hoe blades were made from animal bones, antlers, or seashells.

Hand Weeders



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Some farmers use Chinese weeder geese to keep fields clear. Four geese can manage an acre of land.

For more on garden hand tools: www.tractorhouse.com and search for "weeder"



The powerfully re-engineered John Deere Gator™ Traditional Series utility vehicle is so versatile you'll wonder there you ever got along without it. Its low cargo base makes it easier to load more rock and haul more firewood. And its all-new available rear suspension lets you take curvy turns that go until now you're utterly delirious. Now, between you and your Gator™ there's nothing out there you can't do. Test drive one for yourself at your local John Deere dealer today.

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Long-Handled Weeders

SCISSOR FLUX

A garden multitool, it's a combination hoe and pruner. Its 4-inch-wide scissorblade that chops weeds before the surface root takes. Unweeded plants many in, you pull. The sharp point can dig out tiny weeds between plants. \$25. hax-flux.com

FLUX THROUGH ROSE

A narrow, sharpened blade with finer blades ensures I through dirt in tight planting beds, while planting spreads as you pull. Blade is 4.5 inches wide. \$26. garden.com

WEED

The twisted French stainless steel blade cuts weeds just below the surface on both the push and pull strokes to maximize your weeding efforts. \$49. breville.com

WEED HOOK

Cutting through dense soil and stubborn weeds is the specialty of this half moon-shaped, tempered steel blade on a 3-foot handle. \$27. vix-tool.com

SCISSOR

The notched head can be plunged into moist soil to pull weeds that have set their roots. Only a 1-inch wide, 8-inch end in light space. \$20. green.com

DIAMOND SHUFFLE HEE

Twisted steel (1/2" of 1/2" diamond-shaped) hand this weeder is designed to be "shuffled" through the soil horizontally, stirring all weeds in its path. \$22. breville.com

WEED BANDIT

A twisted-edge stainless steel blade makes quick work of dense weeds. It turns the soil. Comes in three blade widths. \$49. hax-flux.com

CLASSIC GARDEN HEE

The classic of garden tools has multiple uses including weeding, digging, and cultivating. This one has a carbon-steel blade in a beveled edge for cutting through soil. \$18. flora.com

{ *Two places* } destructive pests / don't want (to be)

when you / break out the

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or
(Below) It.

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Rust on the Run

Outdoor metal takes a beating from the weather. Here's how to fight back

BY THOMAS J. BAKER
PHOTOGRAPHS BY
RICHARD LEO JOHNSON



FOR OUR OUTDOORS, iron ruled to first. Cast or wrought, the malleable metal is strong, rustproof, doesn't bend or rot, and is impervious to insects. No wonder it's long been a favorite for railings, fences, planters, benches, and gates, to name just a few. There's only one problem: When exposed to moisture, iron—along with its close cousin steel—rusts. Given enough time, every bit of the hard metal will dissolve into red dust.

The fight against corrosion never ends, but it can at least be reduced to an occasional skirmish. One victim of the rust was a Bob Bernard, a blacksmith in Savannah, Georgia, who keeps busy making the ornamental iron work that shows up in his city. He has no end of customers. "The weather is saturated with salt and humidity," he says. "On some days, you can literally watch the iron burn on bare metal."

On the next page, Bernard shows how to get an old wrought-iron gate looking like new, a project that took just four hours over two days. To keep it fresh, go back once a year to touch up any flings with some primer and paint. Then, every five years, he says, sand it and put on a fresh coat. "Keep the staining intact, and the iron will last indefinitely."



FRESH FINISH IN 5 STEPS

1. SCRAPE Rub a steel-bristled wire brush over all metal surfaces to get rid of loose paint, flaking metal, and powdery rust.

2. FILE On flat surfaces, use a flat hand-and-planet file or a scraper to grind rough patches of rust down to bare metal. On rounded surfaces, 80-grit sandpaper does the trick. Wipe down the surface with mineral spirits.

3. NEUTRALIZE Spray all exposed metal with phosphoric acid, which converts any rust you've missed or can't reach into a black inert crust of iron phosphate. Bernard uses a product called Oxpho. Be sure to protect your eyes, skin, and lungs from the spray.

4. PRIME Wait a day for the acid to penetrate and react fully with any rust then brush away any loose flakes. Apply a thick base coat of oil-based metal primer using a disposable bristle brush (see "Shop" below).

5. PAINT Let the primer dry before putting on the finish coat with a new chip brush. For maximum durability, choose an oil-based metal paint, preferably one made by the same company. Black is the traditional color for ironwork, a glossy sheen lasts longer than a flat one.

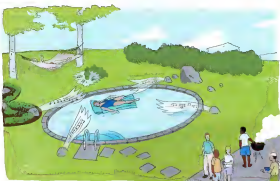


For step-by-step instructions on getting an iron gate ready to look like new, see page 131.

For information on choosing metal patio furniture, visit houzz.com and search for "outdoor furniture."

[illegible]

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Further from the house, you can place rock speakers every 10 to 20 feet in the landscape or conceal them under natural cover like shrubs or flower beds.

benches. Although they're made to be left on your own, outdoor speakers will last longer and look better if installed in a sheltered area, such as under the eaves for box-type speakers or, in the case of rock and pinners, protected by natural cover like trees and bushes.

PLANNING YOUR SOUNDSCAPE

The first thing to consider when installing an outdoor audio system is simply, How big an area do you want to fill with sound? If you only plan to listen on the deck, for example, two box speakers mounted 6 to 10 feet up on the side of the house, angled down toward the middle of the deck, might be enough. But if you have a deck with an adjacent pool or recreation area for both, you'll need speakers in multiple locations. As a rule, one pair of speakers can cover 200 to 400 square feet. Alternate between left and right channels throughout the area, so wherever you are, you'll always be listening in stereo.

Think about where on the property people will be gathering, and plan for speakers in close proximity to the audience. Otherwise, you'll have to crank the volume too high, making directional sound and the use of your neighbors. To avoid sound traveling where it isn't wanted, try to direct speakers away from neighboring properties whenever possible.

GETTING THE BEST ACoustics

The next question to ask yourself is, What kind of listening do you plan to do? The quality of the experience you seek—nothing but background music, hard-driving rock, or symphonies as the lawn—will determine what type of speakers and how much power you need.

Most outdoor speakers are "two-way," meaning they consist of a tweeter, which covers the high-frequency sound spectrum, and the woofer, which provides the bass and mid-range sounds. There are also subwoofers designed as rocks for waterlilies who want to pump up the bass, and omnidirectional speakers that can be buried in the ground and project sound 360 degrees, say from the middle of a flower bed to the areas on either side.

Keep in mind that an outdoor system can't take advantage of the reflective surfaces that make indoor speakers more efficient. "The acoustic realities of an outdoor environment are dramatically different," says Tony Seratano, director of sales and engineering for Denver speaker manufacturer Rocktronics. "The floor, the walls, the ceiling—all contribute to the fidelity of the speaker. Outside, you don't get that." And you do get ambient noise from passing cars, chirping crickets, and kids at play.

So you need speakers with enough oomph to overcome those natural obstacles, as well as an amplifier with

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sufficient wiring to power them. The most common mistake people make with outdoor systems is underpowering them, Sotomoro says, which can lead to distorted sound from overworking the amp or, worse, blown speakers. Most outdoor speakers require at least 40 watts per channel, so make sure your receiver can deliver at least that amount. If your area is large, try to spread the load among multiple speakers. "Use as many speakers as you can," says Scott Tracy. "It's better to use multiple speakers solidly than just two speakers trying too hard."

INSTALLATION AND WIRING

What's true of outdoor speakers is equally true of the wiring that connects them—it must be rugged enough to carry sufficient power over long distances while it withstands the harshest of elements year-round. Most

professionals use at minimum 16-gauge "direct-burial" cable, which is designed to go right into the ground, and bury it at least 12 inches deep. (The plastic casing of indoor speaker wire isn't thick enough to protect the copper wires from moisture damage.) Some contractors require all outdoor wiring to be run through conduits, double-check the code in your area.

You don't want to have to dig up the wire to relocate speakers once your system is installed, so before burying the cable, test out the speakers to see how they sound in the locations you have planned.

CONTROLLING IT FROM YOUR LOUNGE CHAIR

Outdoor speakers can be integrated into an existing home-audio control system, or you can mount a separate all-weather control panel on the side of the house or out by the pool. If you're peggy-banking on your indoor sound system, you'll need to invest in a zone selector with volume controls that allow you to set sound levels for indoors and outdoors separately, you don't want to blare out the soundtracks of people in the living room while your buddies are having an all-gamer competition on the lawn.

Some installers recommend a separate receiver just for the outdoor setup. "It's a good way to go, because it will reduce the load on the amplifier inside," says Alex Polnick, president of Video Installation Plus in Haverdale, NY. "You can get a receiver for a couple hundred dollars."

Now that you've got your outdoor audio base covered, the only challenge remaining is what you're going to listen to. Beethoven, the beachball game, or the Beach Boys for the pool party? ■

SOUND DECISIONS

Four ways to get music in the great outdoors

CLIP OFF THE P-SQUAD
These 12-watt "rock" speakers go long into the landscape. 16 in. wide by 13 in. deep by 17½ in. high. \$175 a pair, rockstar.com



PLANTER SPEAKER
It's not only a 120-watt speaker, it's also a home for the plants. Ideal for patios and decks. 30 in. wide by 30 in. deep by 21 in. high. \$180 a pair, planterspeakers.com

SHIM-DIRECTIONAL
A 2x3 design opening projects the sound in all directions from this 100-watt speaker. Can be bolted on to 7 inches above 18 in. around by 18½ in. High. \$160 a pair, marine.com



BOX SPEAKER
Bored by musicbox on the side of a house: these all-weather 100-watt speakers pump out 125 watts of sound. 7½ in. wide by 2½ in. deep by 12 in. high. \$40 a pair, mlausa.com

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- Reach branches up to 14 feet high
- 1" blade cuts branches up to 6" in diameter
- Easily disassembles for storage and transport

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- No need for ladders or extension cords
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- Easily disassembles for storage and transport

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- ATS Automatic Feed System® advances line automatically - No bumping required!
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- Also available in 12V model \$129.99

C 18-VOLT CORDLESS HARD SURFACE SWEEPER **"69."**

- Easily removes dirt and grass clippings from walkways, driveways, decks and more
- Lightweight and comfortable to use
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D 18-VOLT 22" CORDLESS **"79."** DUAL-ACTION HEDGE HOG® HEDGE TRIMMER

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Photo: Rex Inc.

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• Perfect for cutting grass, weeds,
and edging
• 100% power tool with 100% duty cycle
• 100% power tool with 100% duty cycle
• 100% power tool with 100% duty cycle



handrails

Minnesota's homeowner Laverne Flint needed handrails in her bedroom, but was puzzled by how to put them in. He emailed Ask This Old House, and Tom Silva showed up to lend his expert hand.



irrigation

Outside of Los Angeles, Roger Cook and specialist Bob Gelbreth help homeowner Sherry Steele restore water to her slice of the high desert.

sinks

Minnesota homeowner Anne McCandless tried to fix her rusty bathroom sink stopper with a garbage stick. Ratched's Anthony provided a more professional solution.



closets

California couple Brandon and Marlene Gauthier's stalling closet doors were stuck. They emailed Ask This Old House, and before long Tom Silva had them back on track.



what's your problem?

Tune in and watch The New This Old House Hour, Thursday nights at 8:00 p.m. ET to see if we have the answer you're looking for.



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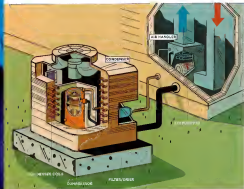


PBS

Be more

HOW IT WORKS

CENTRAL AIR-CONDITIONING



WHAT IT IS

A two-part (aka "split") system for cooling indoor air that consists of a condenser outside the house and an evaporator inside the house.

HOW IT WORKS

Refrigerant circulates in a closed loop between the evaporator and the condenser, creating heat from the house and carrying it outside a fan that blows it away. For a look at the refrigeration cycle, see "The Inside Scoop" (page 76).

WHAT TO LOOK FOR

SEER 15 or higher: SEER (seasonal energy efficiency ratio) is the rated per gallon for a car. The higher the SEER rating, the better the system efficiency and the lower your electric bills. By law, the minimum SEER is 10; most year it will be 15.

SAFER refrigerant

Not only is it safe for the ozone layer, the compressors that use it are quieter than those using other refrigerants.

Low decibel rating

The quietest condensers have a rating of 68.

Diagnosable parts

Permits a technician to quickly pinpoint and diagnose problems electronically.

Two-stage compressor

Operates at full power only in the hottest days.

WHAT IT COSTS

\$3,000-\$4,000 (A SEER-15 system with condenser and evaporator for a 2,000-square-foot house, installed.)

Cold Comfort

New technology makes air conditioners perform better, last longer, and run quieter.

BY MAX ALEXANDER ILLUSTRATIONS BY HARRY CAMPBELL

CENTRAL AIR-CONDITIONING has always been the convenience people live to lose. Despite the fact that it's standard equipment in most American homes—88 percent of new construction and collect of retrofits every year—the quips have long been directed for the draining amounts of electricity they devour, their ozone-depleting refrigerants, and the unsavory levels of noise generated by their condenser units, which mangle away just outside the house.

Happy, new AC technology means we can chill out about those worries. With improvements in fan blade shape and compressor technology, some models make use twentieth the noise of old ones. A new refrigerant, known generically as R410A, is free



ON A SCROLL

Scroll technology "is the latest buzzword in the world of refrigeration and air conditioning. That's because scroll compressors run quieter and use less energy than the piston-driven compressors that had been the norm. And as with most good ideas, this one is actually simple.

The heart of the scroll-driven is two identical spiral-shaped scrolls that fit one inside the other. One is stationary for either. One is stationary for either is attached to an electric motor. The eccentric motion of the motor rotates the scrolls so they are in contact with each other at all times but only at discrete points. Refrigerant gas trapped in the gaps between those points is pushed from the outside of the spiral into its center, compressing the gas so it can be cooled more easily.

Another virtue of scroll compression is that they actually work better over time. As the scrolls wear down, they fit together more tightly and allow less gas to escape.

—Tom Imler

of the chlorine that can erode the ozone layer. And energy use is on the decline. Twenty years ago, a typical system might use 6,000 watts of electricity per hour to cool an average-size house. Today, that same house can be cooled with as little as 1,700 watts per hour, an astounding 730-percent increase in operating efficiency.

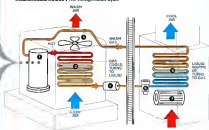
ALL IN THE SIZING

No matter how efficient your air conditioner is, it needs to be sized correctly for maximum performance and minimum energy expense. The key is proper balance between the condenser, where the refrigerant is pressurized and cooled, and the evaporator, where outdoor air is cooled and dehumidified before being circulated through the house's ductwork by the air handler.

Condensers are sized by the refrigeration ton, or "tons" for short. That's the amount of refrigeration needed to freeze one ton of water in 24 hours—12,000 Btu per hour. As a general rule, it takes a ton of air conditioning to cool 1,000 square feet of well-insulated space. When recommending work, a savvy air-conditioning contractor will take into account the home's layout, insulation levels, air leakage, sun exposure, and general climate.

Undersizing a system can overwork the condenser and clog it with frost, which shuts the system down for a time. But according to Richard Trifunovic, The Old House's plumbing, heating, and

TRUE BREED SCROLLS The Refrigeration Cycle



Refrigerant enters the compressor (1) as a hot, highly pressurized gas and is pumped through the condenser (2), coils of tubes embedded in a matrix of thin water coils. As the (3) inches outside air past the fins cooling the coils and converting the refrigerant into a liquid. The compressor pumps the cold liquid through a filter/drier (4) that removes moisture and other contaminants. Then it enters the air handler inside the house. An expansion valve (5) turns the liquid into a mist, so it enters another set of tubing, the evaporator (6). A blower (7) moves warm air from the house across these chilly coils, which absorb the heat and condense any humidity out of the air (condensate collects in a pan, a trick term is outside). As this cooler outdoor air passes into the ducts and through the house, the refrigerant warms up, turns back into a gas, and returns to the compressor where the cycle starts over again.



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Building a Bookcase

BY ALERMONA RAYDON PHOTOGRAPHS BY JOHN SMITH

Instead of a wall-mounted shelf, this built-in bookcase is well disguised as a couple of boxes, held up by a pile of books. It's a space-saving idea that doesn't require a power company or a professional built-in shelf. And thousands of dollars go into building bookcases in your house. All it takes is a little time, a little money, a little wood, and a little care. By following a series of short, step-by-step instructions, you can create the appearance of a built-in bookcase that isn't built-in. It's a great idea for a living room, a study, or a bedroom. It's a great idea for a living room, a study, or a bedroom. It's a great idea for a living room, a study, or a bedroom.

TOOLS: 2000 to 3000 WPM: 6 hours
DIFFICULTY: MEDIUM (Measuring, sanding, painting, and staining the wood may cause some frustration.)

TOOLS FOR THIS PROJECT

FRAMING SQUARE
To transfer layout lines and square joints



CIRCULAR SAW



SPEED SQUARE
To guide circular saw in 90-degree support pieces



MITER for transferring measurements of the wall onto the studs so you can cut it to fit snugly



RUBBER Mallet
To coax tight-fitting shelves into place



STUD FINDER
To find where to attach bookcase to wall



JOINTER to cut bookcase trim pieces

Other Tools Needed:
MEASURING TAPE
HAMMER
LEVEL
CORDLESS DRILL
UTILITY KNIFE

**WITHSTANDS
WARPING,
ROTTING, AND
MOTHER NATURE
ON A REALLY
BAD DAY.**



Veranda®
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Veranda® is a beautiful and revolutionary new material for decking. It looks and feels like real wood but never warps, twists, rats, or splinters the way wood can. It's so resilient, it stands up to intense moisture and the sun's heat. Veranda never needs staining, painting, or painting, which takes away the hassle of constant upkeep (not to mention all the money you'll save in the long run). Plus, it comes in a variety of styles and designs in three beautiful finishes. With Veranda decking, fencing, and lattice, your family can have a yard that will never show its age.

Black Gray



Black Oak



Golden Teakwood



Enduring Products. Enduring Beauty.



3 ASSEMBLE THE BOX

- To make the hanging strip that attaches the bookcase to the wall, rip a 2½-inch-wide piece of plywood. Cut it to length 13 inches shorter than the shelves.
- Lay the two 1x4s on their back edges, supports facing each other. Place the hanging strip between the top supports, flush with their tops and back edges.
- Using a drill fitted with a ⅜-inch combination bit, drill two pilot holes into each leg. Drill through the leg and the support, and into the hanging strip. Screw the hanging strip to the legs with 2½-inch wood screws.
- Slide the bottom shelf into place for support. Fill the assembled frame into place. Set the top of the bookcase onto the supports and the hanging strip. Drill countersink pilot holes along the edges of the bookcase top—two per each support and one every 6 to 10 inches along the hanging strip. Glue and screw the top in place. **LEFT.**

4

LEVEL AND FLUMP THE BOOKCASE

- Slide all the shelves into the frame, if some need coating; use a rubber mallet to gently tap them into place.
- Check the bookcase for level. Place a level on each of the shelves. If one side needs to be raised up, two wood shims under the foot. **LEFT.**
- Hold the level vertically to check the bookcase for plumb. Shim as needed. Chisel the whole piece to square and level—tap shims around the bookcase anywhere there is a gap against the wall to make sure the entire frame is tight in the opening. Score the shims with a utility knife, then snap them off flush with the bookcase edge.
- Use a stud finder to locate and mark where the wall studs fall just under the hanging strips. Using a ⅜-inch countersink, drill pilot holes through the hanging strip and into the studs at these marks. Screw the bookcase to the wall through the pilot holes with 2½-inch screws. **BELOW.**



5

ATTACH THE KICKBOARD

- Cut a piece of plywood—the same size as the lowest support on the frame—so act as a nailer for the kickplate. Slide it under the center of the bottom shelf. Nail through the shelf into the nailer's top edge with 6d finish nails.
- Measure the opening under the bottom shelf. Cut a piece of plywood to fit tightly into the space. Put the kickplate into the opening against the nailer and support edges. It should be flush with the bookcase front. Adhere it with two 6d finish nails at each of the supports and the center nailer. **LEFT.**

6

SCREW THE TRIM TO FIT

- Use ⅜ trim to finish the side and top of the bookcase. The trim can hang over the inside edge for a beveled top, or be flush for a more discrete appearance.
- Hold the trim over a bookcase leg, tight against the wall. With a level to its back, adjust the trim until it is plumb. "Set" it in place with two 6d nails.
- Find the widest gap between the trim and the wall. Open the scribe to span that gap. Now run its point along the wall so the pencil transfers the wall's contour onto the trim. **LEFT.** If you want the trim to be flush, open the scribe to span from the wall at the widest gap to the inside edge of the leg (not the trim). Then position the scribe so the point is on the trim's inside edge and the pencil is on the trim's face. Mark the trim where the pencil hits it. Now adjust the scribe to span from the wall to that mark. Use the new setting to scribe the trim.
- Carefully remove the trim and cut along the scribe line with a jigsaw.
- Using a disposable puttyhug, spread glue onto the plywood edges of the leg. Attach the trim with 6d finish nails every 6 inches. Repeat on the other leg.
- Cut a piece of trim to fit along the top edge. Glue and nail it in place.



7

APPLY MOSING TO SHELF FACES

- Use 1x trim to create a rounded, finished edge on the front of the shelves. To make sure these nosing pieces will fit tightly between the side trim, hold the 1x trim against the front of the shelves and butted to one side. Mark the back of each place where it meets the other side. Cut each strip at the mark.
- Use a brush to apply glue onto the front of the shelf. Nail the nosing into place with 6d finish nails. **LEFT.** Start nailing at one end and adjust the nosing as you move down its length so it is perfectly flush along the top of the shelf. Finish each shelf with nosing in the same manner.
- Set off your nailheads and fill the holes with putty or a wax pencil to match the color of the stained wood. Finally, paint, wax, or polyurethane the entire bookcase.





The Best Seat (Not) in the House

enjoy it all summer long



no one says you have to build your own porch swing.

You could buy one, say, in an antique store.

Or you could go to the flea market or a tag sale, and you're hauling home a chest. Or you could, though not sold and good for hours of hard fun swinging and hanging and sanding and staining before you hang it up and go swimming.

Or maybe you like your craft now, so you sortie to the mega-store and snag a parfab. All you need is oak, and glue? There's the lovely how-are-you, ready-for-rising-rumps-and-half-eat-books-and-Scandy-papers-and-snoozing-cats-and-permanently-battered-glasses-of-afternoon-tea-and-sid-everything-more-nutritious-in-the-cool-cool-cool-of-the-evening.

But wait.

Why not make it yourself? Because if one's task offered no own reward, this one does, inspiring liberate leisure even as it demands intense effort. Were you crafty enough, you could start from scratch—the design was measured twice and cut once, the machine made just so, the trim to match, the finished brass screws microeconomically cross-threaded, the curve of a seat and defined by pencil, formed by saw, and completed with dovetails and glue.

Let's say you're sufficiently crafty. But let's also say you're willing to for the halfway mark between scratch-built and mass bought. Do an online search for "porch swing" and "kit," and marvel at the marketing, little, medium, freestanding, chain-mounted, oak, cedar, redwood, teak, Arts and Crafts, Mission, Adirondack, plantation.

The box arrives, and with it to does a host of plans. Sounds so simple, if you told me to often with a mouse and a brass tool bit, or more often with keyboard than sawdust, you'd be bound as fast to find your progress forkward, even elusive. But keep at it. You'll get your gloves, tools, and user-instruction as an almost musical gesture, a melody of accompaniment riding the rhythms of repetition—accompaniment who, rather than, sandpaper scratch, damp cork—and finally silence, settling over where began in a no-man-and-now-has-dimensions.

In that quiet, commonplace what you've wrought, its left and its balance and its density, and last, after you've oiled and buffed your gear and set it into place, sit upon it and ease into that particular weightlessness and ease that is no time and still the time in the world, on a porch swing describing as limited, infinite etc. —Michael Dolan

Michael Dolan is a writer and television producer in Washington, D.C. His most recent book is *The American Porch: An Informal History of an Informal Place* (theamericanporch.com).

■ To drift to anywhere, to chase, perhaps to chase. Put as long as there have been porches, folks have been swinging. Middle Brown, apt. Lyndee Johnson, (BOTTOM LEFT) and anonymous have added themselves to the list of the makers of a porch swing.

TOP: COURTESY OF THE AMERICAN PORCH; MIDDLE: JEFFREY P. HARRIS; BOTTOM LEFT: LYNDÉE JOHNSON; BOTTOM RIGHT: JEFFREY P. HARRIS





To speed assembly, lay out all the pieces on a tarp first so you can find them easily.

Ready, Set, Swing

For this building project, we selected a 5-foot-long swing made from stout planks of solid teak, milled into elegant, comfortable curves as lovely as they are inviting to the touch. No nailing is needed, so assembly takes only a few hours. And the effort is doubly repaid in savings (this swing costs hundreds of dollars less than one put together in a factory) and in satisfaction. You've created an heirloom you can proudly say you built yourself.

Before tackling final assembly, first "dry fit" all of the pieces without glue. This will let those well spent. You'll know in advance if the fit has all of its parts; you can sand down any fence that isn't sliding into its mortise, and you'll know the chance of making a mistake that's harder to correct later.

Text by Thomas Hines
Photographs by Jim Pensen
Assembly by Mark Powers



THE BASICS

This project relies almost exclusively on mortise-and-tenon joinery: one of the oldest and strongest methods for joining wood. The tenon (the knagel) fits into the mortise (the slot). There are 19 such joints in this swing, and each one follows the same three-step procedure.

Apply glue to the end of a tenon. A waterproof polyurethane (PVA) glue is recommended; we used Titebond II. Also seal glue on the inside of the mortise.

Slide the tenon into the mortise. The tenon's "shoulders"—the shelf of exposed end grain at the tenon's base—automatically bring the pieces into proper alignment.

Drive the screws into the screw holes and through the tenon. This eliminates the need for clamps or any waiting for the glue to dry. For maximum durability, use zinc-plated or stainless screws.

Tip

Clean up. After a demo day and immediately wipe away any glue that seeps out of the joints. If glue dries on the wood, it will leave a film that will, in turn, any protective oil treatments and varnish to a different color than the surrounding surfaces.



right

ORDER OF ASSEMBLY

1. **Start:** First, glue and insert the ends of the seatboards into the mortises on the curved leg rail. Then glue the other ends of the slats into the mortises in the bottom rails.
2. **Next:** Fit each slat into the holders and a hole at a knee. To help push them in all the way, gradually tighten a bar clamp or two perpendicular to the rails.
3. **Then:** Glue and screw together each of the side pieces, minus the arms, so they don't interfere with the installation of the seat slats. Then attach each of the assemblies to the pieces for the runners on the back rails.
4. **So it:** Glue and screw the rest of the frame work that supports the seat slats: the center seat support and the apron that connects the two side pieces at front. Apply a bead of glue on the underside of the first slat at each screw hole; then lay the slat against the side pieces, align the slat's end flush with the side pieces. Screw the slat down. For all of the remaining units, use spacer blocks to set an even gap between each slat and a scoring piece to align the end of each new slat with the one before it.
5. **Arm rest:** Glue and screw each arm onto the side pieces. The swing is now ready for a few finishing touches: move on the next page.

PHOTO COURTESY OF JIM PENSEN



FINISHING TOUCHES

Attach support bolts and fill screw holes. Insert a brass bolt in the end facing inward, through each of the four holes in the side pieces. Apply a thread-locking glue such as Loctite to the bolts and treat as the brass rope nuts. Tighten until the head of the bolt sinks flush with the wood. A screwdriver stuck through the rope hole can provide the necessary leverage. Curve each rope hole facing up. Next, fill each screw hole with a cork plug stained with glue. Seal the plug with a veneer match; wipe up the glue. Then, sand it. Finish with 50-grit sandpaper.

Apply finish. Hand sand the entire swing with 150-grit paper, paying particular attention to the curved leg rail and the arm in time. Let it weather to a silvery gray. To keep a rich, natural wood look, rub a tank oil with UV protection (and without known oil) onto every surface, wait 15 minutes for it to soak in, then wipe again with a clean rag to remove any buildup. Repeat at the beginning and end of each porch-warming season. Rust can also be painted, but then you run the risk of chips, scratches and peeling.

Take a load off. Wipe your brow, pour a tall cold drink, and make yourself comfortable. You've earned it.



Tip

Easy sanding. When filling screw holes with glue, wipe the grain of the glue with the grain of the wood. This simplifies sanding, which should always be done in the direction of the grain.

The Right Way to Hang It

A SWING'S COMFORT, SAFETY AND APPEARANCE ALL DEPEND ON HOW WELL IT'S SUSPENDED.

Rope or chain? Steel chain is easy to adjust, and unless it's galvanized, stays in shape as the swing and seat fold or rest with use. A good nylon rope won't deteriorate and even has some "give" for added comfort. To make sure your rope is strong enough, add the weight of the swing to the maximum weight you expect it to hold at one time (200 pounds is a reasonable estimate). That total should be less than or equal to the rope's safe working load shown on the package.

Twisting ropes. While most porch swings are relatively stable, you should allow at least 1 foot of a bungee in the ends and 30 inches head and back to avoid colliding with the beams, the porch railings, or people.

Swinging hardware. Connect the rope or chain to the eyebolt with 5-bushings, which minimize squeaking and reduce chafing or wear.

Anchor to hardwood. On a deck without railings, just bore a hole all the way through the joist and insert a 1/2-inch eyebolt. If you're not a fan of eyebolts, connect it with a hook bolt. Put washers at both ends and tighten down the locknut completely. On porches with railings, use a Swivel by 1/2-inch long eyebolt with a shoulder. Insert each bolt's threads completely into solid wood. Drive pilot hole first to prevent splitting.

Loop knot. Support knot.



Adjust. Treat the swing like a chair so that a seated adult's feet aren't hanging in the air. For maximum comfort, tilt the swing slightly so that the back of the seat is about an inch lower than the front.

Flare-fading. A swing that's hanging where you can't see it will fade by absorbing up the steel ropes. Put an eye anchor in the back, then tighten the rope that stretches the frame with the most manual effort.

Tightening knot. Tighten here.

Swing like a chair. Forward.

Sitting in the backyard on a sunny summer afternoon, pulling on a beer while music pipes in from the outdoor speakers, is a fantasy most Americans say to reserve to sons as they buy their first house. It's a right of homeownership, the backyard oasis—I craved that lawn, and I finally painted that living room, and now I'm going to enjoy a little R & R with my first up on the lounge chair, thank you very much.

These days, the use for this luxurious living is usually the back deck, a wood platform meant to keep the bugs and smells from upstaging a few hours' sun. The deck is a ubiquitous add-on to every 21st-century house, be it a tiny Cape Cod or a grand Tudor. In fact, according to the National Association of Home Builders, putting up a deck is the number one project new homeowners want to take on. But all too often, do-it-yourselfers end up with a cookie-cutter design: a rectangle of 2x6 pressure-treated pine planks framed by a banister of 1x4 posts.

The design lacks imagination, as you've, say, any notion to the style of the house from which it grows.

Building a basic deck is a fairly easy undertaking, so coming up with a design that complements rather than detracts from your house's style shouldn't be hard. Look around at the shape of your house's exterior. Is it long, like a Craftsman bungalow or a Georgian? Or does it pop with curves and angles, like a Queen Anne? Check out details, such as trim and porch railings, for profiles to crib. You can even look inside for inspiration—a door casing or fireplace mantel might offer up ideas.

We asked four architects, each with encyclopedic knowledge of unique American house styles, to imagine what a deck at the back of these houses might look like. Taking into account the forms and themes of each style, we've come up with basic designs that go far beyond a boring platform of 2x6s.

BY ALEXANDRA SAMSON
ILLUSTRATIONS BY RODICA PRATO



FRONT VIEW

Massive 3x6 or 4x6-wide plank decking looks like the ring flooring found inside Queen Anne porches. The decking may be painted to match the house's trim.



Balusters feature ball-tops and white-washed posts on an 18-inch-high base made of 2x4s. The deck is less than 30 inches off the ground, easily cut through with a chainsaw.



A traditional Victorian-era screen door leads to the deck and complements the period design.

STYLE 1 Queen Anne

A curve is the legacy of the deck, which the shape of the Queen Anne's exterior.

Lattice under the deck is appropriate to the amount of heavy shading on the porch.

Despite its British name, the Queen Anne style of the late 19th century was the first truly American house form. Advances in machine-made parts and technology that could join railings and ducts anywhere, imagined free-form profiles of curves and angles. At the same time, the porch took over the exterior, winding its way around

three or four sides of the house. When Chris Gellman, a principal with Design Associates, in Newmarket and Cambridge, Massachusetts, created a deck for one high-style Queen Anne, he didn't have to go very far for inspiration. The porch had a perfect railing detail that was easy to copy: wide, classical newels and flat

turned balusters like the ones that would have been produced in a factory at the time the house was built. And for the deck's footprint, he let the shape of the house itself guide him. A sweeping curve that releases the deck from its rectangular confines is actually an acknowledgment of the projecting rear facade of the house.

Think outside the box

How to design a deck that's more architectural style than plain pine rectangle

French doors open the
balcony to the exterior
openings, preserving the
openings of the house's
wide facade.

Metal spacers would be
used where the code
prohibits wood joists
between wood
structures.

A circular stair to the
garage preserves
valuable outdoor space
on a small urban lot.



STYLE 2

Italianate Brownstone

The urban incarnation of the mid-19th-century Italianate form was usually a plain brick version of the house and not a cast-iron house style. But in cities across the Northeast, the popular material for the facade was brownstone, which was so rich in its reddish-

chocolate color that it needed little extra adornment. The most prominent features were the arches over the windows, with large two-over-two cast and a row of windows holding up the roof's classical cornice.

Putting a wood deck on the back of

such an elegant urban structure is the surest way to make the whole common area look like a temporary patch. Plus, says New York City architect James Rodas, wood is not really conducive to city life. It's vulnerable to decay from extra pollution, and it's likely to be prohibited by most urban building and fire codes. A more complementary material for this type of house is wrought or cast iron,



FRONT VIEW

Ornate wrought-iron railings
echo the curves of the
arched windows.



Ornate wrought-iron
railing echoes the curves of the
arched windows, providing
enough support
for furniture.

already present on steep hillsides and window sills. Rodas imagines a 6-foot-deep balcony-like deck (large enough for three couples to gather), with a balustrade that echoes the one on the front of the house and a circular staircase that takes one down from the porch floor to the garden level without striding across real estate from the yard beyond.

A short history of decks

The deck is a 20th-century invention—it came into vogue only after the front porch began to lose favor, when the disappearance of the parlors and other entry spaces made the backyard more attractive. Porch-less houses, like the ranch, moved closer to the front of the lot and the security of the heavily protected gate back, first to parks and later to decks.

Deck gardens first in sunny California, where the line between indoors and outdoors is more blurred. Californians built their early decks from railroad and only two heavy woods that stood up well to the mild weather of the region. Then, as immigrants and locals showed their craving spaces in the 1940s and 1950s, the list moved east.

It didn't take hold, however, until a war-time wood could be found to withstand harsher weather conditions. One pressure-treated pine, a so-called miracle product that didn't rot even if buried in the ground (Never mind that the miracle used to treat it was later found to be a carcinogen. Most of today's pressure-treated wood is made with copper). By the 1970s, manufacturers of the stuff had caught on that outdoors, not just construction, was buying it up. They pushed pressure-treated wood as the perfect decking product, and a deck boom swept the country.

Today, the trend in decking is toward hardwoods such as mahogany or teak, turning the space into an outdoor room that's as easily finished as any other area of the house. How appropriate, given its prominence as part of the modern house.

STYLE 3

Craftsman Bungalow



FRONT VIEW

In the early 20th century, the Arts and Crafts movement, popularized by Gustav Stickley's magazine, *The Craftsman*, rebelled against the overindulgence of the Victorian era and instead worked to celebrate details that were handmade with natural materials, such as wood, stone, or glass. In Craftsman houses, simple profiles replaced intricate carving; an architectural feature, though the feature themselves became larger and more prominent to highlight the inherent beauty of their materials. Wide-plank floors, broad expanses of natural-finish oak on walls and staircases, and massive stone fireplaces surrounded by the central interior elements.

On the exterior of Craftsman houses, the most prominent feature was usually a fronted porch, with heavy pillars for supports and deeply overhanging eaves. According to James O'Neil, an architect in New York City and Annapolis, New York, a deck on a Craftsman house is a bit of a cheat—it would do better to just gain a roof and become the porch it's meant to be. But given the desire of so many homeowners to bring the inside out in the space, O'Neil imagines a Craftsman deck should look as close to a rooftop porch as possible. Here, wide-plank decking, and a few lanterns like the lampre ones found on many Craftsman bungalows turn a plain platform into a rich period piece.

All Craftsman houses are so close to the earth that they can be without a porch. While this is the case, the house shown in this Craftsman house.



Painters have tended to use the yellow color for the Craftsman houses. The house shown in this Craftsman house.

Simple stone's bellows reflect the natural stone Arts and Crafts aesthetic.

Thick stone's bellows reflect the natural stone Arts and Crafts aesthetic. The house shown in this Craftsman house.

Many houses featured in the Craftsman house are built with stone. These stone walls built in low-voltage lighting houses that increase the stone's value. The stone walls reflect the natural stone.

Spanish Colonial Revival

After the United States celebrated its centennial in 1876, many Americans acquired a nostalgia for early house forms. In the East, they started building Colonial Revivals to satisfy their longings, but in the West, the prevalent house styles had always been influenced by the Spanish. So in the late-19th-century Southwest, the Spanish Colonial style was born, followed in the early 20th century by the more formal Spanish Colonial Revival. The latter's white stucco and red-tile roofs actually didn't recall much from the West's colonial days; this style was more like an interpretation of the Mediterranean architecture the conquistadores had left behind in Europe.

Thomas Hilly is an architect in Modesto, California, where the Spanish Revival style is the reigning house form. As a purist, Hilly cannot imagine a wood deck on this type of house, built in a region where wood is scarce. A Spanish Revival house should have a tiled patio, and the only wood should be hidden in the structure underneath and in the pergola holding up the climbing vines that tile is expensive and is not necessarily a do-it-yourself prospect. So a wood deck as a Spanish Revival house should at least acknowledge the shape and motif of a patio's placement low to the ground, steps that could be made of tile, pillars hand-sawed into the profile of traditional turned balusters, and, of course, the always necessary pergola.



FRONT VIEW

Exposed joists under the decking carry their share of weight from beams elsewhere in the house—and so the people.



Sloped pilasters cut from tile balustrade and thick wooden balustrade from common Cipriotti Colonial Revival decorative motifs.

The decking, set in a diamond pattern to wrap around the patio and elevated diagonally on the floor, recalls the chevron pattern found in tiled floors and ceilings of the style.

A traditional Spanish arched window is set in a wall from decorative cutouts that normally would place the stone walls on a Etruscan.

A pergola for climbing plants is a traditional feature in this form of house that have a Mediterranean influence.

On the left, Roger Clarke
drives from R & H Sod
and Landscaping Co.,
out ready to lay a
12,000-squar-foot
bale with 20 pounds of
soil each containing
33 rolls of sod. The sods
are grown by the
company and are
ready to be placed
around the site for
easy access.

GRASS TO GO

Want a fantastic lawn fast? **Sod it.**
Here's what you need to know to get the job done right
BY ANHLEY WOMBLE | PHOTOGRAPHS BY KELLER & KELLER



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Slowing down and watching the grass grow sounds good,

in theory. But the reality is that if your lawn needs remedying, you'll be looking at a big patch of dirt for weeks. And why wait, when summer can begin right now—with a lush green carpet underfoot?

When it comes to getting a thick, healthy lawn, nothing beats sod for instant gratification. Sure, it costs a bit more—about \$400 to cover a 1,000-square-foot backyard (about the size of a tennis court)—but it's right and in a couple of weeks you'll get a dense, well-established lawn that's naturally resistant to weeds, diseases, and pest infestations.

"You're less likely to get termite," says Phil Old House landscape contractor Roger Cook. "You're paying for turf that someone else has established for 30 to 40 months."

You're also buying convenience. Sod can be installed spring through fall (and even in winter in mild climates). In areas of the country that have cool-season grasses like the fescues, it means the problem of sprouting a new crop of weeds when seedling lawns are spring. And in southern states, which favor warm-season grasses like Bermuda grass, zoysia grass, and centipede grass, sod is the best way to cover the yard in any time of year since those turf types cannot be grown from seed.

"Sometimes you get a bad rap, but that's usually because of the takes people make while laying it," says Roger. "Put down on properly prepared soil, it will thrive." Turf into a well-ventilated area that's slightly acidic (with a pH between 6 and 7.5) and nutrient-rich. And this only way to know what kind of soil you've got is to test it. For about \$15, your local extension service will send a soil sample to a lab for analysis. Results will come back within a week or two and indicate precisely what amendments you should add and in what quantity.

Then it's time to buy your sod. Depending on where you live, you can order it from a garden center or directly from a sod farm. It will generally be a mix of two or three turf species, chosen for optimal color, texture, and wear. Just be sure the sod is half your supplier if your yard is partly or full shade. Sod should be delivered within 24 hours of being cut, and it's all the same day. Measure your yard carefully so you can order the right amount with some wiggle room (about 10 percent) to account for cutting around curves.

Count on one weekend to prepare the soil and another to lay the turf. If your yard is covered with pebbles, grass, you'll need to remove it first. This is best done with a sod cutter (available from your local rental yard) for about \$75 per day, which allows a 600 sq ft of sod. While you're at it, you'll want to rent a rototiller (about \$55 per day). You'll also need a sod cutting knife with a 1/2 inch blade, a spreader, an iron rake, compost, and other soil amendments, including fertilizer and lime, depending on what your soil analysis dictates. Two people should be able to cover 1,000 square feet in a day, get extra hands if you plan to be more than that.

Read on for our step-by-step instructions for rolling out a luscious carpet of grass.



1. LEVEL THE SOIL
Lift sod the top 4 to 6 inches of soil with a rototiller. Spread 2 inches of finished compost (this may be available for free if your town has a municipal compost center). Add 2 to 3 inches of sand to create soil to improve drainage. Fill in amendments. Then, based on the results from your soil test, use a spreader to lay down the appropriate starter fertilizer, and then time if needed (AQ).



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p. 121



2. LEVEL THE SURFACE
Use an iron rake to break down any high spots. Add 1 to 2 inches of sand to the soil to level and 1 inch below the grade of any paved surface. Such as it with the rototiller. Water lightly to compact the soil.

3. LAY THE FIRST ROW
Find the longest straight edge in your yard. Lay the sods in a row. Lay the first row of sod along it. When you get to the end, make sure you're leaving a 1/2 inch between the sods. As you go, fill in the gaps with soil, making sure the sod is 1/2 inch flat against the soil underneath it, with no air pockets.



**"WHEN PEOPLE SEE ROLLS OF SOD
'GROWING' ON ASPHALT AT THE
GARDEN CENTER, THEY THINK
IT'LL GROW ON ANYTHING.
BUT IT NEEDS ENRICHED,
AERATED SOIL TO THRIVE."**

—Roger Cook, T&E landscape contractor

1. LAY THE EDGES RIGHT

After laying the first row, use the knife to cut off both of the end pieces so you can stagger the short sections, so you avoid leaving tracks. Again, make sure to butt sections of turf snugly against each other without overlapping them. Not only will seams be less noticeable this way, but the edges will be less likely to dry out and die back. Use the knife to cut the ends for 10-pound sods; for 16-pound sods, it's needed, and to trim seams along planting beds and paved areas. (Q)

2. WATER, WATER, WATER

Water the installed lawn the night, which also helps settle the sod (Q). Try to keep feet off the sod for a week. Water every day, preferably in the morning. During the heat of the day, you lose a lot of water to evaporation. And if you water at night, the sod goes to bed wet, which can encourage fungal disease. After the first week, cut back watering to every other day, tapering off to just twice a week by the third week. Then, for the first year, give it an inch of water a week during hot summer months.



3. RINSE THE LAWN

When the grass reaches 3 inches high, it's time to mow it down to 2 inches. Remove your new lawn to 100 blades, use a walk-behind mower (easier than the pusher rule on type) for the first time, and be sure to keep the blades sharp. Though you'll probably want to mow in tandem in the summer months to encourage a deep root system and to shade out weeds—always tie in cut off sections of the grass a length of 10 inches or less, and be sure to use a sharp blade.

4. FEED THE LAWN

After your lawn about three to four weeks' growth, then feed it with a starter fertilizer to speed up nutrient that's needed early during the heavy watering schedule.



SECRETS FROM SOD FARMERS

These guys have made it their business to figure out the best way to grow lawn grasses. Here's some advice from the pros.

- Because sod is portable and dries out quickly, many farmers cut their turf in the middle of the night so that it can be delivered and installed the same day. To keep fresh, consider waiting the sod after you lay the first large area and move the sods around the lawn in your corner with subsequent sections.
- Even sod farmers can't tell how moist soil is by looking at a lawn, so a soil probe (more tips are available at www.garden.com) is used to check moisture levels. After a thorough watering, soil should be damp 2 to 4 inches below the surface.
- Strong turf needs plenty of sun; shade-green grass is weaker and more susceptible to disease, so a days covered with less longer. Water shady spots less often and reduce fertilizer by 25 percent.

For another easy to establish a new lawn, visit thisoldhouse.com and search for "new lawn" to grow grass!

{peak performance}

The roof over your head is your first (and last) defense against the elements.

Choosing the best one for your house is equally a matter of aesthetics, budget, and practicality.

Here's what you need to know

(BY D.J. KUGHER)

WHEN IT COMES TO ARCHITECTURAL FEATURES, THE roof isn't usually the showstopper. Sure, it shelters the house, acting as a wall of armor that protects the framing against the destructive forces of light, water, and pests. Yes, it keeps the occupants dry and warm. But, save for a few cat burglars and the occasional flooder, nobody thinks much about the roof—until it needs replacing.

That day may only come once or twice in the years that you own your house. But when it does, it's a nightmare because reroofing is no minor repair. The result will have to last for a couple of decades—or more—and is likely to eat you back tens of thousands of dollars. So the choice has to be the right one. And not just the least expensive option, either, but one that takes into consideration performance, climate, installation, and stylistic appropriateness.

More than two-thirds of the houses in the United States today have asphalt roofs. But many of those house styles in their original forms would have had a roof made from a more historic material: slate tile, wood, or metal. All are still readily available, some have benefited from improvements in their manufacturing, and each has a few cunningly convincing advocates. On the following pages, we help you sort through the choices so that you can make an informed decision about how best to crown your house and finally give your roof the respect it deserves.

{ wood }

Altogether, a mix of the colonial American and working mother who had, I assume, like first-class or formerly cultivated English colleagues in Virginia and Maryland, and by instinct sensed that the right blend of touch and show—which had been the mode in the mother country. But American touch felt used in the rougher of mode, so outsiders perceived by stereotypes, more from the acres of acres around them.

Seventeenth- and 18th-century American folk-keepers hold their art in high (and local) esteem in logcabin and oak in the South, white pine in New England, redwood and red cedar in the West; then planersmiths smooth to fit snugly together. As a roofing material, wood has never gone out of style: though its dominance was challenged in the early 18th century with the rise of classically inspired architecture, but as, facing an 18th-Century Revival, it reclaimed state rooms. It endures into a large-scale use in the late 19th century with the popularity of the aptly named Shingle Style.

Today's wood shingles stand out for many of the same reasons that H. mightily as the ones that the yellow glazes have glazes, but that means they actually look like better than ever before. He says that many of the new shingles are made of a material that is not wood, but a composite of wood and plastic. This means they are not susceptible to rot, decay, or insect damage. And they are also more durable than wood. They are made of a material that is not wood, but a composite of wood and plastic. This means they are not susceptible to rot, decay, or insect damage. And they are also more durable than wood.

A NOTE ON PRICES

All greens except life gate square
(120 square feet) for health care only
Labor costs only for red oil

Wissenschaften nicht einflussreich

The most common wood finding under bridges for children is typically *Alnus frugosa* (hazel). Though some smokers grow wild, such solitary stems (and another) rarely are different shapes (cherries, and maples). One of the old boys

Pressure (newtons per square meter)

Flax straw, getting older, is much environmentally friendlier than wood pulping. How did growth patterns last year resemble its cellulose and lignin? Treating it with natural flax straw is almost 50 years.

Lightweighting *continued*

Low-profile and even a cheap, 1000 cc is the proof and break resistant and doesn't require the reinforced handling that other cars without production need. Comes with a 10 year warranty.

541

Lightweight Five resins and hydrophobic metals such as aluminum and titanium inhibit the spontaneous ignition, but with a much longer life span. They not look quite like Gravel Dura, though.

Pressure-treated steel pipe

7. *Lincoln*—Red, 1.00
Yes, I will pay to be grown
harsh in 50 years. The
birds visit on ability as one
has elegant their order
with a greenish yellow
tail. But more it grows a
hard ball on the other

Figure 1

Chlorine is being poured in, adding to fears that the world is opening up the market to makers of toxic, substituted, hazardous chemicals made from a blend of polychlorinated and mineral fiber and good for 40 years.

(1953) 1953-1954.

Four illustrations of different house styles arranged in a 2x2 grid. The top-left house is labeled 'Traditional' and is a two-story colonial-style house. The top-right house is labeled 'Modern' and is a single-story house with large windows. The bottom-left house is labeled 'Colonial' and is a two-story house with a prominent chimney. The bottom-right house is labeled 'Contemporary' and is a single-story house with a flat roof and large windows.

Also: BUSH-DOUGHT GRASS, Eriophorum
Dense, 1000, Cultural, Tropical

Timeline

Long. This bundle of reed stalks, quipped lightly, work best on a steep pitched cottage roof to slough off rain and snow. Unless you live in England or Tibet, however, thatchers are few and far between. Henry English thatch can last for 75 years, grass thatch from Indonesia, shown above, can last for 30 years in a tropical climate.

Student Fee: \$200
Faculty Fee: \$100

100

KEYWORDS: child abuse; child sexual abuse; child sexual exploitation; child sexual abuse investigation; child sexual abuse assessment

1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 26

{ tile }

Before it was down the first pedestrian English boulevard in North America, covered these roofs with the indigenous Mesoamerican local red clay. Though they eventually switched to wood, tiles endured as a roofing choice, especially as locally sourced ones when fire or sea wind stole forests. In recent centuries of the 17th and 18th centuries, solid curved Mediterranean terra cotta tiles that secured houses in the hotel and office world. But terra cotta also kept the floor in Brazil. A 20th-century revival of older styles appeared infused in clay, which showed up on Mediterranean-inspired homes like Spanish Colonial Revival, sometimes with the false impression of colorful glazes. Today tiles are most often used in warmer climates without the temperature swings that can crack them, though if it's the look you want, metal tiles can achieve a look similar



terra cotta tile (a)



flat tile (b)



flat tile (b)

{ ROOF TILES }



Terra-cotta

The oldest and best recognized of the clay tiles, it comes in many variety profiles. Clay tiles weigh 60 to 80 lbs. per sq. ft. and are susceptible to cracking in cold, wet areas in the South West and Southeast, where it can last 100 years or more without

Glazed terra-cotta

Color is derived only up to 1/8 inch, so sunlight bakes it also makes them harder to keep clean. Though it doesn't affect their strength as a roofing material. They come in a variety of shapes and patterns, adding to the visual interest.

Formed concrete

Instead of clay, a good blend in the city they are better for a blend. It comes in a variety of colors and is harder than the real thing but requires no maintenance. A more costly lightweight version is formed.

Steel

Steel comes with a curved profile instead of the wavy shape of the real thing. It's made up of galvanized steel or copper. It's made up of galvanized steel or copper. It's made up of galvanized steel or copper.

{ slate }

Slate may be the most elegant of all roofing materials, but that beauty comes at a hefty price in both initial cost and the labor to install it. At about 8 pounds per square foot—three times the weight of asphalt—it also requires well-reinforced roof framing. Set installed properly, the layered and well-sorted pieces of gray-blue stone can outlast the house underneath them. The only risk is to collapse when this is threatened by trees or trapped underfoot. In early days, the material was too heavy to transport by wagon. So slate roofs were found near good rivers or quays. Later being hoisted still farther through it remained the province of wealthy homeowners, so those who wanted to look rich. Today slate is available in a variety of shades, black and gray, as well as the dark gray, plus there's a host of synthetic materials as well as metal, rubber and concrete.



slate tile (a)

slate tile (c)

slate tile (a)

slate tile (a)

slate tile (a)

{ ROOF TILES }



Gray slate

Quarried mostly in western Vermont, this stone comes in about 35 shades of gray and black. Expensive and heavy, but still one of the most elegant, best looking, most durable, and longest-lasting roofing materials.

Formed concrete

Like terra-cotta, but it's made of concrete. It's made of concrete. It's made of concrete. It's made of concrete.

Rubber-plastic

The same color as slate, but made of rubber and plastic. It's made of rubber and plastic. It's made of rubber and plastic.

Steel

As in the case of slate, it's made of steel. It's made of steel. It's made of steel. It's made of steel.

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THIS OLD HOUSE— SAVED

A down-at-heels 1859 house shown on the back page of this magazine inspires a hometown preservationist to call it her own

BY CAROLINE PETRIE, HOMESOWNER PHOTOGRAPHS BY STEVE WILSON

I ALWAYS WAS DRAWN BY THE HORTON HOUSE WHEN I WAS A KID IN St. Joseph, Missouri: a long-abandoned 1859 two-story that had deteriorated until it looked like a shack. St. Joe prospered around the same time the house was built, serving as a midpoint during the great western expansion. The Pony Express was based here, and the city marked the last stop on the railroad at the time. St. Joe was even the richest city in the country for a brief span. The Missouri Hill Historic District, where the Horton house sits, was one wealthiest neighborhood back then. But by the time I was a kid, most of these homes were falling apart. The Horton house was no exception, and when I saw it profiled in *This Old House* in September 2001, I knew I had to save it.

My family has lived in St. Joe for six generations, and we have a legacy in real estate. My grandfather led a number of preservation efforts in her city, and my father is a developer here. I'd seen lots of some amazing transformations of historic properties, but a lot of wonderful old buildings had been lost to urban renewal and real estate speculators. So I became inspired to convert the family house, with a slightly different twist. In 2001, I started my own company, Blackhawk Restoration—Blackhawk 1859s was St. Joe's original name—and started renovating old houses. I'd already rehabbed three homes by the time I spotted the Horton house in *This Old*



ABOVE: The author's restored St. Joseph, Missouri, home. OPPOSITE, CLOCKWISE: The first floor's original fireplace. The master bedroom. The west-facing Victorian bay window.





ABOVE: The house didn't have a kitchen—no plumbing, no electrical. It was the costliest part of the renovation. **RIGHT:** Locally salvaged French doors with leaded glass lead to garden doors made from salvaged stone walls. **OPPOSITE PAGE:** Original windows with salvaged stone surrounds and larger matching second-floor balcony were renovated.



house. I knew nothing about its history, but there it was, with the original walnut staircase, floor-to-ceiling windows, and all these charming details that begged my attention.

I realized that this house was different from the other ones I'd seen. This one I wanted to live in. It embodied the whole historic character of the town, and I liked the size of it. I don't like big houses, and this one was only 1,800 square feet, with simple, clean lines. If you look out the windows, you can see the Museum Tower and all these old church spires, and the gazebo at Joseph Museum is across the street. For the price that I paid—\$6,000—I can't even believe what I got.

But even for such a steal, the house required another \$214,000 of renovations. I was lucky enough to receive a \$25,000 Save Our Historic Homes grant from the city, given to homeowners to help with redecking porches, and I also applied for federal and state tax credits.

The house really was as cheap—as mine, both inside and out. A preservation group, Heritage 1776, saved it from demolition after it was vacated in 1973 by the last living Huttons, but people called it the "rot house" because there were dozens of rats who'd taken up residence in the basement.

By the time I got the house, it was divided into six large rooms, with no kitchen, no bathroom—no plumbing at all. What few walls remained had crumbling plaster, and outside, the cedar siding was

falling off. But I'd been through this before. The only thing that really matters in saving an old house is whether the foundation is okay, and this one was fine.

At the general contractor, or the "project manager," as I like to call him, I started working with my small team of carpenters and found that a lot of materials were salvagable. The floors were in surprisingly good shape, except where vinyl had been laid on some of the original pine floors. In the front, we sealed and sealed the oak planks that were probably put down in the 1940s. In what became the kitchen, we put down ceramic tile and to keep that price floor I worked on it for days, scraping muck at the black glue. We raised the original plaster and that was in the living room and saved as much of the trim and molding as we could.

We also raised most of the original floor, except which had been French pine, again, with a rich wood grain, all I had to do was sand it down—which I did, over and over—with sand and Murphy Oil Soap. The original pewter rangeplace still hung in the front door, and we needed a good patch. We kept the original rose key bell, and finished up the beams and painted the door with and fixed the tiny staircase. The house was back for Peter Epstein, when later, even smaller, at now all my next but to be folded in to trade. I don't think any real estate agent happy with me.

Epstein, I designed a floor plan that divided that large, open space into open bedrooms with bathrooms and walk-in closets. I created a little in-law to fill in the space at the top of the stairs. I also added a laundry room and half bath downstairs, next to the kitchen. Since the house had absolutely no plumbing, we had to add all the pipes and dig down about 10 feet and set an additional 30 feet to connect to the sewer and water lines. That was the most costly part of the project.

Because the house is in a historic district, I couldn't make any changes to the exterior without getting a permit, but I could make

WHAT I DID

TOTAL COST: \$250,000 (including the \$4,000 permit price)

TIME TAKEN: Eight months from purchase to move in

WHERE I SAVED: Replacing as many original materials as I could and not adding a back porch or patio. Acting as my own general contractor or "project manager" also helped.

WHERE I SPENT: I used blue-ray basement insulation, which cost more initially but will save money in the long run.

WHAT TO DO DIFFERENTLY: I had not a new roof. Compared with the condition of everything else, it seemed like it was OK—but now it has to be replaced.

MY FLOOR PLANS:

1. On the first floor I divided a large area into a family room and open kitchen, with a powder room and laundry room tucked behind.

2. Upstairs, a built-in brick divider divides the symmetrical bedrooms—both walk-in closet compartments that before was just one big 10-by-10-foot space.

FIRST FLOOR



SECOND FLOOR



OPPOSITE PAGE: THE HUTTONS' BALCONY PLACES THE HOUSE IN THE

what had been there originally. There had once been a second-story ball room in front, and I found a lot of those original pieces hanging in the living room. One of the columns and several of the beams were hanging against the wall. I moved them, and then had the other pieces replaced by a local carpenter when I reroofed the front porch.

In the back, I wanted to be able to walk out of the kitchen to the yard, so I cut in an entry and added salvaged French doors with leaded glass to the side. We painted the exterior with three coats of sage green oil paint—the old siding was so dry it just kept soaking it up. But the house turned out to have even more meaning for me. Not long after I bought it, I was going through my grandpa's papers and found that she had been born here in trying to preserve the house, too. In fact, she was on the Heritage 1776 committee that saved it from the wrecking ball. I was finally able to find out what my grandpa's meant.

Since completing the restoration in 2003, I've turned this hobby of saving old houses into a full-time occupation. So far, I've fixed up four other houses in this neighborhood and have plans for six more, but the sad thing is that they're still sitting, waiting for their next home. I hope this issue will save people that even something as much bad shape can be transformed.

(photo courtesy of page 100)



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HOW TO RESCUE A BROKEN HOME

IT ALL BEGAN WITH A PHONE CALL. Every week, *The Old House* features a check-out-the-house in the neighborhood that's not doing very well. Many readers have purchased these historic homes by taking the first step: calling that contact number. And once they do, they often find they're on their way to ownership.

When we're in St. Joseph, Missouri, home renoct Caroline Perle saw her former home in love. The Old House, she knew there'd be hard work ahead, but she couldn't wait to get in. Eight months later, the moving van was in the driveway.

When contemplating whether or not to take out the checkbook for that old pile that's parking on your heart-strings, Caroline, who now leads a home restoration partnership, offers the tips below.



Then
After 100 years of family ownership, the Perkins house had deteriorated before it arrived in Jane Perkins' hands.



Caroline Perle
"You typically find great (or beautiful) structures in these houses," says Caroline Perle of the owners of St. Joe homes waiting to be restored.



Details
The view from the front porch shows the house's interior, which is a pleasant surprise.

RENOVATION TIPS

Find out if the house is listed on the National Register of Historic Places or if its history allows you to petition for landmark status. This might allow you to charge up to 30 percent of your restoration costs from the U.S. Department of the Interior.

The same is true for state and local historic districts. Some might grant an additional 20 to 25 percent rebate of construction costs, and local municipalities might offer grants, low-interest loans, and tax abatements.

Read the fine print: Some restoration incentives (such as the federal ones) require that you submit plans and photographs before you begin, submit to certain codes when renovating, and then hold on to the house for at least five years.

Ask a lot of questions. That's the only way to learn.

Bring a professional with you when buying the house, too. I get a more realistic sense of what needs to be done.

Be wary of a house that doesn't have a good foundation. The cost of stabilizing can be high.

Many floor-upgrades need new roofs, so don't be surprised if you find asbestos water damage leaks.

Take long-term and invest in quality insulation, roofing, windows, and other structural materials that will stand the test of time.

Decorate with original items from the house and then expand to desired looks.



TELL US YOUR STORY

Did you renovate your house and do most of the work yourself? If so, tell us how you did it. We'll give you a \$100 gift certificate to the store of your choice. Please send a photo of your project, a list of the work you did, and a brief description of the work you did to:

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A George Mason master Masonry expert shows the first step in the process of painting a brick or stone. This classic round-point shovel is an essential tool in most landscaping projects.

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Doors Don't Behave

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than have them be there!

1. *Journal of Management Education*, 24(1), 1-14.

TOM SALVA REPLIES: When doors close without our help, it means their top-and-center hinges aren't plumb. The problem might be something as simple as loose hinge screws. Just get a helper to lift up on the door while you tighten all the screws. But if loose screws aren't the problem, then the door jamb itself is probably out of plumb. You can check by swinging the door out 90 degrees to the opening and holding a level against the door's left-side edge.

If the door's center is out of plumb, have your helper hold the door open at a 90-degree angle while you reattach the screws holding the top and center hinges to the jamb. Hold the level on the edge of the door and the hinge edge against the jamb, then adjust the door slightly until the edge is vertical. Loos the bolts in the hinges to enable the adjustment. Now screw new hinges. Fill the old holes before drilling and holes for the new ones. I just used a few wood-to-wood glue combs with woodworker's glue into the old holes to glue out these bugs when the plug dies. Wilson drilled

The new pilot holes are 1/8" bit that's a couple of sizes smaller than you normally would so that it won't wander into the old holes. Now when you reinstall the hinges, your door should stay where you put it.

By the way the fix is probly much the same if a door opens on its own - except that you work on the bottom and center hinges instead.

Wiggly Showerhead

Whenever I adjust the storefront, the shower arm moves in and out of the wall. Will this movement cause problems? Is there some way to stabilize the arm without opening up the wall?

Journal of Management Education 33(10) 1133-1147

RICHARD TREHENEY REPLIES: I wouldn't worry too much about a small amount of movement, but if it's moving a lot, a joint might break and start to leak.

The only proper way to attach the trim is to open up the end behind the shower curb—the plate connecting the shower pan with the shower walls—and secure it in place by fastening between the studs using a threaded rod.

I knew that sounds stolid, but either less invasive methods, such as wedging spacers of wood between the pipe and the wall, usually won't work for very long.

Mystery Carpet Smudge

Can you tell the why my wall-to-wall carpeting is darker where it meets the baseboard? Regular vacuuming does not seem to remove this dirty-looking smudge. The carpet is less than three years old and is light beige.

REINHOLD WITTMANN, HANNOVER, GERMANY

HEIN-DRUMMOND REPLIES. According to a couple of carpet-cleaning companies we checked with, that sort of stain is fairly common on all wall-to-wall carpets, if not shoes, too, so on



an opaque stain sometimes called a solid-color stain. These products aren't great for decks because they tend to let moisture seep in, the mood and eventually peel. A semitransparent stain is a better choice because it has pigments to block most of the harmful UV rays but doesn't form a film that can peel. These stains come in oil-based and water-based versions. I find that oil-based films are easier to apply evenly and tend to last longer.

Before you apply the stain, you'll need to sand off the existing finish as well as any gray wood, which won't take finish very well. So first, use all the nails or screws just below the surface of the decking. Then, rent a random-orbit floor sander—it's gentler than a drum sander—and use 60-grit paper

to get down to fresh wood. Proceed carefully, taking off only as much wood as needed. When you're done, vacuum all the dust and sand the deck light with 100-grit sandpaper. Stain. Research by the U.S. Forest Products Laboratory shows that even a few days of exposure to sunlight will affect the wood's ability to accept stain properly.

Keep a close eye on the stain over the next couple of seasons. You should get at least three years out of a good semitransparent stain. But if you see places where the finish has worn thin and exposed the wood grain, it's time to scrub the deck down and sanding needed this time—and apply more stain. (Edwards note: For more on wood deck maintenance, see "Refresh Your Deck," April 2004.)

Unreliable Pilot Light

Last winter, the pilot light on my gas furnace went out while I was covering a leaking water pipe freeze, resulting in thousands of dollars of damage. Can I replace the pilot with an electronic model that ignites automatically? And would this solve the problem?

WILLIAM GUTWIRTH, HUNTER, MASS.

RICHARD TRETNEYER REPLIES: Many manufacturers have kits that will allow an HVAC contractor to convert a standing pilot light to an electronic spark ignition system. The chief advantage of electronic ignition is lower fuel consumption and greater safety because there's no gas to leak if the pilot flame accidentally goes out.

But if your problem is low gas pressure, something the heating installer must adjust before changing to a spark ignition wouldn't much matter. It will try to light the gas up to three times, depending on the type. But if there's not enough pressure, it won't operate.

All you can do is verify your gas ability so they can check on the problem. If inadequate pressure is indeed the culprit, then the company will have to fix its distribution network, and that doubles a big time in coming.

Unsticking Stucco

My wife and I moved into a 1930s Craftsman-style bungalow last year. At some point, stucco was applied to the brickwork's surface as well as to the chimney flue to remove the bricks to expose the original brick. Is this possible without damaging the brick?

BOUS-DIARF, SAN DIEGO, CALIF.

TOM SILVA REPLIES: Just about anything is possible if you have the time and money. I hope you have plenty of both because this could end up being a huge project. But with

be worth it. Even if you succeed in getting rid of the stucco off without damaging the brickwork, you could find that the brick or mortar is badly deteriorated. That might be the reason it was stuccoed in the first place.

If you're still determined to get ahead start by removing the stucco from a small window or area about a foot square. Use a prybar to wedge cold chisel or a chisel into it with a 2- or 4-inch blade—whatever works. Wear safety goggles and leather work gloves. Once you clear a small area, it will break and remove stucco residue as long as you're not too aggressive.

Now you can assess the condition of the brick and mortar and how much time it will take to remove it all. Stripping the stucco from the chimney will be the bigger of the two jobs. Maybe you can live with it there as long as you can get it off the porch columns.

But if you run into a layer of metal mesh in your best patch, you might as well stop right there. The mesh was nailed to the house before the stucco was applied so your brickwork will be peppered with holes after the mesh comes off.

Metal Framing Basics

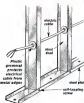
The trend that houses can be framed with steel studs instead of wood studs, but I haven't found much information about this topic. Specifically, I would like to know how the framing elements are fastened together and how wiring and plumbing are routed through the walls.

NICK SPINALE, ANDOVER, MASS.

TOM SILVA REPLIES: I've worked a lot of metal studs in remodeling projects, though I've never built a whole house out of them. But I can tell you that light-gauge steel framing is different in several respects from wood framing.

For example, the horizontal piece at the top and bottom of wall studs is called a track.

STUDS OF STEEL



that the C-shaped studs fit into the edges of the tracks are then simply fastened to the edges of the studs with self-tapping screws, which cut their way into the metal without pilot holes. Not surprisingly, your main tool in this work is a screwdriver instead of a ruler or a hammer. A cut-off saw specifically a chop saw with a 14-inch blade—also takes the place of a miter saw for trimming studs to length.

It's best to order to run wiring and plumbing supply lines through light-gauge framing then through wood because metal studs have holes, called knockouts, already punched in them. If you're running an electrical cable like Romex, remember you have to snap in a plastic grommet to protect the wires.

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soft plastic sheathing from the toilet's vinyl edges. For cement or bit walls, which has flexible metal sheathing, there's no need for gaskets.

Itsy Bitsy Bathroom

What is the smallest size possible for a half-bath?
CELIA GOOD, RT 6-NH.

BOB SILVA REPLIES: I've put half-baths, sometimes called powder rooms, in some really snail spaces, including closets and under stairs. But I've never been able to figure out just how small I could go without upsetting the building inspector until now. And just to painster the end of features, an installation is a factor at this remove.

The two fixtures in a half-bath—a sink and a toilet—both need a certain amount of space just to use them comfortably. The International Residential Code (IRC) requires a minimum side-to-side clearance of 15 inches from the centerline of a toilet to the nearest wall. So the bathroom is narrowest dimension is 30 inches. IRC also requires at least 21 inches of clearance in front of the toilet bowl. That means both that sink and only 20 inches from the wall, which means you need a minimum footprint of 47½ square feet just for the toilet.

As for the sink, a small one measured in a corner occupies the toilet can project just 7 inches from the wall. The IRC specifies you leave at least 21 inches of space for someone to stand in front of a sink. But since you're not likely to have more than one person in there at a time, this space can overlap with the space in front of the toilet. Toilet room length, therefore, could be 32 inches. If equipped with a pocket door, which doesn't require any swinging space like a hinged door, your tiny room could occupy every square foot of 47 square feet.

Don't forget about headroom. You'll need at least 7 feet except above the toilet, where it can be as low as 6 feet 6 inches. All of this works in theory; you'll be sure to check with your building department for local code requirements before you put theory into practice. ■

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MILL SPOKE

PHOTO: BOB SILVA



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SKILL BUILDING

Painting Iron

[Start on the Rail, page 43] To get wrought iron a smooth painted coating, it helps to follow a methodical painting sequence that moves from top to bottom, as shown in the photo below.

- 1. Upper bars.** Using a series of quick brush strokes up from the top and paint each bar all the way around. When it's left to dry with a final coat (the final coat, then halfway down the bar then up from the rail).
- 2. Upper rail.** Brush out from each bar's base until the paint line is continuous. Paint the rail's end-side around each bar in the same fashion.
- 3. Middle bars.** Paint each bar completely before coming to the next. Brush with downward strokes all around and most of the way down each bar. Then paint up from the bottom rail.
- 4. Bottom rail.** Follow the same sequence in the upper rail.
- 5. Bottom bars.** Brush each one down from the bottom rail — Thomas J. Sawyer



[Tip]

On wrought ironwork with intricate scrolls, coat the crevices where a brush can't reach with spray paint. Apply light coats (to avoid drips), and immediately brush out any overspray. Finish all the spray painting before brushing the rest of the work.

Steeling the Ceiling

[Steel in Progress, page 43] Covering a ceiling with uncoated plates of lined steel or copper brass, or aluminum, is a lot different from tiling a floor except that you're working overhead and there's no messy adhesive or grout to deal with. For a job that will have your hands going up in frustration, follow these basic steps:

Install plywood. The ceiling joists are laid in place with special curved metal rails, which have to be driven into each, aligned or plaster work etc. In third day, install metal plates. The plates are gridded to form a pattern, but they're easier to cover with sheets of 1/2-inch plywood, glued and screwed in place. (You'll probably need a helper for the step.)

Find the ceiling center. Ten pairs are installed starting from the center and working out. To find center, stretch a chalk line between opposite corners of the ceiling and snap a line on the plywood. Double same with the other corner. The lines cross at the center of the ceiling. Have a square line through the center panel with the square's longest side. The other baseline for the length of the room. Finish by snapping another line through the center. The line is 90 degrees to the first baseline.

Plan the layout. The first layout should be "balanced" so that the plates that meet are well as the same size as the plates touching the opposite wall. If a panel has to be cut down it should be

- at least one-third of its original size. To find where the center panel will land, work out how many panels will fit along the baseline. We take 10 square feet for the overlap, typically 1/2 inch. Then adjust the center panel's position to create the desirable pattern along the ceiling perimeter.
- Orient the ridges.** Remove the panels center-most will have exposed ridges. Install the panels so the ridges face away from a room's main doorway will make them less noticeable.
- Close the seams.** Tighten up any gaps between trapping against the overlap edge with a hammer and soft pine block (above).
- Coat the metal with paint or clear polyurethane.** Turned steel will rust if it's not protected from humidity. Cover the surface thoroughly with lacquer thinner. Use a brush and roller to apply a clear oil-based polyurethane or oil-soluble oil-based metal primer. Coat the primer with oil-based paint. —T.J.



More Cool Air for Less

[Cold Comfort, page 43] The two parts of a central air-conditioning system are the condenser and the evaporator, should be maintained annually to maximize their efficiency and minimize your electric bills. Some of these tasks can be easily accomplished by a homeowner; others require a skilled technician. Here are a few things you can do before the cooling season begins.

AT THE CONDENSER

- Plus open the unit's side covers and
1. Gently brush dirt off the cooling fins with a soft-bristled paintbrush or spray it off with a hose. (Never use a pressure washer which can bend the fins.)
 2. Recharge or bend fins with a fin comb available from AC dealers and supply houses.
 3. Pick up and remove leaves, lawns or debris. The needles are particularly adept at clogging the fins.
 4. To ensure max summer flow through the condenser coils, prune back vegetation and remove any obstacles within 2 feet of the condenser.

AT THE EVAPORATOR

- Shut off the power, remove the cover and
1. Brush out the evaporator pan with soft, not water, a stiff brush, and a sponge.
 2. Pour bleach through the pan's condensate tube to kill mold and algae, which can clog the tube and cause the pan to overflow. Check the tube's outside and to make sure it's draining freely.
 3. Wipe down the coils.
 4. Vacuum dust off the blower fan.
 5. Change the air handler's filter. Make sure the replacement matches the blower's capacity in cubic feet per minute (cfm).

CALL IN AN EXPERT

You'll need a technician to check the refrigerant pressure, test for leaks, clean and tighten electrical connections, measure air flow through the evaporator, and make sure everything is functioning properly. In central air, whoever does this work follows the manufacturer's specs for the amount of refrigerant. For a system "overcharged," adding too much refrigerant, is as harmful as not having enough. —Max Jacobson

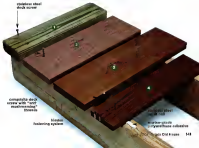
[Tip]

Place a chlorine tablet, the kind used for swimming pools, in the evaporator pan. It will prevent the growth of algae or mold.

Fastening Deck Boards

[Quick Deck the Deck, page 43] The decking material you choose often comes with fasteners you use. Here are four durable ways to hold different types of decking in place.

- 1. Pressure-treated.** The high copper content of the new, arsenic-free deck boards quickly corrodes fasteners made of mild steel. Even those with galvanized coatings. Stainless steel deck screws are the way to go. (Stainless fasteners are also recommended for teakwood and western red cedar.)
- 2. Composite.** Solid deck boards made from recycled plastic and wood fibers (Trex, Trex Composite, Trex, Trex Composite, Trex Composite) are often made from a blend of two. Special screws with a secondary set of double-flared threads (Trex screws) are best. (Trex screws are sold separately from the Trex decking.) By using the double-flared threads, the screws won't pull out of the board's surface.
- 3. For built-in deck fasteners.** When you're adding a built-in deck, you're using wood decking, why not use screws or nail heads? Hidden fastening systems eliminate "fastener scars" as well as a potential entry point for water. The EZ-IT system uses a specialized fastener that fits into a slot or groove cut into the edge of each board. An angled screw secures the board and the board is set in place. (This method works with all types of solid decking, including composites.)
- 4. The built-in deck.** The durable trap cap hardware is so dense it has to be drilled before it can be screwed in. To save time, the EZ-IT system general contractor Tom Silva drilled just two or three small pilot holes into the face of each board, then lays it in a bed of marine-grade polyurethane adhesive squeezed onto the plate. (Light penny-stroke steel nails made hardware into the plate hole, hold the board in place while the adhesive cures. Then say to yourself: "The hole is placed properly to minimize its effect on the deck's appearance. (This method works with any hardwood decking.)" —Scott Schilling



Scribing for a Tight Fit

["Building a Bookcase," page 30] Making a tight, precise fit between the side trim of a cabinet and the wall is a process called scribing—it's one of those critical details that separates the real craftsmen from those of us who rely on tools. But it's not that difficult: once the cabinet is placed and fastened in place...

1. Decide how you want the trim to cover the gap. (See choices at right.)
2. Set the compass to the widest part of the gap. Rest its metal point on the trim and the pencil point on the spot where you want the edge of the trim to end on the cabinet. Your trim must be at least this wide.

3. Place the trim piece. Hold the trim against the wall with one edge and adjust the trim until it's perfectly flush touching the wall. Lock or clamp the trim to the cabinet.

4. Mark the edge to be cut. Without changing the compass setting, rest the compass metal point on the edge where the trim was. Keep that point and the pencil point level relative to each other and make a mark on the trim in the vicinity of the widest part of the gap.

5. Scribe the edge to be cut. Rest the compass to the widest distance between the mark and the wall. Without changing that setting, hold the metal point against the wall and the pencil point on the trim and run the compass the entire length of the trim to make the scribe line. Be sure to keep both points level the entire time.

Now take the trim piece down and cut it with a jig saw along the scribe line. That way you'll have some material to sand or plane down for a perfect fit. —Mark Rosemary

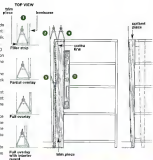


ILLUSTRATION: MARK ROSEMARY

Weaving Wood Floors

["Floor Joists," page 32] When Kerry and Don Givson pulled up the linoleum in their kitchen and saw the original wooden joist floors, they were inspired to put fir on the floor of their new addition as well. But installing a separate threshold piece between the old and new flooring wasn't an option: they wanted a seamless transition between the rooms. Enter Mike Perlick, of Perlick Wood Floor in Petaluma, California. He scuffed their request with a technique known as weaving.

Perlick began by chiseling out random-length pieces of old flooring along the border of the kitchen and the addition. "We didn't want to leave a patch anyone could see," he explains. In their place, he installed the new fir—milled the same size as the old stuff—and laid right on going into the new room's wood joists. After letting the new and old wood settle in together over the weekend, he sanded the entire surface.

The next step—matching the color of the old wood—was the trickiest part of the process. First, Perlick's crew painstakingly faded off the new flooring using a jagged border with the old floors. Then, using the old floor with a coat of oil-based polyurethane. The next day as they pulled the tape off the new boards and revealed the old floor, Perlick's in-house expert mixed a custom oil stain to make the new fir look old. "You have to experiment on pieces of white flooring until you get it right," Perlick says. He stained the new fir, gave it a coat of polyurethane and let it dry.

Perlick's efforts paid off handsomely. "We wanted a rustic floor," says Kerry Givson. "Now you can't tell the difference between the old floor and the new." —Sally Steady



Quick Pilot-Hole Bit

["Building a Bookcase," page 30] When finishing nailing into a tough hardwood such as oak, the shims are pretty good that the nail will bend off in the wrong direction or split the wood unless you drill a pilot hole for it first.

Instead of working around a nail that's retrofitted and not too big, just take an offset finish nail, drive it to head with a new cutter and chuck the shims into your drill. The nail's threaded point will bore through the wood, leaving a perfectly sized pilot hole for another nail. —MAP



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Throwing Sod a Curve

["Goes in-GO," page 104] Next, green rectangles of sod fit tightly against each other when laid in straight lines, but they won't conform to a curve such as around the edge of a flower bed. Some people cut the sod lengthwise into strips that can better accommodate a curve, but The Old House and-scape contractor Roger Cook says another trick, like that one more likely to dry out and die than even that remains full of life.

Instead, Roger makes his sod curve the way a fuller might, by cutting a slit or two in a full-sod piece. With the sod laid next to the curve, he grabs a couple of spoils along one edge and pushes them together to make the sod follow the contour of the bed (1). This creates a triangular-shaped fold that he steams down to create with a major knife (2). One side of the sod goes down against the ground. He lays the other face on top (3). Using the cut edge of the flap as a guide, he uses the knife through the sod and removes the triangular piece underneath (4). Now the face meet and—voilà—the cut disappears. —CB

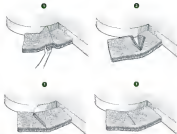


ILLUSTRATION: GUY LAWRENCE

Soil Testing 101

["Goes in-GO," page 104] Before you spend a lot of money to buy down soil, spend a little to have your soil tested. The payoff? It can save you providing the best environment for your new lawn to thrive.

A do-it-yourself kit from a garden center will give readings on pH (acidic or alkaline), your soil's level of crucial nutrients—nitrogen, potassium and phosphorus. But for the most accurate and complete results, have your soil tested by your county extension service or state university. They'll analyze a sample from your yard and send you a report. (See the one shown at right, obtaining this soil's pH, texture, and nutrient levels, and recommending how to correct any deficiencies. And if only costs about \$35, soil can be tested year-round, but it's best done in the spring or fall. To collect a good sample, dig at least five holes, 4 inches deep by 2 inches wide, in various spots in your yard. As you go, avoid or remove any grass, weeds, thistles, or roots. Mix a few samples together then put about 2 cups of the mix into a zip-seal bag and send it to the lab.

The more information you give with the sample, the more useful the recommendations will be. Note what kind of turf grass you're using, whether the yard gets lots of shade, sun, or foot traffic, or if the soil has been recently disturbed due to construction. Just don't wait until the last minute to have a test done. It takes about two weeks to get the lab's results, and then you'll need some more time to correct the soil, if necessary, before your soil gets down. —Johly Winkler

SOIL TEST RESULTS

Soil pH	7.6
Soil pH (Woodruff)	—
Soil pH (SMP)	—
Texture	SILT CLAY/LOAM
Excess Lime	—
Organic Matter (%)	2.3
Nitrate-N ppm	—
Ammonia-N ppm	0.0
Calcium ppm	16.0
Potassium ppm	326.0

RECOMMENDATIONS FOR: Lawn - Average
Maintenance
Lime Recommendations: NONE

FERTILIZER RECOMMENDATION
(Total Amount of each nutrient to apply per year)

Nitrogen	9-10 lb / 1,000 sq ft
Phosphorus (P2O5)	—
Potassium (K2O)	NONE

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The Beauty of Blocking

If you hang a couple of 2x4 boards on a nail connected to the drywall above, boards and nails will probably all end up on the floor one day. Tensel nails (like handrail fasteners, picture nails, and a lot of other bathroom hardware) should always be connected to something solid like studs. The same goes for cabinets and vanities.

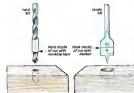
Unfortunately there isn't always a stud where you want it. That's why we install 2x4 blocking or studs when building new bathroom walls, or whenever we open a wall during remodeling. It's an easy target to fill with insulating sheetrock, and you can secure something solidly where you want it.

The blocking's height depends on what you plan to install and for whom. Tensel nails usually fit 48 inches above the floor rails for kids or people with disabilities are about 30 and 40 inches high, respectively.

To install blocking, cut it between the studs and drive several 2x4 nails through one stud and into the end of the blocking piece. Then do the same to the blocking's other end. If you can't end nail, then tap nail through the top and bottom edges and drive lines through the face as I'm doing in the photo.

Depth Gauge

If you have to drill a hole to a specific depth, how do you know when to stop? You can buy adjustable stop collars that slip over twist bits, but it's a lot simpler (and cheaper) to wrap a couple of turns of masking tape around the bit so you can clearly see when the bit reaches its desired depth. Tape will also work on auger bits, or you can just use a marker—it's surprisingly easy to see when the bit is spinning.



Utility support box

Dick Holden built the first Old Mouse commode had a small elevated box to serve as a multipurpose stool. It's nothing fancy just some scraps of 1/2-inch plywood held together with carpenter's glue and preformed floor nails. A handhold cut into each end makes it easy to carry around. Dick left it behind when he departed the show. Dick (DORville, our current commode) and I have shared it ever since.

Merely I use it as a step ladder—it's rectangular cross-section gives me two different levels to stand on. And when tapped on end it makes a handy chair to sit on at the home. If Dick doesn't visit it fast.

DIRECTORY

Around the House

"Trouble in the Tropics" Foster Sewerback Control—U.S. (PSC) 185, Whitehouse, DC, 202-242-6803; Inca.org; Raintest Acacia Network, San Francisco, CA, 415-396-4434, san.org; Greenpage, 202-462-1177, greenpage.org.



By Design: Kitchens

Architecture: Cullen Mahoney, AIA, Mahoney Architects, Warren, CA, 415-415-6073; mahoneyarchitects.com. **General contractor:** Dave Martin, Credence Construction Company, Petaluma, CA, 707-763-6667; credenceconstruction.com. **Cabinetmaker:** Jon Nelson, Hamilton Cabinets, Petaluma, CA, 707-762-6234; credenceconstruction.com. **Furniture:** dink Eklund, Eklund, WA, 206-456-0337; eklund.com.



Landscaping: Pathway Plants

Company personnel: Jacques Casper, Valleybrook Gardens Ltd., Albion, B.C., 604-258-1761; jasper@valleybrookgardens.com. **Pathway plants:** Leda Plaza of Oregon, Astoria, OR, 360-479-5637; ledaplazaoforegon.com.



Garden Gate Nursery, Hartford, CT, 262-367-6464; gardengate.com. **Special thanks to:** Tina Hopkins, homecharm, Sepulveda, CA, 303-511-1515; sepulveda.com.

Interiors: The Gelling Tiles

The collage: Starr Chisum Decorsive Metal Company, Houston, TX, 713-721-9390; decorsive.com. **Flour-de-lis:** Starline Industries Inc., Lake Success, NY, 516-437-1144; starline.com. **Wagon wheels:** W. F. Norman Corp., Nevada, MO, 800-640-4038; wfnorman.com. **Geometric:** AA Abneycoo Affiliates Inc., Brooklyn, NY, 718-258-8333; abneycoo.com. **Victorian:** The American Tin Ceiling Co., London, FL, 888-231-7590; americanincelings.com. **Old-world accent:** AA Abneycoo Affiliates Inc. **Painted-steel:** W. F. Norman Corp. **Factory-finished:** M-Boss Inc., Cleveland, OH, 800-846-2673; mboss.com. **Square deal:** M-Boss Inc. **Cross purposes:** M-Boss Inc. **Based in:** AA Abneycoo Affiliates Inc. **Company:** Egg and Girl, Seattle, WA; Flour-de-lis, AA Abneycoo Affiliates Inc.



Upstage: Box Gate Pin-up

Electrical: Zenzel Ironworks, Norwalk, CA, 912-554-8158. **Paint:** Rose Glass Protective Enamel, Rose-Glass, Vermont, VT, 802-367-7700; zenzelironworks.com. **Printer:** Rose Glass Jewelry Metal Frames. **Real media:** Rose Daphne, Skyline Co., Cleveland, OH, 214-771-1390; roseglass.com.



Home Tech: Outdoor Audio

Excellent audio/video consultant and installer: Scott Trapp, Stamford, CT, 917-439-8901. **Video installation:** Video Installation Plus, Harroville, ME, 214-325-7711; vinstall.com. **Direct-burial cable:** Star Sound Cable, San Marcos, CA, 800-966-0060; starcable.com. **Special thanks to:** Jill Kutz of Electronic Interiors, Greenwich, CT, 203-429-5623. **Speaker:** Martin of Audio Video Systems, Moravia, NY, 315-759-1816; audiovideosystems.com.



How It Works: Central Air-conditioning

Our thanks to: The Air Conditioning Contractors of America, Arlington, VA, 811-290-2120; acca.org.

Turn air-conditioning distributor: The Whitlock Group, West Caldwell, NJ, 973-233-5200; turn.com. **Scroll technology:** Copeland Scroll Compression, Emerson Climate Technologies, St. Louis, MO, copelandcompress.com. **Air-conditioning systems:** Lennox, Richardson, TX, 800-315-6689; lennox.com. **Carrier:** Piquette, CT, 800-237-7437; pld.com.



For more information: Comfort Energy and Design AS Market, published by the Air Conditioning Contractors of America.

Homeowner's Handbook: Building a Business

Holding: Dylan Lander Co., New York, NY, dylanlander.com. **Phycoogy:** FSI Homekamp Co., Brent, NY, 800-999-6113; homekamp.com. **Wildwood Design:**



Richard Gantz, WA, 800-470-9999; wildwooddesign.com. **Stable and finished:** Marvyn Wood Finish in Princeton, NJ, 908-313-9239; marvyn.com.

The Right Way to Hang It

Our thanks to homeowners: Mary and Joe Hardwick, Monroeville, LA. **Painted porch railing:** J. Lee Googins, Wood-Green Fine Tool Goods, Pompano, Garden, NY, 800-323-8030; woodgreen.com. **Blue:** The Wood St. Technical Glass & Adhesives, Franklin, Indiana, Columbus, OH, 800-877-4333; technical.com. **Flask:** CFW Inc., The Wood Company, Madison, OH, 800-321-3444. **Food:** Tom of Fresh 'N' Hot, Rose-Glass, Vermont, VT, 802-367-7700. **Realistic:** AA Abneycoo Affiliates Inc., Eufaula, AL, 800-444-7123; abneycoo.com.

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Think Outside the Box
pg. 67-68

Architects: James L. Bodnar, AIA, RIBA James Bodnar Architects, New York, NY, 212-794-0744; bodnar.com. **Thomas Kelley, AIA,** Thomas Kelley Architects Inc., Montclair, CA, 908-969-1191; architects.com. **Chris DeRamus, AIA,** DeRamus Associates, Cambridge, MA,



Think outside the box
pg. 67-68

417-641-5043; design-associates.com. **James D'Hara, AIA,** James D'Hara Associates PC, New York, NY, 212-264-1144; jdhassociates.com. **History of decks:** The American Porch: An Informal History of an Informal Place, by Michael Dubler, The Lyons Press, 2002.

Grass to Be
pg. 124-125

Bob Harris, Chip Lane, Tim Island The Nantux, Pine Island, NY, 800-780-4873; nantux.com. **David Mollis, Ted Ples** The Ples, New Canaan, CT, 574-232-4111; nantux.com. **Landscape contractor Roger Cook,** R & B Tree and Landscape Co., Sudbury, MA, 781-272-6404.



Peak Performance
pg. 110-119

Woods— **Walters, Bruce Tappan,** Korohe, NY, 516-234-4362; waltersappan.com. **Geiler Cedar Shake and Shingle Farms,** Somers, WA, 804-423-7706; cedarshakes.com. **Timothy Carter,** Fraser Cedar Products, Somers, WA, 800-361-7022; frasercedarproducts.com. **Lightweight concrete shake:** Avenco

Roofing, Fortuna, CA, 808-557-7643; avencorof.com. **Steel shake:** Tando Roofing Products Inc., Joplin, MO, 800-641-4491; tandoroo.com. **Aluminum shingles:** Classic Products, Popo, CA, 800-543-4931; classicprod.com. **Treated pine:** Lufkin Products LLC, Poplarville, MS, 601-673-4133; lufkin.com. **Building-grade shake:** EcoShake, Marshfield, IL, 800-215-7176; ecoshake.com. **Resin shake:** EcoShake, EcoShake Systems Inc., Morgan, WA, 408-544-3437; ecoshake.com. **Tile—**

Turn-outs, colored, and glazed tiles: Ludowici Roof Tile, New Lexington, OH, 800-917-0199; ludowici.com. **Formed concrete tile:** Masonite, Irvine, CA, 800-571-8453; masonite.com. **Modular tile:** Masonite Roof Products, Greenville, SC, 864-233-7643; masoniteproducts.com. **Shale—**

Slate: The New England Slate Co., Fairfield, VT, 844-437-5243; slateco.com. **Formed concrete:** Wonder Roofing Products, Can Gambia, AZ, 800-567-1306; wonderroof.com. **Rubber-plastic:** EcoFlex, Mandeville, IL, 800-211-7179; greenearthproducts.com. **Steel:** Tando Roofing Products

Mod— **Copper shingles:** Copper Shingles Inc., New Canaan, CT, 800-424-7737; coppershingles.com. **Copper shingles:** ProShingle Shingle Inc., Midvale, UT, 877-475-4643; proshingle.com. **Copper Roofs:** Copper Roofing Inc., Klamath, NE, 800-443-1776; copperroofs.com. **Lead-coated copper:** Cambridge Sheet Metal Co., Allston, MA, 800-334-1140; cambridge.com. **Zone-tile:** Polysider Steel, Polysider, WV, 800-434-6906; polysiderroofing.com.

Galvanized steel: Metal Roofing Company Ltd. Manufacturing, Ontario, Canada, 800-347-0460; metalroofing.com. **Zinc:** Zinc Roofing Systems Inc., Cambridge, MA, 617-471-4777; zincroofing.com. **Asphalt—**

Three-148: Ceram-Tek, Valley Forge,

PA, 808-712-8777; ceramtek.com. **Metal:** Metal Roof Products. **Laminated:** GAF Materials Corp., Wayne, NJ, 908-515-1432; gaf.com. **Our special thanks—** Custom slate and metal installation: Shindler Slate Inc., Owerly, VT, 800-943-2744.



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What's on TV Now

Don't miss these vintage projects on HGTV, DIY Network, and local broadcast stations. Go to www.thisoldhouse.com for local stations and times and for additional information about the projects featured here.

HGTV

UNDERSTOWN

The show kicked off its 20th anniversary with the renovation of a sprawling 5565 Queen Anne-style Victorian in Westport, Massachusetts.

CHARLESTON

The Old House worked on the expansion and renovation of an 1895 Colonial English bungalow in Barker 113 Street in the historic Boston neighborhood of Charlestown.

WEST PALM BEACH

The Old House Team heads to sunny Florida where they transform a Mediterranean Revival-style bungalow into a delightful tropical retreat.

DIY NETWORK

RELMONT

The renovation of a 1907 shingle-style Victorian is featured in this project. It also included the removal of asbestos siding and the overhaul of the kitchen.

MINNESOTA BUNGALOW

The renovation and expansion of a 1930s semi-detached bungalow bungalow is the featured project.

LOCAL BROADCAST STATIONS

WINTHROP

Fixed architect Donna E. Dand designed a second floor addition and a guest room for this radical transformation of a sparsely 1850s home instead of reinforcing the past. Dand invented the present and the result was a house designed with excitement.

This Old House CLASSICS



ON TELEVISION

Find your local stations and air times for all of our shows simply by entering your ZIP code at www.thisoldhouse.com/programs/tvschedule



Find

The hit design and collecting series continues to celebrate the world of beautiful objects in its second season on PBS. The Keno brothers, along with the newest cast member, interior designer Alex Hampton, show you how to combine the old with the new, reveal the basic principles and practices of interior design, and explore the creative process itself. Inspired home design begins when passion and knowledge meet. Send in your treasures to unearthedtv.com and the Keno brothers might just knock on your door. Be sure to tune in each week on PBS (check your local listings or visit www.unearthedtv.com).

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In only ten remarkable months, the transformation of our 20th anniversary project house in Carle, MA is complete. Master carpenter Norm Abram, general contractor Tim Silex, plumbing and heating expert Richard Trethewey, landscape contractor Roger Cook, senior design consultant Alex Hampton and host Kevin O'Connor have once again applied their years of experience to create a home that blends tradition and technology. On PBS, you've seen the progress with each unfolding episode of the show. In the magazine, you've read articles that go to greater depth on such topics as converting a barn into living space. And now, beginning April 13 and running through May 20, the This Old House design show house will be open to the public featuring 22 extraordinary spaces that emphasize a sense of high style for everyday living. Tickets are available at solclichs.com or ticketsoldhouse.com.

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Ask This Old House

Ask This Old House returns for its third season on PBS with truckloads of home repair solutions. The guys with the road knocking on doors nationwide, from West Coast stucco menders to classic New England Capes, solving every home maintenance problem. Tune in for new episodes of Ask This Old House in prime time exclusively on PBS, Thursdays in the second half of The New This Old House Hour at 8 p.m. ET (visit www.thisoldhouse.com or check local listings). If you've got a problem for our experts, send an email to askthisoldhouse@thisoldhouse.com or mail a letter to Ask This Old House, This Old House Magazine, 1185 Avenue of the Americas, 27th Floor, New York, NY 10036.

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INSIDE House

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WORKSHOP

The following resources are being offered by the National Roofing Contractors Association (NRCA) to help you learn more about the industry and the products and services it offers. The NRCA is the leading national trade association for the roofing industry, representing more than 100,000 roofing professionals in the United States and Canada. The NRCA's mission is to promote the roofing industry, its products and services, and to protect the interests of its members. The NRCA's website, www.nrca.net, is a valuable resource for roofing professionals and homeowners alike. The NRCA's website provides information on the latest roofing products and services, as well as information on the roofing industry's role in the economy and the environment. The NRCA's website also provides information on the roofing industry's commitment to safety and quality. The NRCA's website is a valuable resource for roofing professionals and homeowners alike.

shadblow.com, Rand Engle, cultural resource specialist, Shenandoah National Park, Leesville, VA, 440-839-1000, engle@shadblow.com
Ideal Roofing Atlanta, Atlanta, GA, 404-233-4264, info@idealroofing.com The Ideal Roofing Institute, Chicago, IL, 312-670-4177, info@idealroofing.com
National Roofing Contractors Association, Rosemont, IL, 630-299-1070, www.nrca.net
Carl Cook, consulting engineer, Simpson, Gumpertz & Hays, Wellesley, MA, 781-907-9000, John.Miller@shs.com, SAA, Kananis, NY, 516-232-4103, jshambers@shs.com
Roger Moss, director, Telephonic Advisors, philsherman.org

Transformations: This Old House—Saved

pp. 100-109

Project management Candice Price, Blackstone Restoration LLC, St. Joseph, MO, 816-496-8346 **Carpentry** Bobby Walker, Walker Construction, 816-390-5112
Paint Rose Minkley in Aiken, Ohio, then in Harbison Park, special mix in



Roof Red Accents, American Traditional Paint, Village, Iowa.com
For more information on St. Joseph, MO, and the Save Our Heritage grant program Robert Myers, city planner, 816-232-0030, or rmyers@mo.gov

Workshop: Ask This Old House

pp. 104-105

Expert information Gayle and Rug, Intertec, Dubois, CA, 800-482-1944, carpenter@intertec.com
Landscaping contractor Roger Cook, K & R Tree and Landscape Co., Burlington, MA, 978-232-4104 **Deck** Walther Cabin Systems, Newburyport, MA, 800-577-2161, info@walther.com



Workshop: Wall Building

pp. 140-141

Tin ceiling installation W.C. Norman Corp., Nevada, MO, 800-641-4031, info@norman.com
Bras Gervin Tin Ceilings, Pennington, NJ, 609-743-7130
Insulation, air conditioning maintenance Lennox, Richardson, TX, 800-951-6669 **Insulation** Pilsen Bros. Insulation, Chicago, 773-381-6641, info@pilsen.com
Deck fasteners

Stainless steel screws McPhy's Systems, St. Louis, MO, 800-443-7817, info@mcphy.com
Concrete Depo, Esport, FL, 877-366-1333, info@depo.com
Hidden fasteners DS-TY, New Haven, Connecticut, 203-344-3444, info@ds-ty.com
Composite deck screws Torgeson, Olympic Manufacturing Group, Agawam, MA, 800-518-3143, info@torgeson.com
Marine adhesive 3330 Fast Cure, IN, St. Paul, MN, **Insulation** Weaving Flooring, Mike Perini, Perini Wood Floors Inc., Fremont, CA, 707-758-9003.



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