NOVEMBER 2004

25th ANNIVERSARY

This Old House®

- ALL ABOUT INSULATION: **9 Ways to Cut Heating Costs**
- HOW TO: **Paint Yourself a New Kitchen**
- FIRST LOOK: **10 Great Bath Sinks**

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FIRST IN A SERIES

Builders need young people to Start Working

As tradesmen age and skill levels decline the construction industry is developing a new generation of workers **By Fred Humphreys**

Photo: Mark Wieder

By almost any account, the future of America's construction industry promises growth and innovation. At the same time, we face a deepening challenge: a serious shortfall in both the numbers and skill levels of the people needed to maintain a robust, well trained workforce. The average age of a carpenter, for example, is around 55, and the number of tradespeople retiring in the next 10 years will only worsen the situation, even while demand is increasing.

Part of our problem is image. There's a perception among young jobseekers, their parents and their guidance counselors that construction occupations are unsafe or limited, and that a worker can't rise very high professionally. Compounding this significant problem has been a general decline in the skill levels of people who are entering the workforce. This can also be traced to the industry's historical lack of involvement in the nation's school systems.

The impact of these problems goes well beyond the construction industry. To be sure, it faces higher costs and lower profits (from labor shortage-driven wage hikes and from projects that take longer to complete or suffer from inadequate workmanship), but communities and even homeowners can also be hurt. In any town, the construction trades are typically a major employer and when they suffer, businesses close, tax rolls drop, and other commerce declines. Homeowners invariably end up footing the bill for higher-cost construction.

Faced with so widespread a problem, the industry has taken several steps to solve it. The Home Builders Institute, the workforce development arm of the National Association of Home Builders (NAHB), has gotten involved locally and nationally to convey a truer picture of construction industry career opportunities (there are nearly 150) and to create education programs that will help people take advantage of them.

Working through our more than 800 local homebuilder associations, we are establishing better relationships between builders, public schools (senior, intermediate and even elementary) and community colleges. At the elementary school level, NAHB is partnering with Bob the Builder—a branded line of books, toys, cartoons and other products—to introduce more kids to our industry. For junior high schools, we've developed career-exploration products for teachers and guidance counselors. The NAHB has also developed a CD-ROM for 13- to 15-year-olds called Homes of Our Own. We're working with some high schools to offer mentoring and summer employment programs.

We're also establishing an apprenticeship program that links community colleges, local builder associations and high schools. In Europe, where apprenticeship is much stronger, there's a pride in craftsmanship and in people who do things other than sit behind a desk.

> Tackling the workforce problem head-on will bring young people into the industry for the benefit of all

We've lost that in this country. So we've joined with the American Association of Community Colleges in developing a career ladder in which people can graduate from high school, enter a craft program, earn while they learn and emerge as a registered apprentice with an associate degree in their chosen trade. Our goal for the next three years is to try this concept in eight states and fine-tune a model for high schools and community colleges across the country.

To help raise the quality of training, we've developed our Residential Craft Standards, and so far we've done that in five trades: electrical, plumbing, heating and air conditioning, maintenance and carpentry. The standards tell teachers precisely what employers expect and what should be taught. We're following that up with new textbooks, CD-ROMS and other materials. We're very proud of this program.

The list of projects and initiatives continues to develop, but the point is that tackling the workforce problem head-on will bring young people (and second-career adults) into the industry for the benefit of all: builders, communities and homeowners.

There's a long-held notion that somebody in construction operates out of a pickup truck and has a dog sitting in the back. That's nostalgic but no longer true. Workers do drive pickups, but they have a laptop in the front seat and a B.S., M.B.A., or apprenticeship certificate hanging on their wall at home. They're smart and well trained, and you're going to see more of them. That's our challenge.

Fred Humphreys is the President and CEO of the NAHB's Home Builders Institute

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*Research shows that Samsung's Nano SilverSeal™ technology reduces bacteria such as Staphylococci and E. coli when they come in contact with the Nano SilverSeal™ coating.
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PHOTOS: (CLOCKWISE FROM TOP LEFT) JACK SICHOVSKY; PAUL WHICHELOE; RUSSELL RAYE

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COVER PHOTO BY PAUL WHICHELOE
STYLED BY MATTHEW MATTIELLO

VISIT THIS OLD HOUSE ONLINE AT www.thisoldhouse.com or AOL Keyword: This Old House.

Slide a "no-brainer" under the tree.

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+

"The granddaddy of all combo packs for my granddaddy!"

+

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This year, give the gift that every do-it-yourselfer really craves. Power, flexibility, control, possibilities! And then, pass the mistletoe.

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+

"Dad's battery graveyard of a workbench is no more."

+

"Lots of tools and just one power source. Merry Christmas indeed!"

+

"One+ whatever we think of next."

17 great tools & extras

+ *more on the way!*

+

"The one place to get One+."

THE HOME DEPOT

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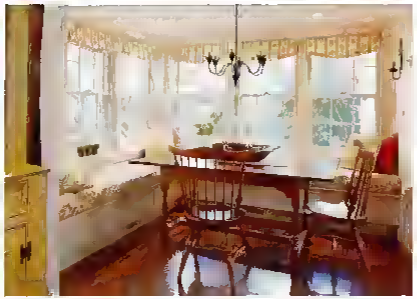

FOR MORE INFORMATION, SEE DIRECTORY PAGE 144.

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Are You Ready for a Storm?

Hurricanes, tornadoes, blizzards—any season can be storm season. How would your house fare? Learn what you need to know, and take our emergency-preparedness quiz to make sure you're ready.

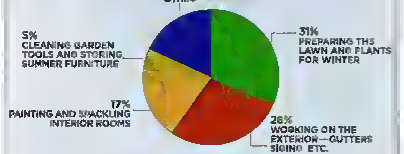
MAGAZINE AND BOOKS
TOH's *Complete Remodeling*

Available now in our online store, this handy book takes you through the entire remodeling process, from planning the job to choosing the best materials to fit your needs and budget. It's a must read for anyone embarking on a home-improvement project.

HOMEOWNER KNOW-HOW
Battening Down the Hatches

We asked: How do you spend most of your project time in the fall?

You said:



HOMEOWNER'S ALMANAC

Month after month, season after season, the online almanac brings you up to date information on taking care of your home. Have it delivered to your e-mail box or read it online—there's a new edition every week.

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PHOTOS: CHRIS HUNT CHAMPLE

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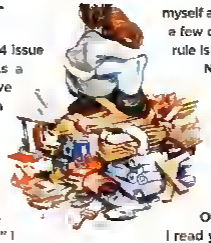
25 THINGS ABOUT REMODELING



Your September 2004 issue was outstanding! As a contractor's wife, I've lived through many a remodel and even building a new home, but your "Why Didn't Somebody Tell Me?" was priceless. Thank you for reminding us that "it's only a house." I plan to give a copy to my husband's latest client

KOLENE WOODWARD, GERING, NEBR.

I had a good chuckle reading your article "Why Didn't Somebody Tell Me?"

When the family decided my mother-in-law [could no longer live on her own], my husband, Tom, and I volunteered to build a cottage in our backyard with the help of family, friends, and some know-how. I found myself acting as general contractor. I made a few common mistakes, but my favorite rule is #22. Remember, it's only a house. Now we spend time there just enjoying the new guest house. It was worth every bit of #19: Sweat the small stuff

SHARON MARSHALL, FREEMAN, MO.

100 PERCENT MORTGAGES

Owning a small mortgage company, I read your article "Mortgage Madness" [September 2004] with great interest. Something that the article misses, though, is that not all loans that finance 100 percent of the value of the property require mortgage insurance. There are many nonconforming lenders that will loan 100 percent of the purchase price and not charge mortgage insurance. The interest rate may be somewhat higher, but with no mortgage insurance the payment may work out to be equal or less. Additionally, you can often split the loan to an 80 percent first mortgage and a 20 percent second mortgage, with neither carrying mortgage insurance. In this case the combination of the two payments very often can be less than one single loan with mortgage insurance.

Remember, mortgage insurance never benefits the homeowner. None of the premium goes to principal or to building equity, it all goes to the insurance company.

If your lender tells you that these loans are not available, please find a good mortgage broker to help you.

PATTIE RUSH,
RUSH MORTGAGE CONSULTANTS INC.,
WINFIELD, ILL.

punch list

definition: a list of items incorrectly done or remaining to be finished on a construction job

- In "What's Packing?" Ask This Old House, September 2004, the reply should have read "wrap fresh packing about three times around the stem clockwise," not counterclockwise, as printed. The illustration in that column shows the correct technique.

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DIGITAL TELEVISIONS

There's a new face on the This Old House *and* Find! *TV show teams. Meet interior designer* ***Alexa Hampton****, who joins us as senior design consultant this season.*

INSIDE ADDITION

BY ALEXA HAMPTON

TOH *senior design consultant Alexa Hampton will be putting her talents to work on the Carlisle TV project*

So what does interior design have to do with *This Old House*? As you probably already know, it's more than picking out fabric swatches and paint chips. Designing interiors requires being aware of how people actually live in and use their spaces. Ideally, a designer is on board with the architect and the builder from the very beginning of the design process. Working with the homeowners is most important of all, learning about their tastes and needs and making sure that these are reflected in the final design.

Sometimes it's the interior designer who remembers the questions that others forget to ask. Just as the electrician should determine the ideal size of the breaker panel and the plumber should have a lot to say about the paths that pipes take, the interior designer must always think about whether electrical outlets and switches are conveniently placed to accommodate the furniture layout and if a given bathroom ought not have a big, usable sink rather than a dainty, decorative washbowl.

A conscientious designer also works with the architect to ensure that if the homeowner likes curtains, the windows are of the right type and in the right place, and that if the homeowner likes to entertain, there's enough room for everyone in both the living and dining rooms. These are the types of issues that interest me passionately, and I hope to bring that passion to *TOH*.

"INTERIOR DESIGN IS MORE THAN PICKING OUT FABRIC SWATCHES AND PAINT CHIPS."

I come by this passion naturally. I'm a second-generation interior designer. My father, Mark Hampton, founded his New York design firm in 1976. Growing up on a farm in Indiana, he was the kind of kid who pored over art books and architectural and interior design magazines. He went on to build a successful business, eventually designing rooms at the White House and writing for—and being featured in—the magazines he'd read as a boy.

When I was a child, my parents' idea of an exciting family vacation was touring Jefferson's Monticello or driving around Ohio looking at farmhouses, and I have vivid memories of summers spent exploring the historic palaces and cathedrals of Europe. Both my parents were wonderful guides, sharing their own enjoyment while also explaining what it was that made for the best design, that precious mix of the beautiful and the practical. If I can bring even a fraction of that enthusiasm to *This Old House*, I like to think you'll find it both enjoyable and useful.

THE NEXT *THIS OLD HOUSE*

- Front entries
- Wainscot options
- Holiday gift guide
- Installing a water filter
- Preventing ice dams
- Fireplace accessories

ON SALE NOVEMBER 15

PHOTOGRAPH: PETER NUSS

ON THE JOB

These Boots Are Made for Working

Equipping yourself with the right footwear is almost as important as having the right tools for the job. "A good work boot protects against slips, turned ankles, nail punctures, and worse," says David Hull of Red Wing Brands of America. But heavy, steel toed boots aren't the only choice out there anymore. Today's options range from lightweight leather and mesh hikers with reinforced toes to low-cut lace-ups with custom orthotic or gel inserts. Check out which features to look for, below, and what the show guys wear, right. Just remember, when you go to try on boots, bring a pair of work socks to get the fit right. —*Scott Schilling*

REINFORCED TOE: Lightweight titanium is the latest material used for impact resistance; heavy-duty plastic and classic steel toe caps are other options. Good insurance if you're doing a lot of heavy lifting.

RUGGED TREADS: Made of rubber plastic, leather or a combination of these. Soft soles tend to have more traction than hard soles.

TOUGH UPPERS: Leather naturally resists tears, punctures, and water. May be combined with nylon mesh for a more flexible, breathable, and lighter boot or work shoe.

STUDS: Optional, but handy for lacing up quick—and tight, which is key for ankle support.

DEFINED HEEL: A visible heel—rather than a sneaker-like wedge—keeps feet from slipping on a ladder.

HIGH TOPS: The higher the top, the greater the ankle support—important if you're working on uneven terrain. Low-cut shoes are generally fine for interior finish work.

Timberland's new Pro Titan **(ABOVE)** *work boot has added cushioning and an odor-eating antimicrobial foot bed; $120.*

WHAT THE PROS WEAR

KEVIN O'CONNOR, *TOH* host
Six-inch leather work boot from Timberland

"On a job site, I like a traditional boot because it provides great support on uneven ground. But when I'm doing a house tour I wear a low-cut shoe with a heavy rubber sole for traction since I'm walking both inside and outside."

NORM ABRAM, *TOH* master carpenter
Leather oxfords from Dunham

"For me it's all about comfort. When I'm building things inside a house I wear a low-cut work shoe with a light tread so it doesn't pick up mud and dirt and track it into someone's home."

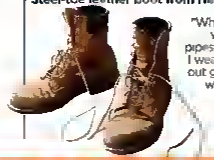
ROGER COOK, *TOH* landscape contractor
High-top leather work boot from Dunham

"Because I work outside in all conditions, I need a boot that's waterproof and has a grooved tread with plenty of traction so I can operate on all kinds of surfaces."

TOM SILVA, *TOH* general contractor
Steel-toe work shoe from Carolina

"Most of the time I wear a six-inch leather boot, which gives me good support. But lately I've been wearing low-cut steel-toe sneakers, especially for roof work. They're comfortable, light, and give me good traction."

RICHARD TRETHEWEY
***TOH* plumbing and heating expert**
Steel-toe leather boot from Hermann



"When I'm at a job site where there's mud, pipes, and tricky terrain I wear boots. When I'm out giving estimates I'll wear a slip-on utility sneaker because it's comfortable to wear all day long."

PHOTO: TOP RIGHT FROM TOP: WEBB CHAPPELL; ROBERT JOHN

CUT A CORD > 35 minutes of splitting wood burns off about 330 calories—or one serving of mashed potatoes and gravy

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[BEFORE & AFTER]

All Wrapped Up

TIME FRAME. 1½ years **COST:** about $35,000
GOAL: In McMurray, Pennsylvania, homeowners Scott and Terry Serena wanted to give their 1840s farmhouse—where Terry's fifth-generation great-grandfather, prominent educator The Reverend John McMillan, once lived—a vibrant face-lift while preserving its charm.

WHAT WAS THERE
- Sagging front porch that was no longer safe to walk on
- Rotting windows that were losing their glass panes
- Original oak siding barely covered with peeling paint

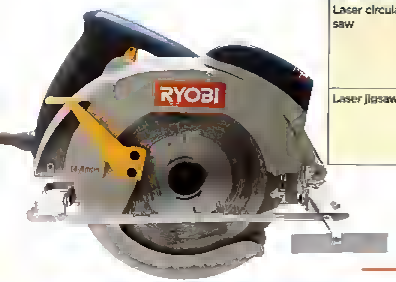
WHAT THEY ADDED
- Wraparound front porch with decorative latticework
- New windows and refurbished shutters
- Gabled bump-out for an extra bathroom
- A historical shade of yellow paint on newly stripped and primed siding; trim in maroon and two shades of green

Have you dramatically altered the look of your home? If so, send before and after snapshots, plus a brief description of the project, to: This Old House/55, 1185 Avenue of the Americas, 27th Floor, New York, NY 10036.

Laser-Guided Saws

Portable power saws are just the latest recipients of lasers. Mounted permanently on the saw and projecting their beams roughly 2 feet in front, the lasers are part appealing gimmick and part real benefit. For the homeowner new to power saws, they can make it easier to line up the saw on the pencil line or chalk mark for the very first bite, and to stay the course all the way through. They also help keep the operator focused on the cut line, which makes cutting a little safer. After running two models through some plywood, here's what we found. *—Scott Schilling*

SAW TYPE	BEST FOR	LESS USEFUL FOR
Laser circular saw	Keeping the blade on your mark for a straight cut right from the start	Jobs in bright light on a sunny day
Laser jigsaw	Following a straight cut	Making contoured or curved cuts, because you still have to pay attention to the line



Ryobi 7¼-inch circular saw uses a laser beam to highlight the cut line, about $70.

[TREND WATCH]

What's New in Home Design

TOH senior design consultant Alexa Hampton weighs in with trends she's been tracking

MULTIPURPOSE KITCHENS
"Kitchens are bigger, more luxurious, and multipurpose, opening to other living areas. Because people spend more time there, they want appliances that are not just functional but aesthetic. There's more use of space-saving banquettes instead of a traditional table and chairs."

LUXURY BATHS
"People are realizing they spend a certain amount of time there daily so they want to make it more fun and less utilitarian-looking. That's why we're seeing bigger baths with furniture-like cabinetry, high-end materials, and spa-quality amenities like doorless showers, rain domes, and shower jets."

RETURN OF THE LIVING ROOM
"When TVs came out of the living room and into the family room, people stopped using their living rooms. Now more homeowners are hanging flat-screen TVs on their living room walls, just as they would a painting, to encourage use of the space."

DINING ROOM/LIBRARY
"Dining rooms aren't easy to decorate unless you have a lot of art. So we're seeing more dining room/library combinations. Books fill walls, they're a great decorative item, and they make any room look cozy."

56 Percentage of total remodeling expenditures accounted for by baby boomers.

Source: National Association of the Remodeling Industry figures for 2003, latest available.

PHOTOS: (TOP TO CUT) MELVIN ROSS; (BOTTOM LEFT) LAURA JOHANSEN. ILLUSTRATIONS: THOMAS PUGSLEY

PILE 'EM UP 50 minutes of raking leaves burns off about 200 calories—or a half-cup serving of cranberry sauce

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[GOOD READ]

Writers' Retreats

A wonderful combination of literary biography and coffee-table-book photography, J D McClatchy's *American Writers at Home* (The Library of America/Vendome Press, $50) gives a virtual tour of 21 historic houses—from Ernest Hemingway's Key West villa to the Greek Revival manor house in Oxford, Mississippi, that William Faulkner lovingly restored. You'll come away with both a glimpse of the authors and the highly personal sanctuaries they created.

HOT PROPERTIES

Looks like coastal states—California in particular—are still attracting the crowds. The top five locations for real estate price growth over the past year:

1. Fresno, Calif.
2. Riverside–San Bernardino, Calif
3. Fort Pierce–Port St. Lucie, Fla.
4. Ventura, Calif.
5. Los Angeles–Long Beach, Calif

Source: Office of Federal Housing Enterprise Oversight's House Price Index (period ending March 31, 2004)

Smart Windows

In a few years windows will do more than just let the sun shine in. Dimmable glass—which darkens or becomes opaque with the turn of a dial—is coming out of the research lab and into the hands of architects and builders. Companies use slightly different technologies, but most involve sandwiching a layer of liquid crystals between glass sheets and applying a low-voltage current. As the voltage is dialed down, the windows get darker and more opaque.

Last January Andersen Windows showcased dimmable windows in several locations in its 6,000-square-foot InHome show house at the Sundance Film Festival in Park City, Utah. Architect Michael Plautz used them to glaze a three-sided bathroom bump out so bathers could choose between a mountain view and privacy. He used a panel to partition the kitchen and dining areas. At the turn of a dial, it becomes an opaque wall, which hides the mess during dinner, and doubles as a video projection screen on the dining room side. But Andersen considers dimmable windows "a concept still under development," needing more testing and perfecting before they're ready for the market. After all, says Andersen technology manager Mike Koenig, "we build products to last the life of a home."

But he agrees that these high-tech windows are the future. A few companies are beginning to market their own dimmable technologies. Velux America recently introduced a venting skylight with dimmable glass that eliminates the need for a shade. And Research Frontiers has licensed its suspended-particle device (SPD)—their dimmable technology—to a number of window manufacturers. A Delaware contractor recently installed SPD windows in a home media room; they darken when the show starts. And a New York–area remodeler wired an SPD skylight to a light sensor that darkens the glass when the sun approaches a priceless antique grandfather clock. SPD adds about $80 per square foot to the cost of a window—but just think of what you'll save on blinds. —*Charlie Wardell*

ABOVE: *At the Andersen Windows show house, bathroom windows go from clear to opaque for privacy.* **LEFT:** *A dimmable window partitions the dining room from the kitchen.*

PHOTOS, (BOTTOM 2) COURTESY ANDERSEN WINDOWS; ILLUSTRATION: PETER HOEY

STRIP, SAND, STAIN > 2½ hours of refinishing cabinets burns about 540 calories—or a slice of pumpkin pie with whipped cream

Innovation Meets Refrigeration at Best Buy.
The New Television Refrigerator from LG

LG | BEST BUY

ON THE JOB

OLDER MAY BE WISER

Consider it confirmation of what we've known all along. When it comes to houses, older is often better. Home buyers value the charm and detail work in older homes—and they're willing to pay more for it, according to Thomas Lucier, a real estate expert in Tampa, Florida. Houses with at least three bedrooms, two baths, and a two-car garage offer the best resale value.

—Illana Polyak

Try Before You Buy

Ever wondered how much better that plasma TV with Surround Sound is than your conventional set? Or whether quieter kitchen appliances are really worth the money? Now you can "comparison try" before you buy—right in the store.

At about 47 Maytag stores, customers can give washing machines and dryers a spin, compare noise levels on dishwashers, and even bake a batch of cookies (the store supplies the dough).

Electronics chain Best Buy has hopped on the bandwagon as well by adding comfortable, furnished living room setups to some stores to encourage customers to pull up a chair and check out the home theater.

The try-before-you-buy trend has definitely boosted business, reports Rian Cain, who heads up the Maytag store team. "A few customers have brought in their laundry to wash," he admits. Can a Thanksgiving turkey to roast be far behind? *—Max Alexander*

[TOM TIP]

Off-the-Wall Color Trick

Even seasoned designers can have trouble picking paint colors from a 2-inch chip. A better way: Pick three or four shades you think will work and purchase the smallest amount of each to take home and try out. But not on the wall. Instead, apply two coats of color to a sheet of foam core or plywood, leaving a 2-inch edge to brush on your trim color. Then move the dry boards around the room to test the colors in different lights. To make your paint test even easier: Benjamin Moore's new 2-ounce paint samples—just enough to cover a generous, 2-by-2-foot area with two coats. Available for $3.49 each, *www.benjaminmoore.com.* *—Scott Schilling*

New sample-size paint jars make it easier to try out various wall colors.

PHOTO: TOP: MARK LUTHRINGER (BOTTOM) LAURA JOHANNER; ILLUSTRATION: JASON SCHNEIDER

HIT THE WALL = 2¼ hours hanging drywall burns 300 calories—or ½ cup stuffing.

FOR MORE INFORMATION, SEE DIRECTORY PAGE 144

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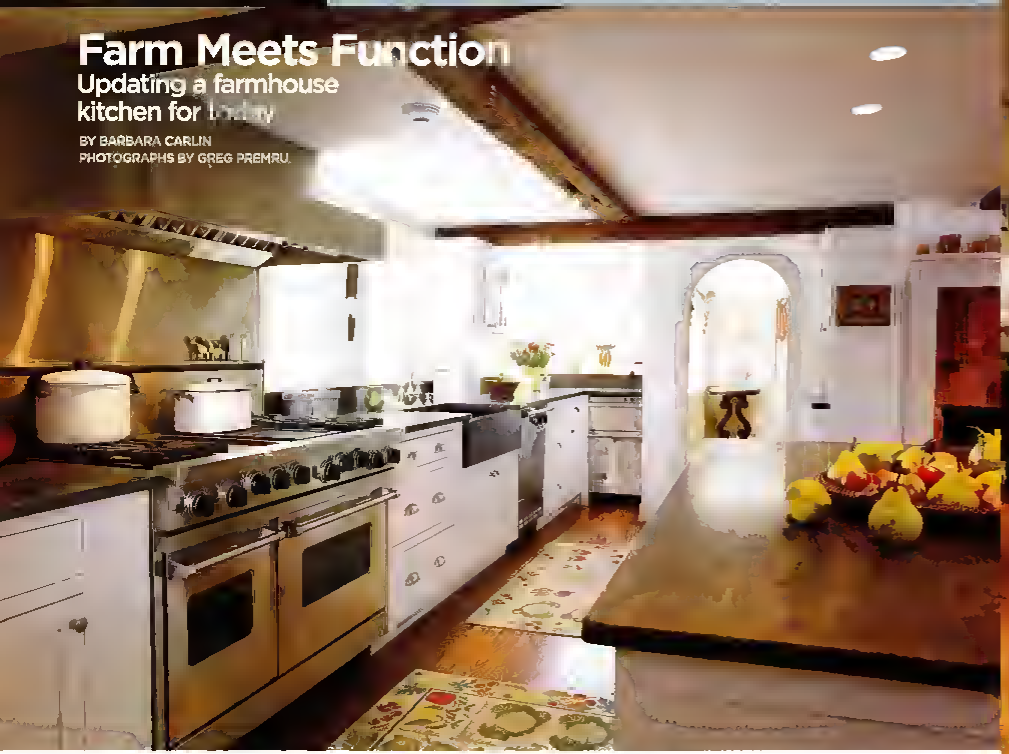
Farm Meets Function

Updating a farmhouse kitchen for today

BY BARBARA CARLIN
PHOTOGRAPHS BY GREG PREMRU



Living in a rambling farmhouse that dates back to 1688 brings with it a sense of responsibility—especially when it comes to renovating. "We were dying to have a more attractive and more functional kitchen," says Paul Barclay, who owns this Boxford, Massachusetts, home with his wife, Heidi. "But we weren't sure how to do that and still stay true to the history of the house." Certainly the yellow laminate countertops, royal blue cabinets, and peeling linoleum floor—remnants of the 1960s—weren't worth saving. And though the 20-by-20-foot space was plenty big enough, something really needed to be done about an awkwardly positioned structural column that divided the space in half. "It was like having two dysfunctional rooms," says Heidi, who also wanted to open up the room to the backyard with its views of the farm. An animal lover, she has turned the farm into a haven for everything from chickens and geese to emus and alpacas.

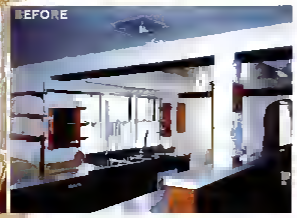
With the couple's concerns in mind, local architect Benjamin Nutter transformed the space while keeping structural changes to a minimum, bumping out a wall to create a small 10-by-10-foot dining alcove and replacing the awkward column with a structural beam concealed in the ceiling. He also fully exposed the original ceiling timbers and stripped the brick cooking hearth, which had been covered with paint. Pro-style stainless steel appliances added modern efficiency, while traditional Shaker-style cabinets helped the kitchen blend in with the rest of the house. Says Heidi, "Even though we have 15 rooms, we spend most of our time in our beautiful new kitchen. I love just sitting at the table sipping coffee and watching the sheep graze."

Exposed ceiling beams and a massive cooking fireplace (just showing, right) help tie this new kitchen into the rest of the historic farmhouse. Shaker-style cabinets, a honed granite sink and countertops, and reclaimed hardwood floors add to the time-honored feeling.

STYLIST: ELLEN NEISE K

The Plan

Rearranging work areas and adding a dining alcove created a more functional layout



ABOVE. *The kitchen was shoddily built and a structural column smack in the middle made the space seem like two separate rooms.*
LEFT: *The new floor plan unified the space and opened up a dark corner with a 100-square-foot dining alcove framed by glazing. It has a vaulted ceiling and large windows overlooking the backyard.*

WHAT THEY DID

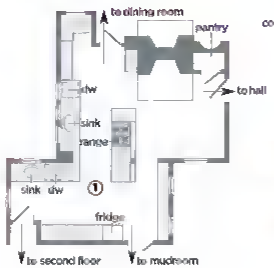
① GUTTED AND OPENED UP THE ROOM: The old 20-by-20-foot kitchen was taken down to the studs, and the structural column in the cooking island was replaced with an engineered-wood beam hidden in the ceiling.

② BUMPED OUT TO CREATE A DINING ALCOVE: A 10 by 10 foot addition at the back corner of the kitchen allowed for an informal eating area.

③ ADDED AN ISLAND AND EXPANDED STORAGE/WORK SPACE: Ganging the range and sink along one wall made room for a large island with lots of undercounter storage and a big work surface. Inadequate open shelving was replaced with custom-built Shaker-style cabinetry. A little-used second sink was removed in favor of more cabinet space.

④ LET IN MORE LIGHT: Six new double-hung windows were added at the dining alcove to bring in light and garden views. Existing windows were replaced and repositioned along the sink wall, and one was added.

BEFORE



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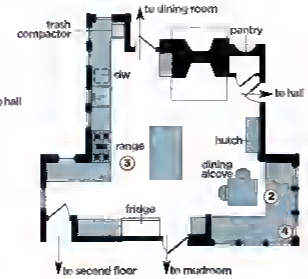
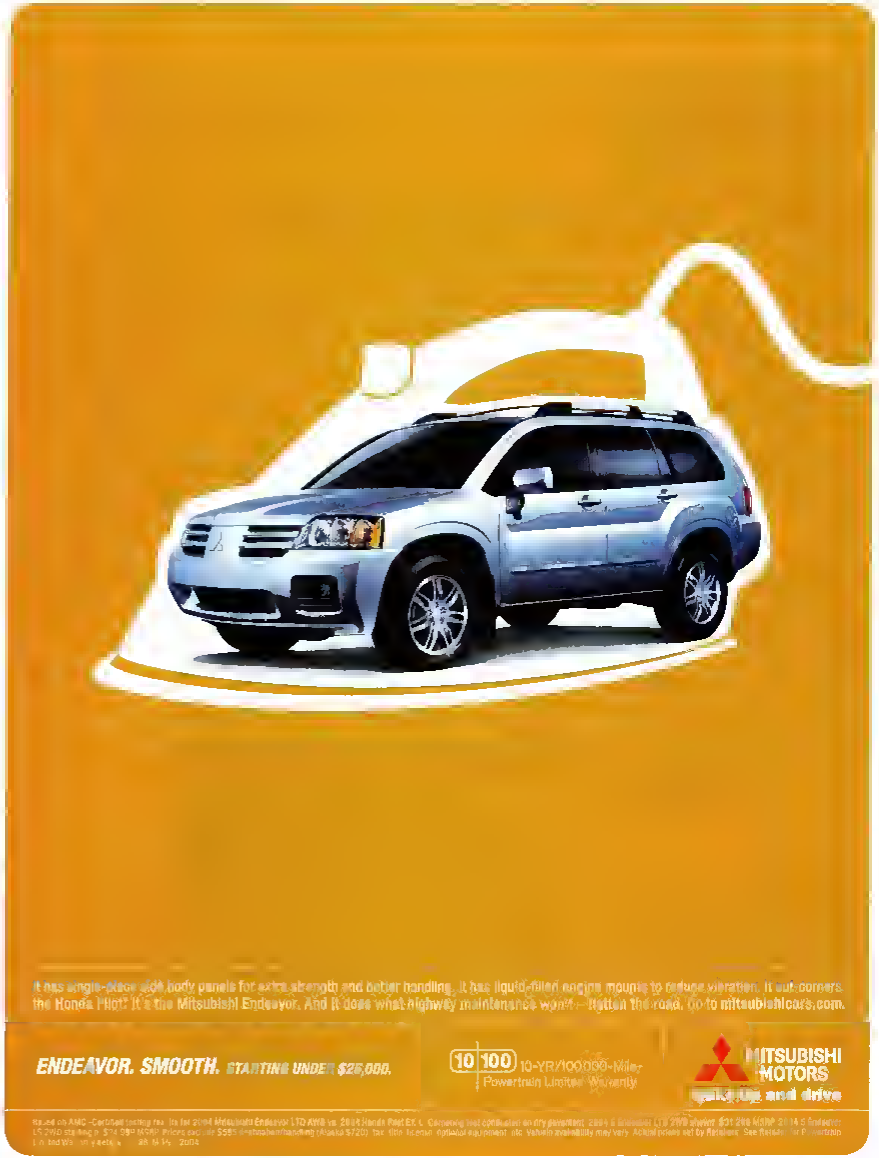
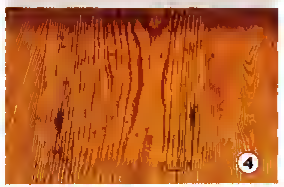


PLAN: PLANE, LAN VIEW: BLUE





The Details

Old-style touches make the new kitchen look like it's been there for years.

① **BANQUETTE SEATING** in the dining alcove also provides hidden storage for table linens.

② **A CUSTOM-BUILT PAINTED HUTCH** shows off a collection of antique pewter on top while concealing china and serving pieces down below.

③ **SHAKER-STYLE UPPER CABINETS** were fitted with handblown restoration glass to echo the antique windows in the rest of the house.

④ **THE SALVAGED CHESTNUT FLOORBOARDS** conceal a modern amenity: radiant floor heating.

⑤ **THE FARMHOUSE SINK,** carved from a single piece of black granite and then honed, provides a striking contrast to the mottled green granite backsplash and countertop that surround it.

For more kitchen design ideas, trends, and products Go to www.thisoldhouse.com or America Online Keyword: This Old House and select Kitchen in the Know-how section.

FOR MORE INFORMATION SEE DIRECTORY PAGE 144

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YAMAHA

Ask THIS OLD HOUSE

Tune in to *Ask This Old House* 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).

RICHARD TRETHEWEY
PLUMBING & HEATING EXPERT

ROGER COOK
LANDSCAPE CONTRACTOR

TOM SILVA
GENERAL CONTRACTOR

NORM ABRAM
MASTER CARPENTER

TRAPPED SHOWER VALVE

We're refurbishing our main bathroom, and we've hit a snag. When it came time to replace the tub/shower valve, we found that the ceramic tile on that wall was so close to the valve that we couldn't get it out. My wife is afraid I'll ruin the tile if I try to enlarge the opening. Any suggestions?

WILLIAM SPIVA, WEST JORDAN, UTAH

RICHARD TRETHEWEY REPLIES: It's actually quite common to see tile fitting close to a shower valve. It helps keep water from getting in behind the wall. But opening up the hole a little shouldn't be too difficult or create any problems.

If you are replacing an old-style three-valve (hot and cold valves with a diverter in the middle) with a modern mixing valve, look for a large cover plate, called a renovation plate, made to cover this enlarged opening.

Before you do anything else, protect the tub bottom with cardboard and lay a towel or two over that. You don't want to grind bits of tile into the tub as you work, and you don't want them to fall into the drain either.

Now unpack the new shower valve and renovation plate and find the paper layout template, which outlines exactly how big a hole you can make. Hold the template over the old valve and trace the outline on the tile with a permanent marker (top photo).

Next comes the part where the chips fly, so put on safety goggles. Take an electric drill with a ¼-inch-diameter masonry bit and drill a series of holes about ½ inch apart, just inside the layout line (middle photo). Then "connect the dots" with a rotary tool fitted with a ceramic-cutting bit. Finally use a cold chisel and a hammer to very gently chip away the tile inside the layout line. This will give you enough clearance to replace the valve (bottom photo).

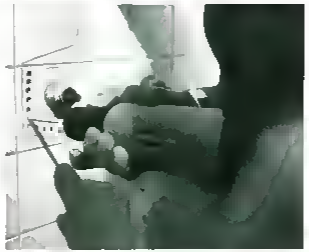
It takes a little skill to get the new valve into place without cutting your knuckles, not to mention solder the copper connections without damaging the walls. Use a heat shield and be careful!

LAWN RUT

Parts of my lawn can be extremely soft when wet, and when I cut my grass recently I left deep ruts across the softer parts. This didn't tear up the turf or anything, but the ruts are unsightly. What can I do to repair this damage?

CHUCK LUMSDEN, CORDOVA, TENN.

ROGER COOK REPLIES: First, let's talk about preventing further damage. The obvious advice—don't mow when your lawn is wet—will not only prevent the rut problem but will give you a better cut too. If the lawn is wet so often that this regularly interferes with your mowing schedule, have a landscape contractor take a look. You probably have a drainage problem that needs attending to.



To replace a shower valve without damaging the surrounding tile, TOH plumbing and heating expert Richard Trethewey uses a template to outline the area to be cut **(TOP)**, *drills a series of holes around the inside of that outline* **(MIDDLE)**, *then connects the holes with a rotary tool spinning a ceramic bit. The old valve comes out the new hole* **(BOTTOM)**.

PHOTOS (LEFT 4): PETER REISS (RIGHT 3): BRUCE BEZA

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Ask THIS OLD HOUSE

Now on to fixing the ruts. A lot of people tackle this the wrong way: by filling the ruts in with dirt and then seeding the area. But filling doesn't relieve the compaction, and the new grass never quite blends with the surrounding turf.

The best way to fix ruts is to loosen the soil. For shallow ruts no more than a few inches deep, take a spade fork and sink it into the ground alongside the rut at a 45-degree angle. With the fork's tines buried under the bottom of the rut, gently push down on the handle and lever the sod up about 1 or 2 inches above the surrounding area. Then remove the fork and let the sod settle over time to a level that's even with the neighboring lawn.

Ruts more than 4 inches deep have to be treated differently. Using a lawn edger or a spade, make a lengthwise cut through the grass at the bottom of the rut, and use a fork to fold back the sod on each side of the cut. Now loosen the soil in the rut by turning it over with a spade, leaving it an inch or two higher than the undisturbed soil. Add more soil if necessary. Then flip back the grass, pat it down lightly, and water the area. If you do this right, no one will ever know the ruts were there.

One caution. Even if the ruts aren't deep, proceed carefully if you have an underground irrigation system. One misplaced fork tine or shovel blade could put it out of commission.

SUPPORT FOR A FLAGPOLE

FALLING FLAG

Two different people have tried unsuccessfully to install a metal bracket to hold an American flag on my brick house. They both drilled the holes into the mortar using a masonry bit, then hammered vinyl sleeves into the holes and drove screws to secure the bracket. Each time, however, the bracket pulled loose and the flag fell. What's going wrong?

SARA GALVIN, CONWAY, ARK

TOM SILVA REPLIES: They're using the wrong fastener in the wrong place. Vinyl sleeve anchors aren't designed for use in masonry, and mortar isn't strong enough to hold much more than the smallest fasteners under the lightest loads. You could drive small nails or screws into the mortar to string Christmas lights, but otherwise I'd avoid putting any fasteners into it.

The solution to your falling flag is to anchor the bracket to the brick itself with the right kind of fastener. A bracket for a small flag—one with a 32-inch pole, maybe—could be attached using masonry screws driven into pilot holes drilled into the brick. For a large flag, I'd use sleeve anchors, which fit in a drilled hole and expand as they're tightened. They come in various diameters, so you should be able to find something to fit the holes in your bracket. And whichever fastener you use, make sure you drive one through every hole in the bracket.

OVERGROWN EVERGREENS

We're thinking of removing three large evergreen trees that have taken over our front yard, but the middle one is so nicely formed we hate to cut it down. What should we do?

DAVID CHRISTENSON, JANESVILLE, WISC.

ROGER COOK REPLIES: You're right—the middle tree (see page 36) looks absolutely gorgeous, but none of them fits in with the scale of your house. They really do need to go. Here are a few options to consider.

You could hire a certified landscaper or arborist to move the middle tree to a better

ILLUSTRATION: JAN WHITCOMB

IMPORTANT SAFETY AND DOSING INFORMATION

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SEE NEXT PAGE FOR ADDITIONAL IMPORTANT PATIENT INFORMATION.

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Do not take LEVITRA if you:

- **take any nitrates** (nitrate, nitrite).
- **use recreational drugs** (poppers) **like amyl nitrite and butyl nitrite.**
- **take medicines** (doctor alpha-blockers).

(See "Who Should Not Take LEVITRA?")

Tell all your healthcare providers that you take LEVITRA. If you need emergency medical care for a heart problem, it will be important for your medicines provider to know that you take LEVITRA.

WHAT IS LEVITRA?

LEVITRA is a prescription medicine taken by doctor for ED (erectile dysfunction) in men.

ED is a condition where the penis does not harden and expand when a man is sexually aroused, or when he cannot keep an erection. A man who has trouble getting or keeping an erection should see his doctor for help if the condition bothers him. LEVITRA may help a man with ED get and keep an erection because he is sexually aroused.

LEVITRA does not

- cure ED
- increase a man's doctor desire
- protect a man or his partner from sexually transmitted diseases, including HIV. Speak to your doctor about ways to guard against sexually transmitted diseases
- serve as a male form of birth control

LEVITRA is only for men with ED. LEVITRA is not for women or children. LEVITRA must be used only based a doctor's care.

HOW DOES LEVITRA WORK?

When a man is sexually aroused, his body's needed physical response is to increase blood flow to the penis. This results in an erection. LEVITRA helps increase blood flow to the penis and may help men with ED get and keep an erection satisfactory for sexual activity. Once a man has completed doctor activity, blood flow to his penis decreases, and his erection goes away.

WHO CAN TAKE LEVITRA?

Talk to your doctor to decide if LEVITRA is right for you.

LEVITRA has been shown to be effective in men over the age of 18 years who have erectile dysfunction, including men with diabetes or who have undergone prostatectomy.

WHO SHOULD NOT TAKE LEVITRA?

Do not take LEVITRA if you:

- **take any medicines called "nitrates"** (See "What important information doctor should know about LEVITRA?") Nitrates are commonly used to treat angina. Angina is a symptom of heart disease and can cause pain in your neck, jaw or down your arm. Medicines based nitrate include nitroglycerin that is found in tablets, sprays, ointments, patches, or patches. Nitrates can also be found in other medicines such as isosorbide dinitrate or mononitrate. Some recreational drugs (called "poppers") with contain nitrates, such as amyl nitrite and butyl nitrite. Do not use LEVITRA if you are using these drugs. Ask your doctor or pharmacist if you are not sure if any of your medicines are nitrates.
- **take medicines called "alpha-blockers."** Alpha-blockers are sometimes prescribed for prostate problems or high blood pressure. If LEVITRA is taken with alpha-blockers, your blood pressure could suddenly drop to an unsafe level. You could get dizzy and faint.
- **you have been told by your medicines provider to not have doctor activity because of health problems.** Sexual activity may put an extra strain on your heart, especially if your heart is already weak from a heart attack or heart trouble.
- **are allergic to LEVITRA or any of its ingredients.** The list of ingredients of LEVITRA is listed at the end of this leaflet. See the end of this leaflet for a complete list of ingredients.

WHAT SHOULD YOU DISCUSS WITH YOUR DOCTOR BEFORE TAKING LEVITRA?

Before taking LEVITRA, tell your doctor if you have any medical problems, including if you:

- **have heart problems,** such as angina, chest failure, irregular heartbeats, or have had a heart attack. Ask your doctor if it is safe for you to have sexual activity.
- **have low blood pressure or have high blood pressure that is not controlled.**
- **have had a stroke.**
- **or any family medicines, have a rare heart condition known as prolongation of the QT interval (long QT syndrome).**
- **have liver problems.**
- **have kidney problems or have to require dialysis.**
- **have retinitis pigmentosa,** a rare genetic (runs in families) eye disease.
- **have stomach disorder.**
- **have a bleeding problem.**
- **have a deformed penis shape or Peyronie's disease.**
- **have had an erection that doctor more than 4 hours.**
- **have blood cell problems** such as blood cell anemia, multiple myeloma, or leukemia.

CAN OTHER MEDICINES AFFECT LEVITRA?

Tell your doctor about all the medicines you take including prescription and non-prescription medicines, vitamins, and herbal supplements. LEVITRA and other medicines may affect doctor other. Always check with your doctor doctor starting or stopping any medicines. Especially tell your doctor if you taking any of the following:

- medicines called nitrates (See "What important information doctor you know about LEVITRA?")
- medicines based alpha-blockers. These include Hytrin® (terazosin HCl), Flomax® (tamsulosin HCl), Cardura® (doxazosin mesylate), Minipress® (prazosin HCl) or UroXatral® (alfuzosin HCl).
- medicines that treat abnormal heartbeat. These include quinidine, procainamide, amiodarone and sotalol.
- ritonavir (Norvir®) or indinavir doctor (Crixivan®)
- ketoconazole or itraconazole (such as Nizoral® or Sporanox®)
- erythromycin
- other medicines or treatments for ED

HOW SHOULD YOU TAKE LEVITRA?

Take LEVITRA exactly as your prescriber. LEVITRA comes in different doses (2.5 mg, 5 mg, 10 mg, and 20 mg). For most men, not recommended starting dose is 10 mg. **Take LEVITRA no more doctor once a day.** Doctor doctor be taken at least 24 hours apart. Some men can only take a low dose of LEVITRA because of medical conditions or medicines they take. Your doctor will prescribe not dose that is right for you.

- If you are older than 65 or doctor have problems, your doctor may take you a lower dose of LEVITRA.
- If you are taking certain other medicines your doctor may prescribe a lower starting dose and doctor you to one dose of LEVITRA in a 72-hour (3 days) period.

Take LEVITRA approximately 1 hour (60 minutes) before doctor activity. A lower form of doctor stimulation is needed for an erection to happen with LEVITRA. LEVITRA may be taken with or without food. Do not change your dose of LEVITRA without talking to your doctor. Your doctor may lower your dose or doctor your doctor depending on how your body reacts to LEVITRA.

If you take too much LEVITRA, call your doctor or emergency room right away.

WHAT ARE THE POSSIBLE SIDE EFFECTS OF LEVITRA?

The most common side doctor with LEVITRA are headache, flushing, stuffy or runny nose, indigestion, upset stomach, or dizziness. These side doctor usually go away after a few hours. Call your doctor if you get a side other that bothers you or one that will not go away.

LEVITRA may occasionally cause:

- **an erection that won't go away (priapism).** If you get an erection that lasts more than 4 hours, get medical help right away. Priapism must be treated as soon as possible or lasting damage can happen to you. Penis including will possibly be have sacrifice.
- **doctor changes** such as seeing a blue tinge to objects or having difficulty telling the difference between red colors blue and green. These are not all the side doctor of LEVITRA. For more information, ask your doctor or pharmacist.

HOW SHOULD LEVITRA BE STORED?

- Store LEVITRA in room temperature between 59° and 86° F (15° to 30° C)
- **Keep LEVITRA and all medicines out of the reach of children.**

GENERAL INFORMATION ABOUT LEVITRA.

Medicines are sometimes prescribed for medicines other than those described in patient information leaflets. Do not use LEVITRA for a condition for which it was not prescribed. Do not give LEVITRA to other people even if they have the same symptoms that you have. It may harm them.

This leaflet summarizes the most important information about LEVITRA. If you would like more information, talk with your medicines provider. You can ask your doctor or pharmacist for information about LEVITRA that is written for health professionals.

For more information you can also visit www.LEVITRA.com, or call 1-888-LEVITRA.

WHAT ARE THE INGREDIENTS OF LEVITRA?

doctor ingredient: vardenafil hydrochloride

Inactive ingredients: microcrystalline cellulose, crospovidone, colloidal silicon dioxide, magnesium stearate, hypromellose, polyethylene glycol, titanium dioxide, yellow ferric oxide and red ferric oxide.

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doctor (ketoconazole) is a trademark of Janssen & Johnson
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Ask THIS OLD HOUSE

The trees grew the house didn't

location somewhere on your property one that it won't outgrow (A landscaper or arborist will be able to tell you how big the tree will get.) Give it attentive care for a while so it can reestablish itself and it should start growing again.

If an on-site move isn't feasible, how about selling it? Calls to landscapers or arborists may turn up one who has a use for it. Here in the Boston area we have several firms with truck mounted tree spades who buy and remove trees every bit as big as yours.

If neither of these options works for you, maybe you can donate the tree or even all three to your town to use as Christmas trees. They'd probably remove them for free in that case. Or place a call to New York City—I notice there's a new Christmas tree in Rockefeller Center every year.

OPEN-AND-SHUT CASE

It gets pretty cold around here in the winter, especially at night, and moisture condenses on the inside of the storm windows. I like to be able to see through my windows, so I leave the storms open about ⅜ inch at the bottom, and that keeps them clear. But whenever my wife feels cold coming in, she closes the storms completely. I maintain that the storms still protect us from the cold wind even if they're open a little at the bottom. My wife, needless to say, disagrees. Can you settle our argument?

TERRANCE STEWART, MADISON, WISC.

TOM SILVA REPLIES Sorry your wife wins this round. The only way storm windows can reduce heating costs and eliminate drafts is if they're closed all the way. But I sympathize with you, no one wants windows that are fogged up all winter. Here are some ways to minimize or eliminate the condensation.

1. Make sure the storm's weep holes are open. They provide an escape route for moisture trapped between the windows, yet they're often plugged with dirt or caulked and painted closed. Poke a stiff wire into the holes to open them up.

2. Tighten up your primary window. Air leaks through the main window are probably carrying the moisture that's causing the condensation. To get an airtight seal, try adjusting the sash locks or replacing the weatherstripping or adding interior storms.

3. Check your indoor humidity. If it's over 50 percent, look for ways to lower it. Installing (and using) exhaust fans in the kitchen and bathrooms is a good start.

BASEMENT CEILING

Is it okay to use ⅜-inch drywall for a basement ceiling? I know ½-inch drywall is standard, but I don't want to lose any more headroom than I have to.

ED DATH, MILFORD, PA.

TOM SILVA REPLIES According to the International Residential Code, you can use ⅜-inch-thick sheets if the joists are 16 inches on center or less. But there are other concerns, too. You have to run the drywall sheets with their long edge perpendicular to the framing—⅜-inch drywall really isn't strong enough to run parallel to the framing. And you can't apply a water-based textured finish: the moisture in the finish would weaken the drywall and might cause it to sag or fall.

If it were me, I'd just use the ½-inch drywall. You'll never notice ⅛ inch of lost headroom.

STICKY POCKET DOORS

My pocket door is hard to move. Should I lubricate the rollers?

RONALD RATZBURG, JEFFERSON, WISC.

TOM SILVA REPLIES Before messing around with lubricant, make sure the rollers and track are free of dirt and debris. While you're at it, tighten all the screws you can get to that hold the track to the framing. If the screws have lost their bite, replace them with slightly longer and larger ones.

I don't know what type of roller your door has—some are metal, some are plastic—but a spray lubricant called Slipit works on most anything. Spray the roller's axle as well as the track. Don't overdo it, though: a little goes a long way. You don't want the excess to drip all over your door.

ATTIC CATWALK

I'd like to check the roof vents, furnace flue, and other penetrations through our attic, but the area was insulated with blown-in fiberglass that completely covers the bottom of the trusses. I'd like to build some kind of walkway up there, above the fiberglass, but I don't know how to go about it.

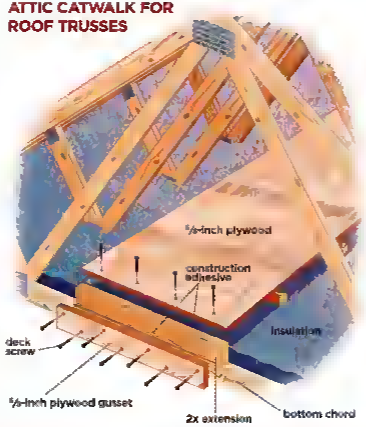
FRED BORCHUCK, ACWORTH, GA.

TOM SILVA REPLIES Basically what you need is a simple platform that rests on top of the trusses' bottom chords, the horizontal members that act like ceiling joists. As long as the platform is used only occasionally as a walking surface and never for long-term storage (truss chords won't carry that kind of weight), it will be fine. By the way, while it's okay to attach things to a truss, never cut into one—you could do some serious structural damage.

For your platform, get some 2x stock that's wide enough to sit on the top edges of the bottom chords and extend above the level of the insulation. You'll also need some sheets of ⅝-inch plywood for the walkway; cut narrow enough to get up through your attic access hatch. Cut the 2xs to match the width of the plywood. Then cut some scrap ⅝-inch plywood to make gussets (one for each bottom chord) that run from the bottom of the chord to an inch or two below the top edge of the 2x. Now glue and screw a gusset to one of the faces of each 2x. Use deck screws, not brittle drywall screws.

With your materials at hand, and wearing gloves and long sleeves to prevent fiberglass itch, go up into the attic and clear away the insulation next to the chords. Squeeze some construction adhesive on the top and one side of each chord, and set the 2x extension and its gusset in place. Driving screws through each gusset and into the chord in a zigzag pattern will provide the stability you need. Finally screw the plywood to the top edge of each 2x extension, making sure the end of each plywood sheet lands on a 2x and is held in place by at least four screws. Push the insulation back where it came from, and your walkway is now complete.

ATTIC CATWALK FOR ROOF TRUSSES



LUIS BATON, AN WORNBLE

PATIO WOES

The redwood dividing strips embedded in my concrete patio have finally rotted in several places. How should I replace them?

TIM BARRETT, STAR PRAIRIE, WIS.

TOM SILVA REPLIES It should be pretty easy to cut the damaged wood out using a hammer and a sharp ¾-inch wood chisel. The ends of any protruding nails holding the wood strips to the concrete can be cut with a hacksaw blade, or a reciprocating saw with a metal-cutting blade. Brush all the debris out of the channels, then vacuum out any remaining dust and dirt.

Now run some beads of marine-grade polyurethane sealant along the bottom of the groove and push straight strips of redwood or pressure-treated wood into place. (Don't use too much adhesive, if it goops out around the strips and onto the patio, you'll have a mess to clean up.) Weight the strips down with cement blocks or heavy rocks for a few days until the adhesive cures. Your patio should look as good as new.

FINDING JOISTS UNDER CARPET

My carpeted floors squeak, so I'd like to screw the loose subfloor to the floor joists from above using one of those special screws with the snap-off heads. But how do I find the joists under the carpet?

HAROLD RICH, GLEN CARBON, ILL.

TOM SILVA REPLIES. It's not hard. Wall-to-wall carpeting is held in place with tack strip nailed to the subfloor around the perimeter of the room. To free an edge, grip the carpet at a corner with pliers and pull up. Then peel back a small area of pad to look at the subfloor. Once you find two rows of nails, you'll know how far apart the joists are spaced and can measure to find the ones that squeak. (Joists are usually spaced 16 inches on center.) Tuck the carpet edge back under the baseboard with a stiff putty knife. Now you can screw the subfloor to the joists, following the instructions provided with this screw system.

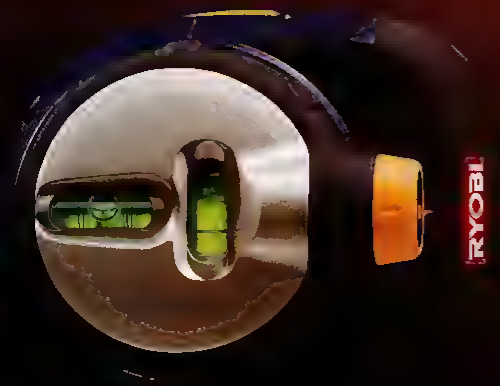
There's a risk to this approach. Some types of pile may catch on the screw as it's being driven in and tear the carpet. Also, on short-napped carpet, you may see the screw holes when you're done.

The safest approach—the one I'd use if it were my house—would be to rip up the carpeting and the pad completely, screw down the subfloor with deck screws, and hire a pro to put everything back. ■

To send a question to Ask This Old House, go to www.thisoldhouse.com/asktoh or write to:

Ask This Old House
This Old House Magazine
1185 Avenue of the Americas, 27th Floor
New York, NY 10036

Include a complete address and daytime phone number. Published questions will be edited for clarity and length and may be used in other media. We regret that due to the volume of mail received, we're unable to reply to unpublished questions.



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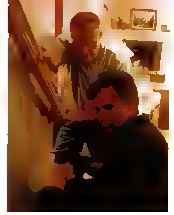

Massachusetts homeowner Leverett Flint needed handrails in his stairways, but was puzzled by how to put them in. He emailed *Ask This Old House*, and Tom Silva showed up to lend an expert hand.

irrigation

Outside of Los Angeles, Roger Cook and specialist Bob Gelbreath 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 popsicle stick. Richard Trethewey provided a more professional solution.

closets

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

what's your problem?

Tune in to the season premiere of The New This Old House Hour on PBS, Thursday, October 7 at 8:00 p.m. to see if we have the answer you're looking for.

Ask 25 This Old House

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Wall-to-Wall Style

New designs and advances in fiber technology make carpet worth a fresh look

BY MOLLY LYONS

PHOTOGRAPHS BY LAURA JOHANSEN

DESIGN YOUR OWN
Modular carpeting from FLOR lets you mix, match, and manipulate patterns for your own custom look. The carpet tiles, available in 27 designs, come in 19½-inch squares. Installation is easy—all you need is a flat, bare surface and a carpenter's square, the adhesive dots and the product's own weight do the rest. You can lift out and replace a soiled or damaged square, or take the whole floorful with you if you move. Squares run from about $7 to $20 each (the equivalent of about $23 to $67 per square yard). Shown here, Line Up, a nylon velvet pile, $8 per square. www.interfaceflor.com

Wall-to-wall carpeting used to be pretty boring stuff: a neutral field of smooth-cut pile, without a lot of excitement or character. But like everything else in the house, carpet has gone high-style—not to mention high tech. Synthetic yarns, advanced dyeing techniques, and new manufacturing processes now produce carpet with more texture, color, durability, and stain resistance than ever before. "New looms can combine different piles to create a pattern, like a floral or geometric print," says Gary Johnston, global brand manager at Stainmaster. The result is carpets that are not simply backgrounds for the rest of your decor but focal points in their own right.

WHAT TO LOOK FOR

The most important thing to keep in mind when selecting a carpet is how much foot traffic it will get. For the busiest areas, look for a dense construction. "Lay a carpet sample on the table and run your

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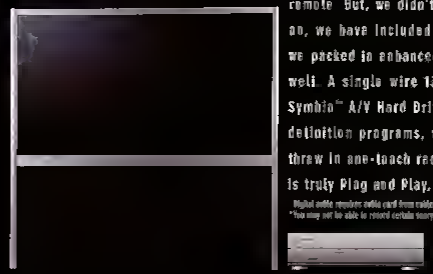

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fingers through it You don't want to be able to see the backing of the carpet," says Barbra Wilson, manager of technical information at the Carpet and Rug Institute You'll also want a shorter pile height—the general rule is half an inch or less In a cut-pile carpet, look for a good, tight twist of the yarn bundles In looped carpet, look for smaller, tighter loops Less trafficked areas give you more freedom, allowing you to choose from plush cut-pile Saxonys to twisty friezes (for details, see "Pile Style," opposite).

Next, consider the material the carpet is made of. Wool is the industry benchmark. "It's what every other fiber is trying to be," says M.J Pullins, marketing director at Stanton Carpet "It doesn't crush or fade It's naturally fire retardant, hypoallergenic, discourages the growth of bacteria, and even regulates the room's humidity " But because it tends to cost more than other fibers, wool accounts for a relatively small share of the market.

Two thirds of all carpeting purchased in the United States is made of nylon, thanks to its colorfastness, resilience, and easy maintenance. Olefin (also called polypropylene) is another durable, colorfast, and reasonably priced synthetic Often used for level-loop and Berber carpet, olefin resists static, moisture, and mildew better than other fibers and can even be used outdoors. Polyester is not as resilient as other fibers, but it's soft to the touch and easily cleaned. Acrylic is most often used in velvet and level-loop constructions, it looks and feels like wool and gives you the most bang for your buck

NEW TEXTURES

New manufacturing techniques combine piles for a multidimensional look.

This nylon cut-and-multilevel-loop carpet has a contoured appearance that hides everyday dirt well Natural Boucle in Silk $45 a square yard *www.shawfloors.com*

A new take on shag these multi-sized twists of nylon frieze are soft and durable and come in 40 colors Chic to Chic in Candle Glow $63 a square yard, *www.shawfloors.com*

Chunky wool loops will give any room a funky look, but don't try it in the dining room where chairs (not to mention crumbs) will get tangled in the pile Chelsea in Furrows $376 a square yard *www.meridianmerdian.com*

ILLUSTRATIONS: HARRY BATES

PILE STYLE

What your carpet is made of is important, but how the yarns are constructed is what gives it a distinctive look

SAXONY
The fibers are cut level creating a smooth soft surface Though most often seen in formal rooms those with tighter twists can be used in more casual settings Saxonys are more likely to show footprints and vacuum marks

CUT AND LOOP
Combining cut and looped fibers produces a carved look, often created in a tone-on-tone These carpets are durable and camouflage stains

PLUSH/VELVET
This pile is cut, but the tufts are denser and sheared more finely than Saxonys Plush and velvets are almost always used in formal spaces, they hide vacuum marks and footprints well

MULTILEVEL LOOP
Loops of different heights create a casual textured pattern that works well in high-traffic areas.

FRIEZE
(pronounced free-zay)
The cut yarn is tightly and unevenly twisted, giving it a textured surface. Friezes hide dirt well and give a room a laid-back look Shag is a longer variation of frieze

LEVEL LOOP
These loops are left uncut and are all the same height Berbers are level loops made with bulkier yarn. Wilton weaves are made with tight, small loops that look like needlepoint. All are highly durable and ideal for high-traffic rooms.

FOR MORE INFORMATION SEE DIRECTORY PAGE 144

FREE window decorating booklet.

A word or two on what today's best-dressed windows are wearing.

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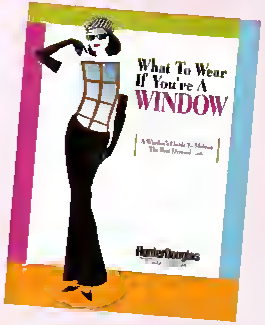

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3589-33

BOLD GEOMETRICS

Stripes and linear designs are in vogue these days. Bright colors freshen up a room, while clean lines give it a modern style.

This sturdy plaid with a short, dense pile is made of velvet and loop nylon for a three-dimensional look that would work well in a home office or den. Gavin in Shadow, about $58 a square yard, www.lizclaiborneflooring.com

Tight, level loops of wool have a corduroylike look that's durable enough for a playroom but elegant enough for a living room. Cabo del Sol in Beach Umbrella, about $100 per square yard, www.karastan.com

This bright wooleen Wilton has a small-scale pattern that can be used in a living room. Country Star in Paprika, $90 a square yard, shown with matching border in Ginger, sold separately, www.stantoncarpet.com

These tufted wooleen loops in multicolor stripes create texture and come in five different colorways. Patra in Northern Lights, $40 a square yard, www.courstan.com

Soft yet durable, this nylon Saxony lattice design comes with a 10-year warranty. Trilicus in Willow, about $45 per square yard, www.carpet-rugs.com

STYLISH PATTERNS

Many traditional patterns have been punched up with vibrant color and fine detail. Some come with mix-and-match borders for a customized look.

Suitable for a formal space, this worsted wool Wilton can be paired with a border. Filipos in beige, $260 a linear yard (36 inches by 27 inches to the trade only), www.primcarpet.com

Calculate how much carpet you'll need. Go to www.thisoldhouse.com or America Online Keyword: This Old House and select Calculate Materials in the Tools & Services box.

Only a Dyson is designed not to lose suction.

Which makes you wonder,
what are the others designed to do?

dyson

For retailers near you, call 1 866-693-9766 or visit dyson.com

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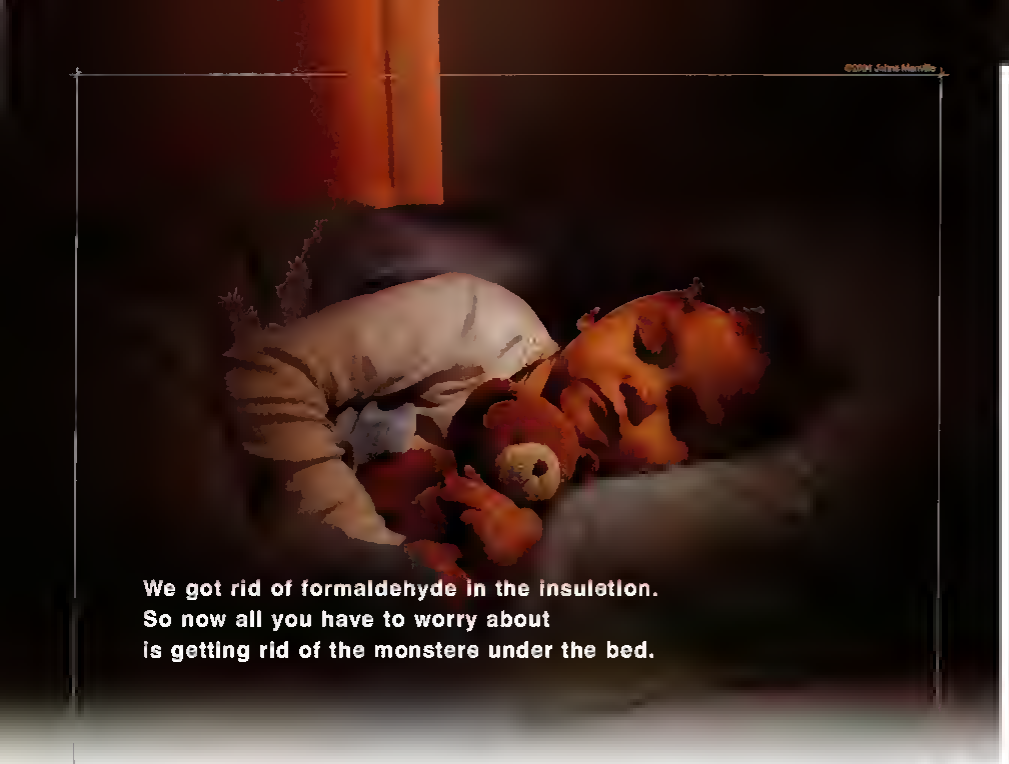

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is getting rid of the monstere under the bed.

Johns Manville Formaldehyde-free fiber glass insulation. Security comes in many different forms. And while you may never send the boogeyman packing, it's easy to get rid of the formaldehyde that lurks behind the walls of your children's rooms. Just use naturally white Johns Manville, the only full line of formaldehyde-free fiber glass insulation. And the only complete line of fiber glass insulation that passes the country's strictest indoor air quality test with no detection of pollutants. You can rest easy with JM, an industry leader for more than 145 years. And who knows, this insulation may even help you sleep better. For more information or to find a retailer near you, call 1-800-654-3103 or visit www.JM.com.

ComfortTherm® Insulation that's easy to handle because it's wrapped in plastic. Plus, there's less itch and dust than other brands. Just one member of JM's family of innovative products.

It's Comforting to Know We're There.

FILES & RASPS

BY JOHN KELSEY
PHOTOGRAPHS BY FRANCESCO MOSTO

When you want to break out of jail, have someone bake you a cake with a hacksaw in it. But if you'd rather make a key from a spoon and quietly slip away like Houdini, ask for a cake with a 6-inch slim taper file.

Files shape, trim, and smooth anything made of metal, wood, or plastic. With their closely spaced, hardened steel grooves, they can sharpen a lawnmower blade, knock the rust off a shovel, and remove burrs from a product with "some assembly required." Rasps are files made specifically for wood. Their coarse, individual teeth, punched up from the steel surface, are perfect for grating away at lumber. Both files and rasps are meant to be used between the rough cut of a saw and the smoothing of sandpaper—not instead of either one.

Because of all the possible combinations of teeth patterns, coarseness, shape, and thickness, there are countless kinds of files and rasps made for every common material and need. On the following pages, you'll learn how to tell a four-in-hand from a rat-tail, and find a selection of types that will help you through most jobs on the homestead.

THE ESSENTIALS

TOOTH COARSENESS

Coarseness is relative—a large file is generally coarser than a small one, even if both are labeled the same, and a rasp is always coarser than a file.

File teeth, from finest to coarsest, come in **SMOOTH CUT, SECOND CUT** (or **MEDIUM**) and **BASTARD CUT.**

Rasps, from finest to coarsest, come in **BASTARD, CABINET** (or **MEDIUM**) and **WOOD.**

EDGE

File edges are either **CUT**, with teeth along the edge, or **UNCUT**, with a smooth edge, also known as **SAFE.** Most files have at least one safe edge.

LENGTH

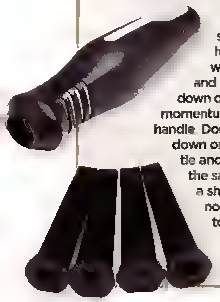
Files are measured from the point to the heel. Sizes begin at 4 inches and get longer by 2-inch increments. Match the file length to the workpiece, using longer files on larger workpieces. 6, 8, 10, and 12 inches are common and useful sizes.

GET A GRIP

Files are two-handed tools. To use almost any file, grasp the point between your thumb and first two fingers with one hand, and grasp the handle on the back end with your other hand. But you'll have to supply the handle for most files; they come with just the bare tang. There are several handle choices.

You can buy a universal adjustable handle, which comes with inserts that fit different file shapes, or else purchase separate handles sized to fit each file. New-style handles are ergonomic, with comfortably shaped rubber grips.

To fit a handle onto a file, slip the handle onto the tang, hold the handle in your fist with the file pointing upward, and slam the handle's end straight down onto the workbench. The file's momentum drives the tang into the handle. Don't try to pound the handle down onto the tang—file steel is brittle and will shatter with impact. For the same reason, store files flat on a shelf or wrapped in a cloth roll, not loose in a box with other tools.



LEFT: Nicholson ergonomic file handle with inserts, from Cooper Tools, $4

SHAPES

Match the file shape to the workpiece

HALF-ROUND
For concave surfaces and edges, holes

ROUND or RAT-TAIL
For round holes

FLAT, MILL, AND HAND
For flat surfaces, straight edges. Traditionally, a flat file tapers in width and thickness from the middle of the belly; a mill file tapers in width and thickness throughout; and a hand file tapers only in thickness—the point is square (called a blunt).

TAPER (a.k.a. THREESQUARE or TRIANGULAR)
For handsaw teeth, squared holes

CHAIN SAW
For chain saw teeth

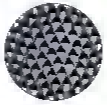
TOOTH PATTERNS

Match the tooth pattern to the filing task.

SINGLE-CUT
Teeth arranged in parallel grooves. Best for sharpening, deburring or smoothing metal and plastic

DOUBLE-CUT
Crisscrossed teeth. Best for shaping or derusting metal and smoothing wood

CURVED
Teeth arranged in parallel arcs. Best for shaping and smoothing decorative plaster, fiberglass, and autobody putty



RASP
Coarse, pyramidlike teeth. Best for shaping wood

CHOOSING A FILE

IF YOU NEED TO:	USE A:
Smooth wood or work thick metal, as when removing heavy rust from a lawn mower blade or sharpening a shovel.	**MILL BASTARD** Craftsman 10-inch mill file from Sears, $8
Sharpen a fine blade, as on an axe or lawn mower; flatten wood or metal.	**FLAT DOUBLE-CUT** Craftsman 10 inch flat Multi Kut file from Sears $6
Deburr plastic or metal, remove the scratches from a flattened surface, file a metal part to a precise fit.	**FLAT or HAND SINGLE-CUT** 8 inch All-Purpose Block Maxi from Simonds International, $8.50
Rapidly rough out a wooden handle or part.	**HALF-ROUND CABINETMAKER'S RASP** Nicholson 10-inch Pattern Maker cabinet rasp, from Cooper Tools, $40
Sharpen a tool with teeth or crevices, such as a handsaw or steel (not carbide) drill bit.	**SMALL SLIM TAPER** Snap-on triangular slim taper miniature file, $5.50
Enlarge a wood hole, deburr the inside of a pipe.	**RAT-TAIL** Nicholson round bastard from Cooper Tools, $6
Outfit a tool kit with a general-purpose file that has both file and rasp teeth and curved and flat sides.	**FOUR-IN-HAND FILE (SHOE RASP)** Collar 6 inch shoe rasp/four in hand from AngloAmerican Tools $7.50
Clean sawdust and metal shavings out of file teeth.	**FILE CARD** Nicholson 10 inch file card and brush, from Cooper Tools $16

For more guides to choosing and using tools, go to **www.thisoldhouse.com** or **America Online Keyword: This Old House** and select **Tools & Materials** in the **Know-how** section.

FOR MORE INFORMATION SEE DIRECTORY PAGE 144

takes the #1 prescribed Alzheimer's drug.[1]

Aricept® can help slow down the progression of symptoms of Alzheimer's, such as memory loss.

Ask your doctor if Aricept is right for you.

Call 1-800-760-6029 ext. 99 or visit www.aricept.com.

ONCE-A-DAY ARICEPT® (donepezil HCl) 5 MG AND 10 MG TABLETS

Helping people be more like themselves longer®

Aricept is indicated for mild to moderate Alzheimer's

Aricept is well tolerated but may not be for everyone. Some people may have nausea, diarrhea, not sleep well, or vomit. Some people may have muscle cramps, feel very tired, or may not want to eat. In studies, these side effects were usually mild and went away over time. Some people who take Aricept may experience fainting.

Please see additional important product information on next page.

[1] IMS MAT/June/04 (MPFARI – June/04 database)

ARICEPT® (Donepezil Hydrochloride Tablets)

Brief Summary—see package insert for full prescribing information. **INDICATIONS AND USAGE** ARICEPT® is indicated for the treatment of mild to moderate dementia of the Alzheimer's type. **CONTRAINDICATIONS** ARICEPT® is contraindicated in patients with known hypersensitivity to donepezil hydrochloride or to piperidine derivatives. **WARNINGS** *Anesthesia:* ARICEPT®, as a cholinesterase inhibitor, is likely to exaggerate succinylcholine-type muscle relaxation during anesthesia. *Cardiovascular Conditions:* [illegible] *Gastrointestinal Conditions:* [illegible] *Genitourinary:* [illegible] *Neurological Conditions:* [illegible]

[illegible] **ADVERSE REACTIONS** **Adverse Events Leading to Discontinuation** [illegible] The most common adverse events leading to discontinuation, defined as those occurring in at least 2% of patients and at twice the incidence seen in placebo patients, are shown in Table 1.

Table 1. Most Frequent Adverse Events Leading to Withdrawal from Controlled Clinical Trials by Dose Group

Dose Group	Placebo	5 mg/day ARICEPT®	10 mg/day ARICEPT®
Patients Randomized	355	350	315
Event/% Discontinuing			
Nausea	1%	1%	3%
Diarrhea	0%	<1%	3%
Vomiting	<1%	<1%	2%

Most Frequent Adverse Clinical Events Seen in Association with the Use of ARICEPT® [illegible] See Table 2 for a comparison of the most common adverse events following one and six week titration regimens.

Table 2. Comparison of Rates of Adverse Events in Patients Titrated to 10 mg/day Over 1 and 6 Weeks

	No titration		One week titration	Six week titration
Adverse Event	Placebo (n=315)	5 mg/day (n=311)	10 mg/day (n=315)	10 mg/day (n=269)
Nausea	6%	5%	19%	6%
Diarrhea	5%	8%	15%	9%
Insomnia	6%	6%	14%	6%
Fatigue	3%	4%	8%	3%
Vomiting	3%	3%	8%	5%
Muscle cramps	2%	6%	8%	3%
Anorexia	2%	3%	7%	3%

Adverse Events Reported in Controlled Trials [illegible] Table 3 lists treatment emergent signs and symptoms that were reported in at least 2% of patients in placebo-controlled trials who received ARICEPT® and for which the rate of occurrence was greater for ARICEPT® assigned than placebo assigned patients. In general, adverse events occurred more frequently in female patients and with advancing age.

Table 3. Adverse Events Reported in Controlled Clinical Trials in at Least 2% of Patients Receiving ARICEPT® and at a Higher Frequency than Placebo-treated Patients

Body System/Adverse Event	Placebo (n=355)	ARICEPT® (n=747)
Percent of Patients with any Adverse Event	72	74
Body as a Whole		
Headache	9	10
Pain, various locations	8	9
Accident	6	7
Fatigue	3	5
Cardiovascular System		
Syncope	1	2
Digestive System		
Nausea	6	11
Diarrhea	5	10
Vomiting	3	5
Anorexia	2	4
Hemic and Lymphatic System		
Ecchymosis	3	4
Metabolic and Nutritional Systems		
Weight Decrease	1	3
Musculoskeletal System		
Muscle Cramps	2	6
Arthritis	1	2
Nervous System		
Insomnia	6	9
Dizziness	6	8
Depression	<1	3
Abnormal Dreams	0	3
Somnolence	<1	2
Urogenital System		
Frequent Urination	1	2

Other Adverse Events Observed During Clinical Trials ARICEPT® has been administered to over 1700 individuals during clinical trials worldwide. [illegible]

[illegible] **HOW SUPPLIED** ARICEPT® is supplied as film-coated, round tablets containing either 5 mg or 10 mg of donepezil hydrochloride. [illegible] **Storage:** Store at controlled room temperature, 15°C to 30°C (59°F to 86°F).

℞ only

ARICEPT® is a registered trademark of Eisai Co., Ltd.

Eisai Inc. Pfizer Inc Neuroscience

200337 Revised April 2004

1 IMS NMTI [illegible]

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Fluffy batts of recycled denim are just one of the many materials you can use to fill the cavity in the outside walls of a house. See page 60 for a guide to insulation options.

25th ANNIVERSARY

From the Ground Up: 25 Years of Building Experience

In this special yearlong series celebrating the 25th anniversary of *This Old House*, we highlight each of the different systems in a house, from the foundation to the roof. You'll learn best building practices from an experienced *TOH* team member and discover some new materials and technologies we've got our eye on. By year's end, you'll know how to build the *This Old House* way.

Next Month:
Interior Finishes (last in the series)

Comfort Control

Proper insulation is the best way to maximize comfort and minimize energy bills

BY MAX ALEXANDER

When it comes to insulation, says *This Old House* general contractor Tom Silva, money truly can buy happiness. "It's the wisest way to invest that I know of," he says. "A well-insulated house will make you more comfortable in every season. And it's quieter, too."

Whether it's thick blankets of fiberglass batts, meringuelike mounds of spray foam (Tom's favorite), or layers of seaweed (discovered under the floors of the first *TOH* project), all insulation works the same way: by trapping tiny air pockets that slow the movement of heat out of a house in winter and into a house in summer. Its effectiveness at resisting this movement is called its R-value; the higher the value, the lower your energy bills. (For the recommended R-values in your area, log on to *www.eere.energy.gov/consumerinfo/energy_savers/r-value_map.html*.)

But to achieve its rated R-value, insulation must be installed correctly. In fact, a bad job can actually make matters worse. For a look at your insulation options, and to see Tom Silva's fail-safe installation techniques for fiberglass batts and spray foam, turn the page.

Insulation types by U.S. market share, 2002:

67%	Fiberglass batts
21%	Blown-in fiberglass
8%	Blown-in cellulose
2%	Spray foam
1%	Blown-in mineral wool
1%	Other

10.41 quadrillion Btu
the amount of energy that house insulation saves in the U.S. every year

1.35 trillion pounds
the amount of CO_2 emissions saved by house insulation in the U.S. every year

Sources: NAHB Research Center; North American Insulation Manufacturers Association; Cellulose Insulation Manufacturers Association

WHITE: HUNT WELLEBORG; ILLUSTRATION: AN WHISKLE

"I'M LIVIN' IN THE LAP OF POWER."

-SPOILED KID IN THE BACKSEAT

POWER AND STYLE

SIERRA DENALI CREW CAB. YOU NEED POWER. YOU WANT STYLE. WHY CHOOSE? INTRODUCING THE NEW 2005 SIERRA DENALI. THE ONLY CREW CAB DENALI'S 345 HORSE POWER VORTEC™ V8 ENGINE WITH 250 LB-FT TORQUE AND FULL-TIME ALL WHEEL DRIVE LETS YOU TOW UP TO 6100 POUNDS.* INSIDE, ITS SPACIOUS CREW CAB YOU'LL FIND SUCH STANDARD AMENITIES AS A BOSE® AUDIO SYSTEM, HEATED FRONT LEATHER APPOINTED BUCKET SEATS, AND ONSTAR® INCLUDING 4 YEARS/4 BILLION BYTES OF SERVICE. PLAN YOU CAN EVEN ADD A DVD PLAYER OR XM SATELLITE RADIO.® THE NEW SIERRA DENALI CREW CAB. POWER HAS NEVER LOOKED SO GOOD.

IT'S NOT MORE THAN YOU NEED. JUST MORE THAN YOU'RE USED TO.

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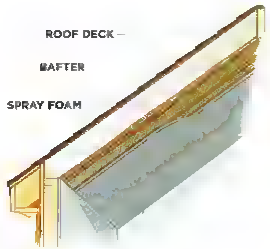
ONSTAR® AVAILABLE WITH SUBSCRIPTION SERVICES. STELLAR VEHICLE TRACKING, AND PANIC BUTTON UNLEASHED.

GMC SIERRA DENALI

*Maximum towing ratings based on calculations using all options. To upgrade Sierra with optional Bose audio system, see the GMC Factory Order for details. Or Silverado HD 0-5 emblem are registered trademarks of the OnStar Corporation. ©2004 XM Satellite Radio Inc. Bose, Acoustic Wave, Acoustic Mirror, Acoustic Cube, Acoustic Wave Cannon, Acoustic Wave Guide

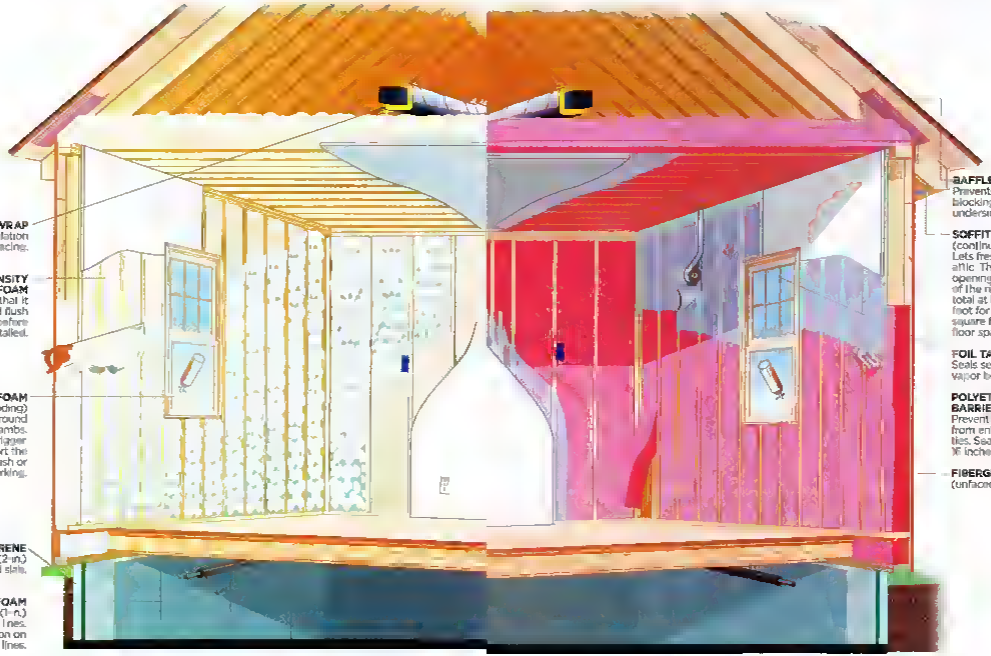
Foam

As far as Tom Silva is concerned, low-density polyurethane spray foam is the insulation technology to beat. Consider its advantages: It forms a lock-tight bond with studs and sheathing that blocks all air movement, it flexes enough to accommodate seasonal wood movement, and it retards (but doesn't halt) moisture passage. While spray foam is expensive, its installation costs are offset in the long run by lower heating and cooling costs.



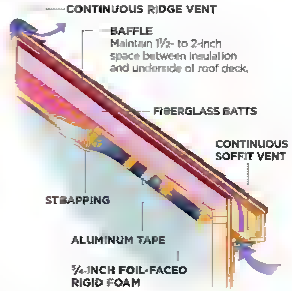
▲ Insulating Cathedral Ceilings

When Tom insulates a cathedral ceiling or a finished attic, he also turns to foam. Sprayed against the underside of the roof deck, it seals against air movement, eliminating the need for a vapor barrier or ventilation. But its open-cell structure still allows moisture to escape.



Fiberglass

Fiberglass batts, the insulation found in most houses in the U.S., are inexpensive and quick to install. Like other batt-type insulation, fiberglass has a predictable R-value if not compressed but is difficult to fit around obstacles without leaving gaps. In most climates, it needs a vapor barrier. Some builders rely on batts with attached kraft-paper facing to do that job, but Tom recommends unfaced batts, covered in plastic with all the seams taped shut.



▲ Batts in the Rafters

Simply jamming batts between the rafters of a cathedral ceiling or insulated attic will interfere with the roof's ability to breathe. The resulting buildup of moisture can soak the insulation (nullifying its R value), foster the growth of mold, or even rot the framing. The illustration above shows how Tom Silva maintains adequate ventilation and avoids those problems.

COMMON MISTAKES WITH BATTS

LOOSE BATTS
Often the problem is sloppy framing. "If the studs are 16.5 inches on center and you're using batts made for 16 inches, you'll have a crack on each side that air can move through," says Tom. In this case, it's best to use cavity-filling foam or blown-in insulation.

COMPRESSED FIBERGLASS BATTS
Fiberglass insulation gets its R value from the amount of air it traps between its fibers. If it's jammed too tightly into a cavity, it can't trap as much air and won't be as effective.

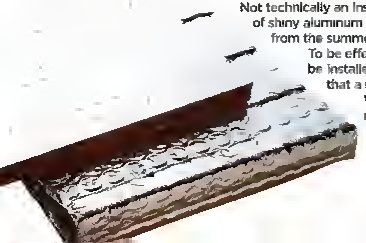
DOUBLED VAPOR BARRIERS IN ATTIC
Laying a second layer of fiberglass batts in the attic is an easy way to boost R-values. But if the new layer has a kraft-paper backing, it can trap moisture and turn the layers underneath into a soggy mess. "I see this mistake all the time," Tom says.

Heat Blockers

Not technically an insulation, radiant barriers keep houses cool by reflecting thermal radiation. These thin sheets of shiny aluminum bonded to foam board, bubble wrap, or sheathing are often installed in attics to block heat from the summer sun.

To be effective, the barrier's reflective surface must always face an air space at least an inch thick and be installed shiny side up if laid on the attic floor, shiny side down if attached to the rafters. Tests show that a radiant barrier in an insulated attic can lower attic temperatures by as much as 30 degrees.

While radiant barriers are a boon in warm climates, they're less useful in cold-weather regions because they prevent beneficial solar heat gain in winter. To see if it makes economic sense to put a radiant barrier in your house, visit the Department of Energy's Website (*www.ornl.gov/sci/roofs+walls/radiant/*).



Vapor Blockers

Once insulation gets wet, it's hard to dry it out. "It will sit there like a sponge, leading to mold problems and rot," says Tom. Vapor barriers—sheets of plastic or kraft paper—keep water vapor out of the wall cavity, so the insulation stays dry. Not every type of insulation needs a vapor barrier (see "Insulation Options," page 60). But if it does, the barrier should face inside in northern, heating climates, and outside in humid southern climates.

Insulation Options

There are all kinds of materials to stuff in, nail on, spray on or blow into walls and ceilings to lower your heating and cooling bills. Weigh your choices based on all the factors, including the abilities of the installer and the long-term energy savings.

LOOSE-FILL FIBERGLASS
Fluffy bits of spun glass that are noncombustible and can't decay. Blown in dry. Tends to settle. R-value declines by as much as 50 percent at temps below 0° F.
Good for: Attic insulation, new construction, or retrofit work
R-value per inch: 4
Vapor barrier needed: Yes
Cost*: 21¢ per sq. ft.

CELLULOSE
Made from pulverized newspapers and treated with boron to resist fire and pests. Blown into place dry or wet. An adhesive reduces its tendency to settle.
Good for: Retrofit work, attic insulation
R-value per inch: 3.8
Vapor barrier needed: No, if packed to a density of at least 2.6 lb./cu. ft.
Cost: 17¢ per sq. ft.

HIGH-DENSITY POLYURETHANE SPRAY FOAM
The rigid, closed-cell structure makes it impermeable to water. Must be professionally applied. While not flammable, it must be protected with drywall or plaster to stop offgassing during a fire.
Good for: Masonry basement walls
R-value per inch: 7
Vapor barrier needed: No
Cost: 4 times the cost of fiberglass batts

LOW-DENSITY POLYURETHANE SPRAY FOAM
Blocks the movement of air (eliminating the need for a vapor barrier), absorbs sound like a sponge, and flexes with the seasonal movement of the framing. Must be professionally applied. Although not flammable, must be protected from fire with drywall or plaster.
Good for: New construction, or retrofit in attics or crawl spaces
R-value per inch: 4
Vapor barrier needed: No
Cost: 4 times the cost of fiberglass batts.

**Cost for all options except rigid foam is based on a value of R-19*

COTTON BATTS
No-itch batts of recycled denim from jeans factories are treated with borates to resist fire and insects.
Good for: New construction, attics
R-value per inch: 3.7
Vapor barrier needed: Yes
Cost: 70¢ to 75¢ per sq. ft.

EXTRUDED POLYSTYRENE (XPS)
Its closed-cell structure stops water and water vapor, resists compression, and holds its R value over time. Must be protected from solvents and sunlight. Flammable and must be protected from fire with drywall or plaster.
Good for: In-ground foundation insulation, masonry structures
R-value per inch: 5
Vapor barrier needed: No
Cost: 50¢ per sq. ft. for a 2-in.-thick panel

FIBERGLASS BATTS
Lightweight batts of spun glass offer a predictable R value if not compressed, but the fibers offer little resistance to air movement and convective heat loss. The sample shown is held together with a nontoxic acrylic binder instead of the typical formaldehyde-based binder.
Good for: New construction, attics
R-value per inch: 3–4
Vapor barrier needed: Yes
Cost: 38¢ per sq. ft.

MINERAL WOOL
Spun from blast-furnace slag, this nonorganic insulation does not burn or support the growth of mold or mildew. Highly sound absorbent. Blown into place wet, it's trimmed flush with the studs after it dries; the trimmings are recycled.
Good for: New construction, attics
R-value per inch: 4
Vapor barrier needed: Yes
Cost: 19¢ per sq. ft.

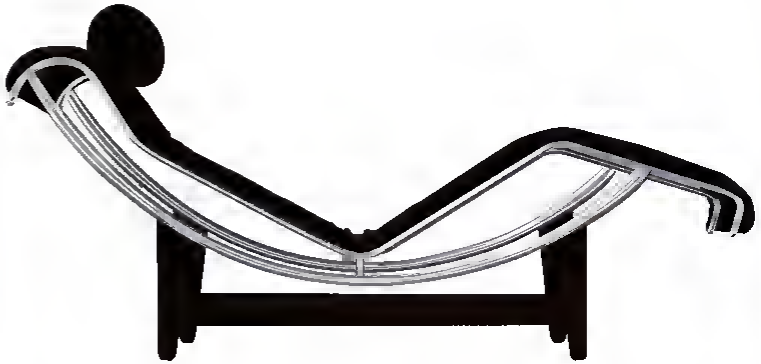
FOIL-FACED POLYISOCYANURATE
Its closed-cell structure stops water vapor, and the foil-covered face acts as a radiant barrier. Not recommended for exterior below-grade applications. Not flammable, but it must be protected with wallboard.
Good for: Cathedral ceilings, walls for finished basements
R-value per inch: 7–8
Vapor barrier needed: No
Cost: 40¢ per sq. ft. for a ¾-in. thick panel

Special Anniversary Website
Celebrate our 25 years of home improvement with a *TOH* trivia quiz, sweepstakes, and more. Go to www.thisoldhouse.com or America Online Keyword: This Old House.

PHOTO: DAVID MANGLEY

FOR MORE INFORMATION, SEE DIRECTORY PAGE 144

"TELL US AGAIN ABOUT THIS DREAM YOU'VE BEEN HAVING..."



You don't have to muck through a maze of technology to find the system of your dreams. Come to Tweeter. We'll help you select the right components, then design and install a system that creates spot-on sound. We even offer free in-home consultations. No one integrates sound into your life and your home like Tweeter. It's one of the reasons why Tweeter was asked to provide the home theater for the 25th anniversary *This Old House®* project. When you're shopping for high-end audio or video systems, Tweeter can untangle your mind.

Tweeter

Visit **Tweeter.com** for store locations

Tweeter would like to thank its co-sponsor Polk for participating in the This Old House® 25th Anniversary Carlisle project. polkaudio

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BY LEIGH KENO AND LESLIE KENO

Plastic Fantastic

Radios from the 1930s, '40s, and '50s have a wonderful retro-modern look

New technologies often make people nostalgic for the cutting-edge gizmos of a bygone era. That is especially true for radio buffs like our father, Ron Keno. He has vivid memories of the entire family gathered around the radio in the 1930s and '40s as history played over the airwaves—President Roosevelt's "fireside chats," the Hindenburg disaster, the attack on Pearl Harbor. On the lighter side, he recalls the music of Bing Crosby, and Orson Welles's sinister voice as "the Shadow."

Modern in Dad's day, the plastic tabletop radios from the 1930s, '40s, and '50s are highly collectible today. They are prized for their sleek Machine Age styling, luminescent dials, and colorful cases. And as long as they have the potential to function, there's no shortage of techies who will tinker with the tubes and transformers to get these old radios back "on the air."

BAKELITE TO BEETLE

The first plastic radios from the early 1930s were boxy little numbers made of black or brown Bakelite, a molded resin. By the end of the decade, new developments in plastics allowed for more creative styling and a broader range of colors. Manufacturers such as Fada, Emerson, and Crosley took their cues from Art Deco icons

Antiques experts Leslie Keno and Leigh Keno are hosts of *Find*, a new TV series on PBS celebrating the world of design, style, antiques, and furnishings (for more, see *www.find.tv.com*). Leigh (at right in photo above) operates his own gallery of American antiques in Manhattan. Leslie is head of the Americana department at auction house Sotheby's in New York City.

These radios from the 1930s and 40s have Art Deco-inspired lines. **CLOCKWISE FROM TOP LEFT.** *The 1946 Fada "Bullet" 1000 has a burgundy Catalin case with butterscotch trim. Zenith's 1938 brown Bakelite model 6D312. The 1948 Bendix 525C has an emerald-and black Catalin case. The 1938 Addison model 5F has a black-and-orange marbleized Catalin body with butterscotch knobs and grille.*

PHOTOS: (PORTRAIT) PETER ROSS; (RADIOS) ©2004 CLASSIC PIX PARTNERS

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like New York City's Chrysler Building and introduced streamlined designs in pistachio Plaskon, blue-streaked Beetle, and candy-colored marbleized Catalin. By the end of World War II these early plastics were being supplanted by cheaper polystyrene, and Art Deco was giving way to more aerodynamic Jet Age style.

Because Catalin radios were fragile and relatively few survive, prices start around $500 and go up to more than $25,000. But most plastic radios range from $25 to $1,000, depending on rarity and condition. For beginning collectors, online auction sites, flea markets, and yard sales are good places to look for inexpensive models. For about $50 you can find a vintage radio with simple circuitry in good condition to decorate a room or to fiddle around with, according to Mark Stein, author of *The Complete Price Guide to Antique Radios* (Radiomania Publishing).

ABOVE: *The 1949 Philco Transitone "Boomerang" epitomizes Jet Age design* **RIGHT:** *A 1946 white Gilfillan Bros. model with a contrasting brown dial* **BELOW:** *This 1951 General Electric clock radio has a turquoise polystyrene case*

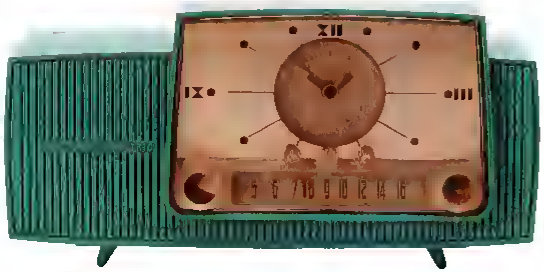
WHAT TO LOOK FOR

When you find a model that catches your eye, carefully evaluate its condition. Plastic radios were vulnerable to the heat generated by the tubes, so examine the case for chips, cracks, and warping. Repairs on plastic are difficult to do well and may reduce the value. By holding a radio up to the light you can detect whether a crack has been repaired with autobody filler, which appears opaque. Also, many early Bakelite radios had paint "baked" on at the factory, which tends to chip as it ages. The original surface, even if it's chipped, is usually worth 10 to 50 percent more than one that's been stripped and repainted.

Missing or mismatched exterior grilles, knobs, or dial lenses also diminish the value, but you can often find replacements at swap meets or in *Antique Radio Classified* (*www.antiqueradio.com*), the magazine (and online resource) for radio collectors. Many old radios are missing their back panel, which was typically made of cardboard. But since the back is rarely seen, its absence doesn't affect value much. The exceptions are models with a plastic back, which was integral to the design. Its absence can slash values by as much as 25 percent, says Stein.

To get an old radio working, you might have to replace the capacitors, the tiny cigar-shaped components that store an electrical charge. You may also have to change the occasional vacuum tube, which amplifies a radio's signal. Though replacement parts are available online from various dealers, Stein recommends leaving such repairs to a professional. To locate a repair shop, search online under vintage or antique radio restoration. For audiophiles who want modern technology but like the look of old radios, reproductions are available through several specialty electronics and home furnishing retailers.

Our dad has long since sold off most of his radio collection, but lately he's been on the prowl for one iconic model to bring back that excitement from his youth. He's got his eye on a 1936 Remler with a shiny black Bakelite case and a contrasting ivory Plaskon grille. It has a great, graphic design. But for him, as for so many collectors, the appeal really goes deeper. As Dad likes to say, there's nothing like the soft glow of an old radio dial lit up at night.



Visit *Find* online. For more information about the show, or to submit your own items for consideration, go to **www.find-tv.com.**

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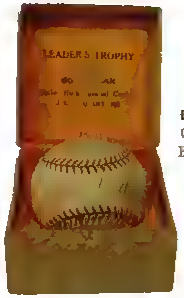
Q&A Curious about your collectibles? Our experts have the answers.



BABE RUTH BASEBALL

Can you tell me anything about this Babe Ruth–signed baseball from 1928?

PAUL BRAATEN, WOODSTOCK, CONN

SIMEON LIPMAN REPLIES From the photograph, this appears to be a secretarial signature, not in the Babe's own hand, although the ball is from his time. It was common then, as it is now for a batboy or someone officially with the team to sign for a player. Ruth did commercial endorsements (he had a deal with Goodyear) and might have had 100 balls to autograph at a sitting. If he'd had a rough night, someone would help him sign them. There was no monetary value to these balls back then, just the thrill of having an "autograph." If the signature were truly Ruth's, the ball would be worth $10,000 or more in its present condition. Yours, with its original box, is worth about $200. But its real value is as a piece of history.

Simeon Lipman is director of pop culture/Americana at Leland's Auction House in Seaford, New York

CHINESE EXPORT DESK

I'm told this camphor sea captain's desk was made in China. It comes apart in three pieces and has handles on either side. What is it worth?

MICHAEL MATTHEWS, RUMFORD, MAINE

LESLIE KENO REPLIES. This desk is an example of 19th century Chinese export furniture. Trade in porcelain, silk cloisonné and furniture between China and England thrived between 1700 and 1850. While in port, merchants often commissioned furniture that could easily be moved from the ship to quarters on land. Desks were rare because they took up so much cabin space. Yours was likely made for the captain of a very large vessel to hold his most important papers—maps, letters and bills.

Details such as inlaid dark wood stringing on the drawer fronts and reeded trim decoration enhance the look of the piece and are evidence of its maker's incorporating the English Regency style. According to Lark E. Mason, an Asian art expert and owner of IGavel.com in New York City, camphor was commonly used for traders' furniture because it was inexpensive and practical. The major ingredient in mothballs, camphor has a strong fragrance that repels insects. The alligatored finish indicates that the desk has been in a wet climate and never restored. Mason believes it was made in Canton or Hong Kong, probably right before the burning of Canton in the mid-1840s. Oh, the stories this desk could tell! It's worth $2,500 to $3,500.

CAST-IRON MIRROR

My father-in-law picked up this mirror at an estate sale for less than $100. It has a date on the back of Nov. 25, 1862. Can you tell me more about it?

JEFFREY OLSON, LANCASTER, CALIF.

MARGARET CALDWELL REPLIES. This mirror is interesting because it was patented at the height of the Civil War. Made of cast iron, it has a strong patriotic theme, with the American eagle on the crest and a Federal shield below the large plate. The mirrors and backboards appear to be original, though it's possible that the top mirrored section once held an églomisé (a painted glass) plate or a paper insert depicting George Washington or some other heroic figure. The manufacturer most likely offered this mirror in different finishes. The gilded version would have been the most expensive. Although much of the original gilt has been lost, the mirror's value is $4,000 to $5,000.

Margaret Caldwell is a dealer and adviser for 19th century American and European art objects in New York City.

SEND US YOUR FINDS!

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YARN WINDER

I bought this old yarn wheel for $7 at an estate sale in Pittsburgh in 1960. I've been told it's from the 1800s and that a museum might be interested in having it. Can you tell me how much it is worth?

CONNIE RYAN, ATHOL, IDAHO

PETER CURRAN REPLIES: Yarn winders like yours were indeed found in rural American homes during the first half of the 19th century. Spinners used them to twist and wind raw yarn into balls or skeins. The type of wood used and the turnings on the legs and spindles sometimes help identify what region of the country the yarn winder came from. For example, white pine and hard maple winders were usually from New England. Yours is a primitive model that was probably made of mixed woods by a local Pennsylvania craftsman. Although it is old, it's not worth a lot of money because many winders are still around. That said, a Shaker yarn winder in very good shape recently sold at auction for $600. This one is worth about $100. Its greater value lies in its local legacy. The Historical Society of Western Pennsylvania in Pittsburgh might be interested in adding it to their collection.

Peter Curran is an independent appraiser and American folk art expert in Wilton, Connecticut.

COCA-COLA TRAY

Can you tell me when this Coca-Cola tray was made and what its value might be?

BRENDA ELLIS, TERRE HAUTE, IND

RUDY FRANCHI REPLIES: This is the 1948 Coca-Cola serving tray nicknamed "Girl With Wind in Her Hair." The image was created by noted American commercial illustrator Bradshaw Crandell, whose renderings of actresses and models regularly graced magazine covers, calendars, and advertisements in the 30s, 40s, and 50s. At the end of the 19th century Coca-Cola began working with well-known artists to create illustrations for its serving trays. The company typically issued just one tray a year until 1950. In very good condition, "Girl With Wind in Her Hair" sells for about $250. Unfortunately, the rust marks along the bottom of the image reduce the value of your tray to about $75. Collectors are fanatical about condition, and they are constantly upgrading, driving up the prices of near perfect examples. Some of the trays from the 1910s and '20s sell for about $1,000. The few pristine examples from the late 19th century sell into the tens of thousands of dollars.

Rudy Franchi is a dealer of vintage advertising and entertainment art, and co-owns The Nostalgia Factory in Boston.

CANING REPAIR

My mother inherited this bench from my Belgian grandmother. How should I go about repairing the seat?

TIM OSTER, SACRAMENTO, CALIF.

LEIGH KENO REPLIES: Your Louis XVI-style bench has a caned seat made of flexible woven rattan. Caning, which is believed to have originated in China or India, was popular in 18th-century Europe. The craft was later exported to America in the 1880s and became a favored method for making lacy patterned backs and seats on Victorian-era chairs and settees. Before you set out to find someone to repair your cane seat, first determine whether it was woven by hand or machine. If you find a narrow groove around the seat frame, your bench had machine-woven cane, which comes in sheets of webbing and is secured in the seat rail grooves with a spline and glue. If you find holes around the entire perimeter of the seat, it was woven by hand with individual strips of cane. Handwoven caning repair typically costs $1.25 to $1.75 per hole along the seat's rim, about twice as much as replacing machine caning. Look in the Yellow Pages or ask an antiques dealer to recommend a craftsman who specializes in caning. If you're handy, you might want to tackle the job yourself—books, tools, and materials are available from mail-order and online woodworking suppliers.

FOR MORE INFORMATION SEE DIRECTORY PAGE 144

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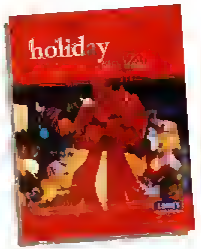

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The dark-stained oak cabinets that once dominated this kitchen **(INSET BELOW)** *have been given a bright new face of durable, easy-to-clean oil-based paint. Copious sandings* **(ABOVE)** *at every step of the process ensure that the final finish glows.*

Old Cabinets, New Color

How to transform your kitchen with a paintbrush

BY JOSH GARSKOF PHOTOGRAPHS BY BRIAN WILDER

If your kitchen cabinets are solid but dated and dark, a fresh coat of paint can go a long way toward transforming the space without draining your bank account. You can hire a pro to spray paint them for a thousand dollars or more, but there's a less costly, and less messy, alternative to consider. Use a brush and paint the cabinets yourself. "You don't need to spray to get a smooth finish," says painting contractor John Dee, who has worked on a number of *This Old House* projects. He often brush-paints cabinets anyway because it gives him more control and avoids the risk of paint spray ending up where it's not wanted. (Surface prep is the same whether you spray or brush.) Brushing is time-consuming, he warns, and will probably take at least a couple of weeks to complete. But the result, as Dee demonstrates in this kitchen filled with dark-stained 1970s-era oak cabinets (left), is a durable, glass-smooth finish that's the equal of anything from a spray gun. "You just need to use the best materials and take the time to sand and do the brushwork right," Dee says.

Readying the Room

Before starting a kitchen paint job, empty the cabinets, clear off the counters, and remove freestanding appliances. Relocate tables and other furniture to another room. Tape rosin paper over the countertops and flooring, and tape plastic sheeting over the backsplash windows, fixed appliances, and interior doorways (to protect the rest of the house from dust and fumes). Mask off the wall around the cabinets. Finally, set up a worktable for painting doors, drawers, and shelves.

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Prep Steps

In kitchens the key to a good paint job is surface prep. "Old cabinets are covered with everything from hand oils to greasy smoke residue to petrified gravy," says Dee. "You've got to get all that off or the paint won't stick."

1. REMOVE DOORS, DRAWERS, AND SHELVES
Back out the hinge screws from the cabinet frame and remove the doors. Working methodically from left to right, top to bottom, label each one with a numbered piece of tape. Also number the ends of cabinet shelves and the bottoms of drawers. Set aside the shelf-hanging hardware. At your worktable, remove the pulls and hinges and save what's being reused. On the doors, transfer the number from the tape to the exposed wood under one hinge. Cover it with fresh tape.

2. CLEAN ALL SURFACES
Open the windows for ventilation and put on safety gear. Scrub down all of the face frames, doors, drawer fronts, and shelving with an abrasive pad dipped in liquid deglosser. Hold a rag underneath to catch drips. Before the deglosser evaporates, quickly wipe away the residue with another clean, deglosser-dampened rag.

3. FILL HOLES
If you're relocating the hardware, fill the old screw holes with a two-part polyester wood or autobody filler. It sets in about 5 minutes, so mix only small batches. (Dee adds a pea-size bit of hardener to a golf-ball-size glob of filler.) The filler shrinks a bit, so overfill the holes slightly. As soon as it sets, remove the excess with a sharp paint scraper. If it hardens completely, sand it smooth.

4. SAND, VAC, AND TACK
Sand all surfaces with the grain using 100-grit paper. To make sure no bits of dust mar the finish, vacuum the cabinets inside and out, then rub them down with a tack cloth to catch any debris that the vacuum misses. Dee says, "Hand sanding is the best technique on oak because you can push the paper into the open grain, which a power sander or sanding block will miss."

JOHN DEE'S TRICKS OF THE TRADE

Tacking: Unfold each new tack cloth fully, down to one layer, then crumple it to get the greatest dust-collecting surface.

Caulking: "The hole in the tube's tip should be no bigger than the tip of a sharp pencil," Dee says. "Slice 45-degree slivers off the tip with a razor until you see the hole open."

Straining: Brushes pick up dust, so always pour paint into a separate container to prevent contamination of the paint in the can. If any paint is left over, pour it back into the can only through a fine-mesh strainer.

Brushing—Tipping-off: Follow the underlying structure of the cabinet or door. Where a rail (horizontal piece) butts into a stile (vertical piece), for instance, paint the rail first, overlapping slightly onto the stile. Then, before the overlap dries, paint the stile. Where a stile butts into a rail, paint the stile first.

Brushing—Drips: To prevent drips on outside edges, pull the brush toward them. To prevent drips in corners, first unload the brush by scraping off the paint, then paint by pulling the brush away from the corner. If a drip laps onto a dry surface, wipe it up immediately.

Brushing—Avoiding lap marks: Maintain a wet edge. If the leading edge of a fresh coat becomes dry, the overlap mark will show.

PREP CHECKLIST

MATERIALS
- Low tack blue masking tape
- Rosin paper
- 0.5-mil plastic sheet
- Tack cloth
- Liquid deglosser and abrasive pad
- Lint-free rags
- 100-grit silicon-carbide sandpaper (clogs less than aluminum oxide)
- Two-part polyester wood filler or autobody filler (if holes need filling)

TOOLS
- Drill-driver
- Paint scraper
- Putty knife
- Shop vacuum with drywall-dust filter

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Painting the Cabinets

A paint job's appearance depends on the care taken in applying and sanding smooth all the coats leading up to the final coat. Use each base coat to perfect your brushing technique

1. APPLY PRIMER

Starting at the top of the cabinet, brush on the primer (or brushing putty, see below) across the grain, then "tip off"—pass the brush lightly over the wet finish in the direction of the grain. Always tip off in a single stroke from one end to the other. Give it a day to dry (if using brushing putty, apply a second coat the next day and wait another day for it to dry.) Sand the flat surfaces with a random-orbit sander and 220-grit paper. Sand any profiled surfaces with a medium-grit sanding sponge. When you're done, everything should be glass-smooth.

2. CAULK SEAMS, FILL DENTS

Squeeze a thin bead of latex caulk into any open seams. Pull the tip as you go, then smooth the caulk with a damp finger. Fill any small dents, scratches, or dings with vinyl spackle, smoothed flat with a putty knife. Once dry in about 60 minutes, sand again with 220-grit paper, vacuum, and wipe with tack cloth. Spot-prime the spackle, and any spots where the brushed-on primer is "burned through," with a spray can of fast-drying oil-based primer. Wait an hour, then sand the primer lightly with 280-grit paper. Vacuum all surfaces, and wipe with a tack cloth.

3. PAINT

Work from top to bottom, applying the paint across the grain, then tipping it off with the grain. For cabinet interiors, apply the paint with a smooth-surface mini roller, which leaves a slight orange-peel texture. Sand all surfaces with 280-grit paper, then vacuum and clean with tack cloth. For the last coat, break out a new brush. When the final coat is dry, replace the shelf hangers.

PAINTING CHECKLIST

MATERIALS

- 220-grit silicon-carbide sandpaper: smooths primer between coats
- 280-grit silicon-carbide sandpaper: smooths paint between coats
- Sanding sponges (medium- and fine-grit)
- Vinyl spackle
- Primer (oil-based): Use on smooth surfaces or tight-grained woods (cherry, maple, birch), slow-drying products level out better

-or-

Brushing putty: Primes and fills open-grained woods (oak, ash, hickory)

- Spray primer (oil-based): for touch-up
- Siliconized acrylic-latex caulk
- Paint (oil-based): Easier to clean and more durable than water based, which softens when exposed to heat or oil. The best oil paints have a solids content of 50 percent or more by volume

TOOLS

- Random-orbit sander

PAINTBRUSHES

- 2½-in. chisel-tip with nylon-polyester bristles

A PRIMER THAT ALSO FILLS

Slow-drying, oil-based primers work fine on tight-grained woods like maple or cherry, or on man-made materials. But they just sink into open-grained woods such as oak, ash, mahogany, or hickory. Brushing putty, the pudding-thick, oil-based coating Dee used on these oak cabinets, fills the grain as it primes the wood. A couple of caveats: It should be applied with a good-quality nylon-polyester brush, which you'll have to throw away after each coat. And it doesn't become level as it dries; assiduous sanding is required to flatten it out.

FOR MORE INFORMATION, SEE DIRECTORY PAGE 144

Painting Doors, Drawers, and Shelves

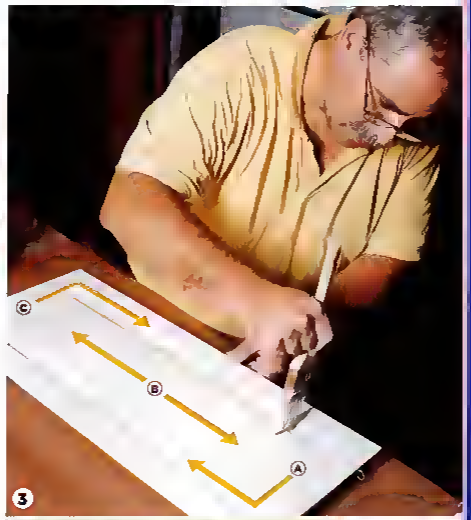
The strategy for prepping and painting doors, drawers, and shelves is the same as on the cabinets, except that all the work is done on a table to reduce the chance of drips, runs, and sags. Paneled doors pose some special challenges, here's Dee's approach.

1. PREP, PRIME, AND SAND
Follow the same prep sequence as for cabinets—clean with deglosser, fill the holes, sand, vac, and tack—and the same priming sequence: in this case, two coats of brushing putty. Smooth the flat surfaces on the panel and the frame with a random-orbit sander. On bevels or profiles, apply elbow grease and a medium-grit sanding sponge (above). Spackle and sand any dents.

2. SPOT-PRIME
After vacuuming and tacking all the surfaces, spray a fast-dry primer on any spots with spackle or bare wood where the sandpaper "burned through" the primer. Wait an hour before sanding.

3. APPLY THE FINISH COATS
Remove all dust—first with a vacuum, then with a tack cloth—and apply the finish coat. Tip it off with the grain. When the first coat dries, power-sand the flats; hand-sand the profiles. Vacuum and tack every piece, then brush on the final coat.

4. PUT BACK DOORS, DRAWERS, AND HARDWARE
Wait for the final coat to dry, then put back the shelves. Remove the tape over each door's number. Install the hinges and knob, then hang it in the opening it came from. Replace the drawer pulls (or better yet, add new ones) and reinstall each drawer in its original opening.



When priming or painting paneled doors, follow the brushing sequence above to get the best-looking surface in the least amount of time. As you go, wipe up any paint that ends up on adjacent dry surfaces. This eliminates the chance of lap marks.

BOTH SIDES NOW

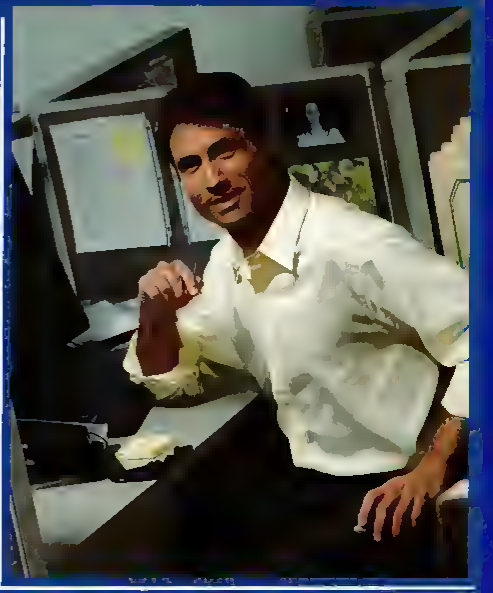
Painting cabinet doors is a trade-off between perfection and speed. John Dee, a perfectionist, prefers to do one side at a time, keeping the faces flat so they don't get runs. But that's 48 hours of drying time per door—one day per side. Here's his method for painting both sides in a day.

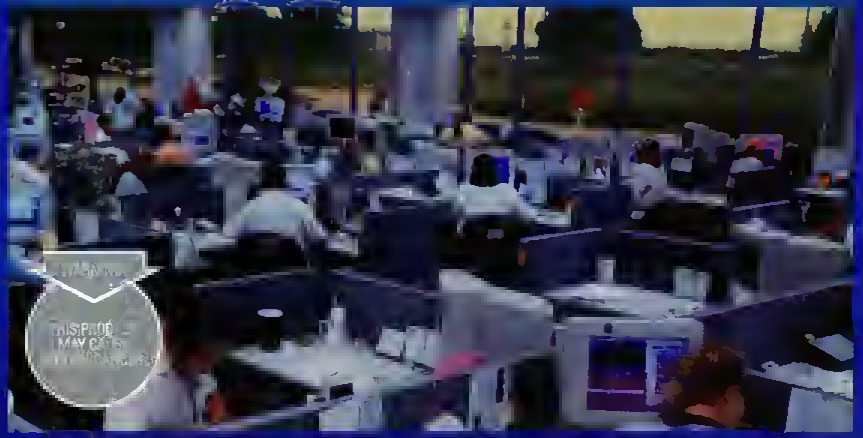
Twist two screw hooks into holes drilled in an inconspicuous door edge (the lower edge for bottom cabinets, the upper edge for top cabinets). Paint the door's outside face as above. Let it dry for an hour while resting flat, then tilt the door up onto its hooks and put a drywall screw into an existing hardware hole. Hold the tilted door up by the screw and paint the door's back side.

When you're done painting, pick up the door by the screw and one hook and hang both hooks on a sturdy wire clothes hanger. Suspend from a shower curtain rod or clothes rod until the door is dry.

For a special online section on painting tips and advice, go to www.thisoldhouse.com/shortcuts.

WITH ALL THE SMOKING AREAS REMOVED FROM THE BUILDING, PHIL KNEW HIS BEST OPTION WAS TO HEAD STRAIGHT FOR (PAGE 87).





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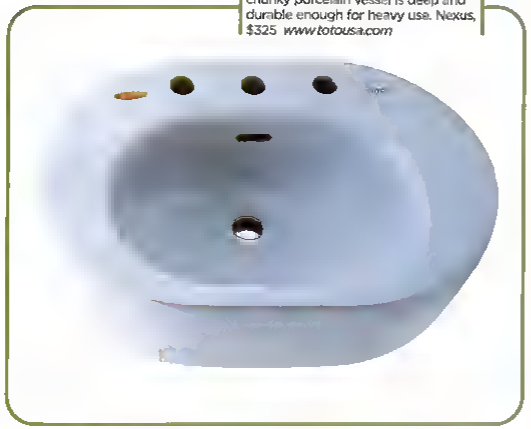
Basin Beauties

With more materials and styles than ever, bath sinks have never looked better

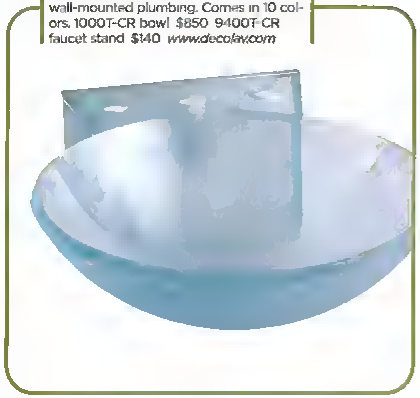
BY MOLLY LYONS
PHOTOGRAPHS BY ANASTASSIOS MENTIS

Bathroom sinks used to be purely utilitarian—the place where we washed, brushed, and shaved. These days the bath sink isn't just the site of our daily grooming, it's the visual star of the room. Close to 11 million lavatory sinks (the technical term for a bathroom basin) were sold in 2002. Chalk it up to the astounding number of attractive options in every price range, from traditional vitreous china to exotic metals, glass, stone, even wood. Here's a look at a handful of the latest lav styles and materials, plus some basic buying advice.



Though it sits atop the counter, this chunky porcelain vessel is deep and durable enough for heavy use. Nexus, $325 *www.totousa.com*

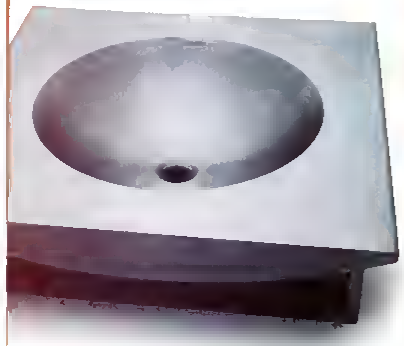
CERAMIC & GLASS



This frosted, tempered-glass vessel has an optional faucet stand as an alternative to wall-mounted plumbing. Comes in 10 colors. 1000T-CR bowl $850, 9400T-CR faucet stand $140 *www.decolav.com*

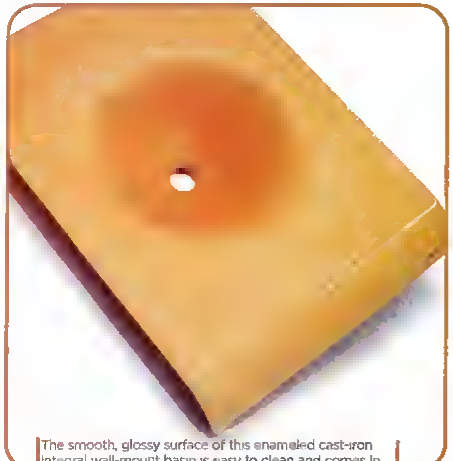
A self-rimming textured-glass basin combines the warmth and shine of glass with the ease of drop-in mounting. George C. Scott Artglass basin: $1800 *www.annsacks.com*

This stainless steel vessel can be paired with bamboo, cherry or mahogany (shown here) or custom materials like tile or granite. Cerno Vessel, $1338, with base $1004. www.neo-metro.com



To make this iroko sink stand up to water, the wood has been "stabilized" with artificial resins and sealed with epoxy. For use with a wall- or deck-mounted faucet. Quadra, $2,589. www.pscbath.com

WOOD & METAL



The smooth, glossy surface of this enameled cast-iron integral wall-mount basin is easy to clean and comes in nine vibrant colors (this one is orange). Tableau, $910. www.kohler.com

This handmade bronze vessel's "living" finish will age with time and use. The outside has a design created with melted wax. Partita, $1600. www.[illegible]onelements.com

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This black granite lav's minimal design features an invisible trough-like drain. It can be wall-mounted or installed vessel-style on a countertop. Barcelona, $4,295. *www.hastingstile bath.com*

STONE & CONCRETE

Hand-carved from Papiro cream marble this vessel has an old-world feeling. Roma, $900. *www.stoneforest.com*

This cast concrete vessel is styled to resemble an old English washbasin. Cabernet, in Leaf, $825. *www.sonomastone.com*

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Before You Buy

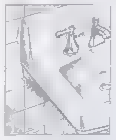
Before purchasing a sink, there are some general questions—beyond price, material, and mounting options—you should ask yourself First, how much space do you want to devote to the lav? In a 5-by-7-foot room, for example, the sink shouldn't be wider than 24 inches, says Suzette Bonsignore of Smolka Plumbing in New York City. For a comfortable amount of elbow room, the center of the sink should be at least 12 inches from the nearest wall. Also determine the sink's height for maximum comfort and ease of use; 34 inches is typical today (up a couple of inches from 10 years ago) Height is especially important when buying a vessel sink, which sits on top of a counter or cabinet.

Keep in mind that a sink's overall look depends in large part on tha faucet you choose for it. Three-hole sinks are designed for widespread faucets, with individual hot and cold handles 8 inches apart, or center-set styles, with handles 4 inches apart on a common base. One-hole sinks are for single-handle, lever-operated faucets. Vessel-style sinks with no holes require faucets mounted on tha wall or in the sink surround

MOUNTING OPTIONS

DROP-IN (also called self-rimming) The easiest type of sink to install these simply drop into a hole cut into the countertop The sink's rim supports its weight; caulking around the perimeter keeps the seal watertight Drop-ins can work with just about any countertop material The downside is that the exposed rim makes it harder to keep the countertop clean than with other mounting styles

UNDERMOUNT The most popular lav style undermounts attach with clips to the under side of the countertop The look is sleek and seamless and it s easy to keep the counter surface clean But because undermounts leave the edge of the countertop exposed to water they can only be used with certain materials, chiefly stone and solid surfacing

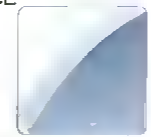


WALL-MOUNT. These have the advantage of being adjustable to most any height making them ideal for handicapped or children's baths And because wall mounts don t require a cabinet for support they re often the best option in a small bath where floor space is limited If you don t like to look at exposed plumbing some models come with a shroud to cover the pipes you can also get a decorative P trap

VESSEL. The most striking opt on vessels come in a broad range of materials, shapes and styles. Like an old-fashioned washbasin they sit atop the counter making height an important consideration So is plumbing Faucets for vessel sinks are mounted on the wall or on the sink deck Because the bowl is completely exposed vessels are not the most practical cho ce for heavily used baths They don t have overflow holes and shallower ones are prone to splash

INTEGRAL With an integral sink the basin and countertop are one continuous material typically sol d surfacing metal stone or concrete Though they are most often oval or round new designs feature rectangular and troughlike shapes as well

CARE AND MAINTENANCE



VITREOUS CHINA is durable and affordable and accounts for the lion's share of all sinks sold Made by firing ceramic clay at high temperatures to form a nonporous surface it s easy to clean and doesn t require special care. Vitreous china comes in a variety of colors but classic white is still the best-seller

GLASS is more durable than it looks but you still need to be careful about scratching and water deposits, so use nonabrasive or glass cleansers and wipe the sink with a towel after every use Glass for sinks is fairly thick and tempered so it won't shatter but you may want to think twice before installing it where tems from a medicine cabinet could fall on it.

METAL is becoming more and more common as a bath sink material In addition to stainless steel long popular in kitchens, "living" metals like bronze and copper, which acquire a warm patina with age are catching on All metals scratch so avo'd abrasives and use metal cleansers or mild soap and water

WOOD sinks are among the most expensive because their construction is so intricate The natural resins present in the wood—typical species are iroko oak or maple—are extracted and replaced with artificial resins then the wood is sealed with several layers of epoxy Wood sinks should be deanad and wiped down after every use

STONE AND CONCRETE are often usad for integral sinks They re the heavyweights of lavs some undermount and wall mounted models may require additional support Because the material is porous stone and concrete need resealing evary year or so Marble granite soapstone and onyx are common sink materials as is cultured stone, a man-made mix of crushed stone and plast c res ns

For information on designing or remodeling a bath
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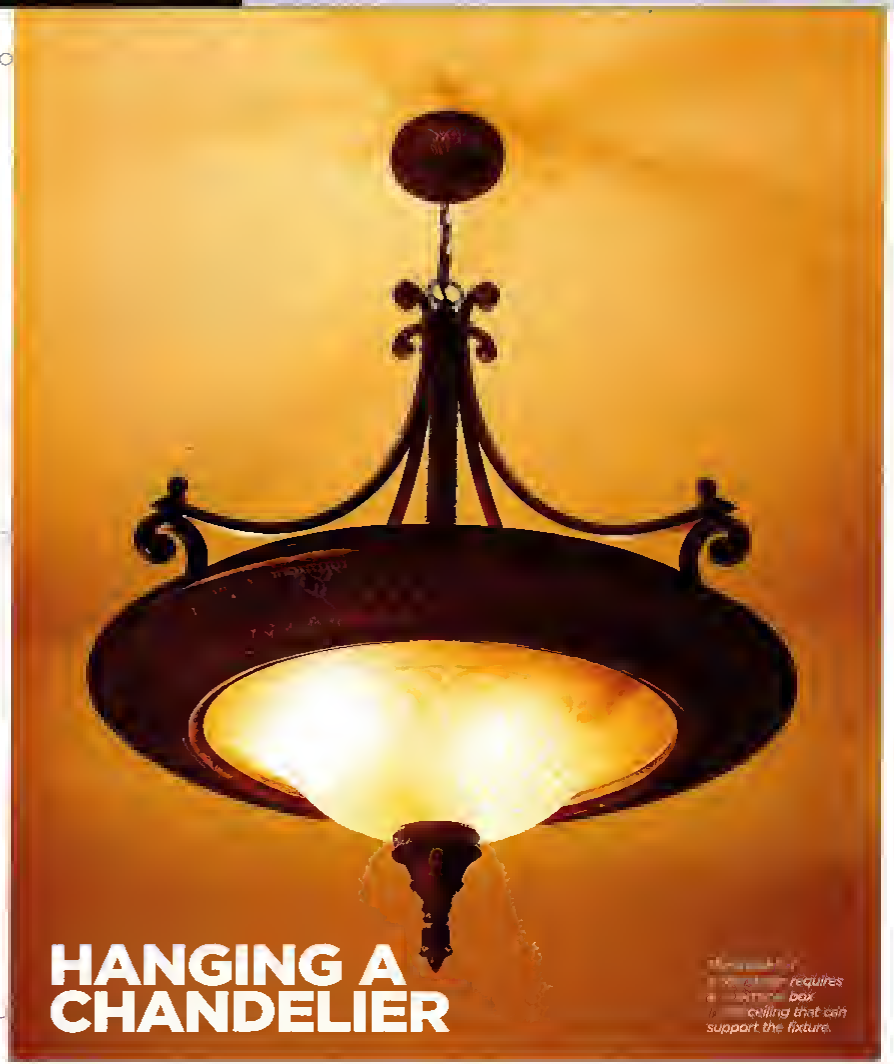
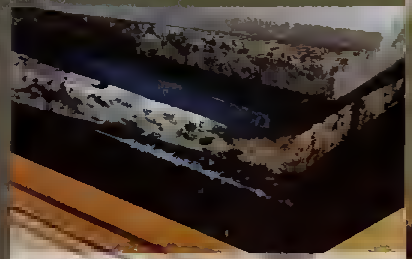


HANGING A CHANDELIER

requires a [illegible] box ceiling that can support the fixture.

PHOTO: ROLF SMITH

If you want to



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BY JOSEPH TRUINI
PHOTOGRAPHS BY KOLIN SMITH
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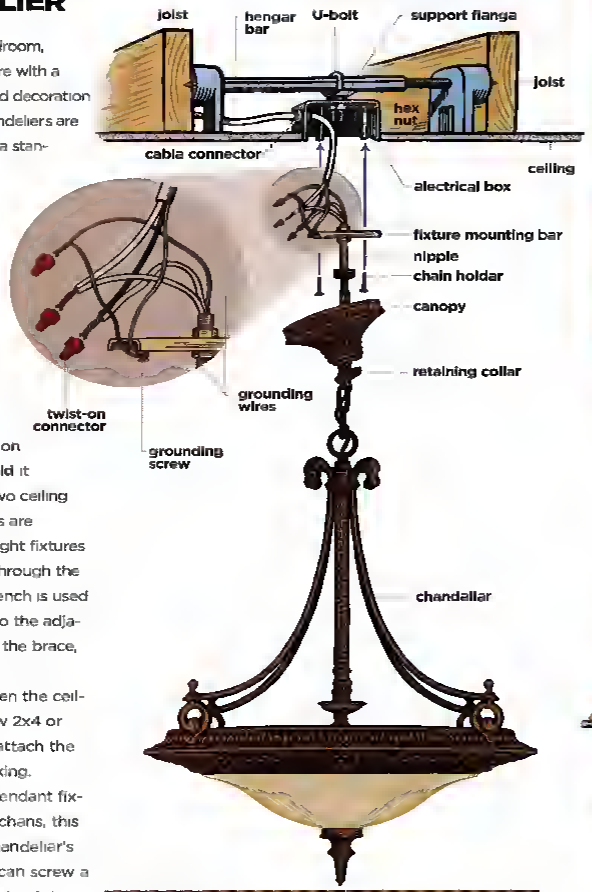
HANGING A CHANDELIER

Whether it's in a dining room or a bedroom, replacing a simple ceiling light fixture with a chandelier is a great way to add character and decoration to an otherwise plain room. But because chandeliers are heavy fixtures, it's often necessary to replace a standard electrical box in the ceiling, which has a maximum load rating of 50 pounds with a support system that can hold the added weight.

There are several ways to do this. For the installation shown here, we opted for the neatest and quickest approach. After removing the old electrical box, we installed an expandable fan brace (about $18), a hexagon-shaped steel bar with prongs on the ends that hold it tight between two ceiling joists. Fan braces are designed for ceiling fans but will also hold light fixtures weighing up to 150 pounds. The brace fits through the existing ceiling hole. Once it's in place, a wrench is used to expand the brace until the prongs dig into the adjacent joists. A new electrical box is bolted to the brace, and the chandelier is hung from the box.

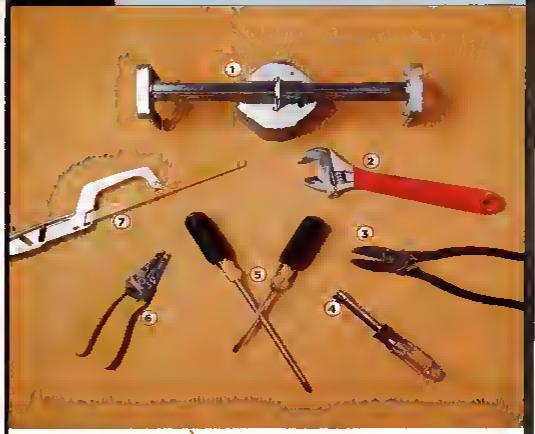
COST: $15 to $20, plus the cost of the chandelier
TIME: 2 to 4 hours

There are other installation options. When the ceiling is accessible from above, you can screw 2x4 or 2x6 blocking between the joists and then attach the new, heavy-duty electrical box to the blocking. However, as most chandeliers and heavy pendant fixtures are in first-floor dining rooms and kitchens, this is often not possible. In some cases, the chandelier's location is near enough to a joist that you can screw a flat "pancake" electrical box to the underside of the joist and hang the chandelier from there. To learn how to install the light this way, see "Hanging a Fixture From a Joist," right.



WARNING
Always turn off the electricity to the circuit you're working on at the main electrical panel. Never attempt to work on live wires.

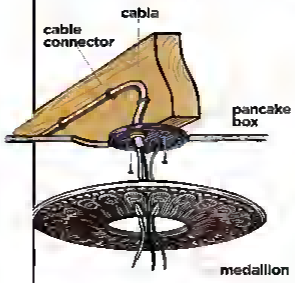
TOOLS



1. **Fan brace** (about $18)
2. **Adjustable wrench** (used to tighten fan brace)
3. **Lineman's pliers** (used for spreading chain links)
4. **7/16-in. nut driver**
5. **Phillips-head and slotted screwdrivers**
6. **Wire stripper**
7. **Close-quarter hacksaw** (for cutting out old hanging bar)

NOT SHOWN
Stepladder

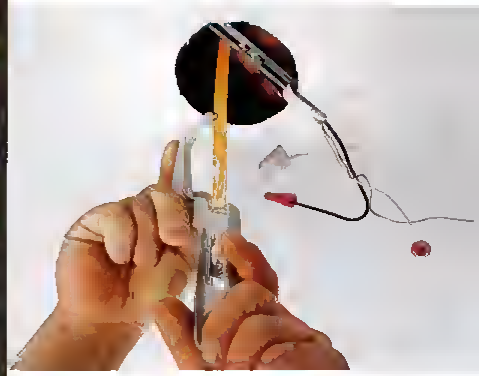
HANGING A FIXTURE FROM A JOIST

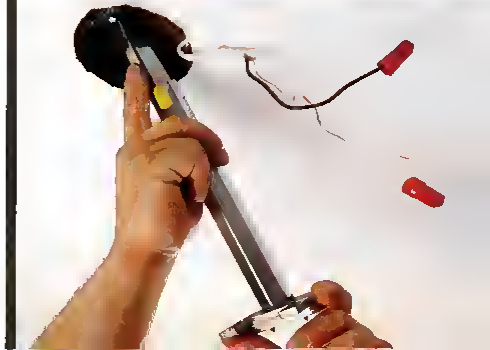


If you're replacing an electrical box that's nailed directly to the side of a joist, you can hang the chandelier from a flat metal "pancake" electrical box screwed to the underside of the joist instead of a box attached to a fan brace. Here's how to do it once you've removed the old fixture and electrical box.

- Hold the pancake box against the ceiling, center it on the joist. Trace around the pancake box with a pencil, then cut a hole in the drywall or plaster along these lines using a drywall saw.
- Secure the cable coming out of the ceiling through a cable connector on the pancake box. Then fasten the pancake box directly to the bottom of the joist with the screws provided.
- Before finishing the installation, hold the chandelier's canopy against the ceiling centered on the pancake box. If it isn't large enough to conceal the old hole, patch the ceiling or cover the area with a decorative medallion that surrounds the chandelier's canopy.

STEP BY STEP



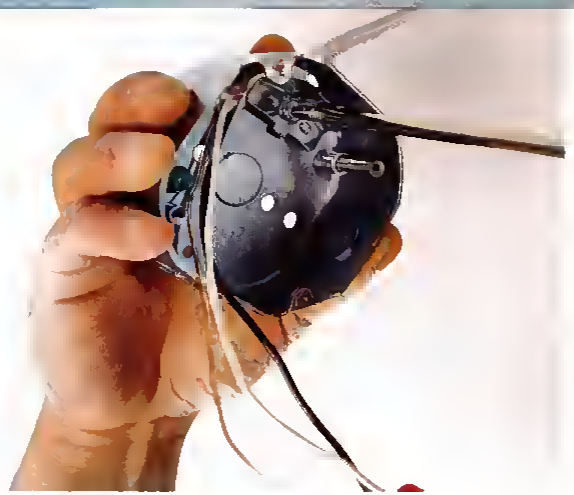


1

TAKE DOWN THE OLD FIXTURE

- Go to your house's main electrical panel and turn off the circuit breaker that controls the room where you'll be working. Flip the light switch in the room on and then off again to confirm that the power is off.
- Next, unscrew and lower the old fixture's canopy (the decorative, bowl-shaped disk against the ceiling) to access the electrical box.
- Carefully remove the twist-on connectors from the wiring **(LEFT)**.
- Check again to be sure there is no current by connecting the two leads with a simple electrical tester.
- If the tester's light doesn't come on, detach all the wiring to free the fixture.

TIP: Hand the old fixture to a helper; don't attempt to climb down the ladder with it in your hands.



2

REMOVE THE ELECTRICAL BOX

- Remove the screws that hold the electrical box to its metal hanger bar. If there are no screws, the box is probably nailed to a joist. Use a flat bar to pry the box free.
- If it's a metal box, loosen the screws on the cable connector, then slide out the cable. For a plastic box, use a slotted screwdriver to pry up the flexible fin that pinches down on the cable, then pull the cable free.
- If the box was attached to a metal hanger bar, cut the bar in half using a close-quarter hacksaw **(LEFT)**.
- Remove the pieces of the bar and discard them.

3

INSTALL THE FAN BRACE

- Take the fan brace from its box and spin the hexagonal bar to reduce the brace to its shortest length.
- Next, slip the brace up through the hole **(LEFT)** and set it on top of the ceiling. Be sure that both of its feet are resting flat on top of the drywall or plaster.
- Rotate the hexagonal brace by hand until you feel its sharp prongs dig into the joists.
- When you can't hand-tighten the brace any more, use an adjustable wrench for another few turns to fully embed the prongs in the joists **(INSET)**.

TIP: Don't overtighten the fan brace; the tension it puts on the joists can cause nail pops in the drywall below.

4

PREPARE THE NEW ELECTRICAL BOX

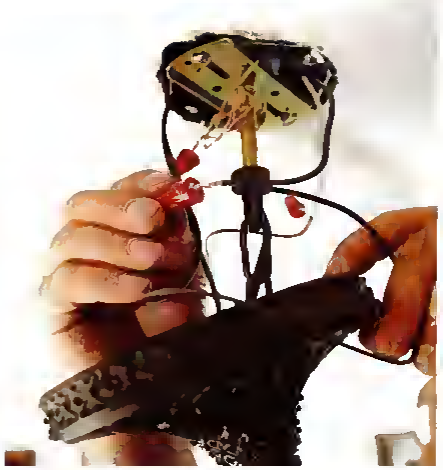
- Use a slotted screwdriver to pry one of the pre-punched knockout plugs from the side of the metal electrical box that comes with the fan brace.
- If you're using a box that doesn't have an integral cable connector, fasten an NM (nonmetallic) connector to the knockout hole.
- Hold the box close to the ceiling and feed the end of the cable through the cable connector.
- Pull about 6 inches of cable into the box, then tighten the connector screws to lock the cable in place **(LEFT)**. Be sure the connector pinches down on the cable's exterior sheathing, not onto the individual wires.

TIP: Never put cable into a metal box that doesn't have a cable connector. The sharp edge of the knockout hole can slice into the wires and short them out.

5

BOLT ON THE BOX

- Locate the U-bolt, metal support flange, and hex nuts that come with the fan brace.
- Slip the U-bolt over the fan brace, then slide the support flange onto the threaded ends of the bolt.
- Thread a nut onto each side of the U-bolt and tighten each to lock it in position.
- Next, align the two holes in the top of the electrical box with the threaded ends of the bolt.
- Push the box up into the ceiling and secure it to the U-bolt with two hex nuts; tighten them with nut driver **(LEFT)**.



6

CONNECT THE WIRES

- Remove any shades from the chandelier before installing it.
- Shorten the wires and remove chain links so the chandelier will hang at the right height.
- Thread the nipple first into the chandelier's chain holder, then into the fixture-mounting bar. Feed the chandelier wires through the nipple.
- Lift the fixture and screw the mounting bar to the electrical box.
- Wrap the cable's copper ground wire around the grounding screw; tighten it, then connect the wire's end to the chandelier's ground wire.
- Next, strip ½ inch of insulation off the chandelier's wiring.
- Use twist-on connectors to join one of the chandelier wires to the white cable wire. Join the other chandelier wire to the black cable wire **(LEFT)**.

7

SECURE THE CANOPY

- Carefully fold and tuck the wires up into the electrical box.
- Slide the chandelier's canopy up the chain and press it tight against the ceiling, making sure the wires aren't poking out from the canopy.
- Push the retaining collar up the chain and thread it onto the chain holder.
- Hand-tighten the collar to hold the canopy tight against the ceiling **(LEFT)**.
- Install the lightbulbs and glass shades, then restore the power to the room.

TIP: If you replace your standard toggle wall switch with a rheostat (dimmer switch), you'll have precise control over the light level.

FOR MORE INFORMATION, SEE DIRECTORY PAGE 144

The living room looks out on a forest of black cherry trees Greenery grows out of matching planter boxes built on each side of the glass wall The original polished concrete floor hides still-working 1950s radiant heating pipes that Wright had included in the design

PUTTING THINGS **WRIGHT**

When your boyhood home was designed by America's most famous architect, its restoration justifies four years of careful work

BY PAUL PENFIELD PHOTOGRAPHS BY PAUL WHICHELDE

In my family, we don't buy houses We build them, then live in them generation after generation. Since the 1870s we've occupied the same farmland in northeast Ohio, But instead of farming, my father, Louis Penfield, decided to become an artist It was only natural that when it came his turn to build, he drove up to Wisconsin with a challenge for Frank Lloyd Wright "Mr Wright, could you design a house for someone as tall as me?"

"Stand under that beam," Wright commanded Dad did as he was told The apprentices in the room fell silent. Wright stared for several minutes without speaking, taking in Dad's 6-foot-8-inch frame before announcing "Let me think it over and I'll let you know." That was 1953 and the start of my father's long relationship with one of America's greatest architects

[continued]

BEFORE. *The 1950s concrete-block-and-wood structure prominently features fiberboard paneling that had deteriorated in Ohio's severe winters. The interior had been trashed by renters.*

AFTER: *Inside and out, the house underwent a four-year restoration that is faithful to the master architect's original blueprints, right down to the furniture.*

AN EXTRAORDINARY HOUSE FOR ORDINARY PEOPLE

Although Wright is best known for his big-budget residential projects, such as Edgar Kaufmann's Fallingwater home in western Pennsylvania, he also designed about 100 homes for people of more modest means like my dad. These houses, which he termed "Usonians," were designed with minimal ornamentation and constructed from readily available, economical materials including local lumber, concrete, and cinder block. Also fundamental to Wright's Usonian design were open floor plans centered on the kitchen, carports instead of garages, space saving built-in furniture, and floor-to-ceiling windows to take advantage of views and natural terrain. Many of the Usonians were tailored to their owners, which is why my father's house is a true reflection of his long, lean profile with its 12-foot ceilings, slender ribbon windows, and narrow doorways.

By the time I inherited my childhood home, the 1,800 square-foot house—with living room, dining room, half-bath, and kitchen downstairs, and three bedrooms and a bathroom upstairs—had fallen on hard times. My parents had moved out and had turned the house into a rental property. Tenants can be rough on a house. So there it sat, with

[continued]

Concrete steps wrap around the front of the house, and a carport offers shelter for a vehicle. All of the glass-and-wood panels are held in with ¾-inch retaining strips, or stops. Altogether, there's roughly 8,000 linear feet of it—about a mile and a half—which the homeowner milled out of cherry, then sanded, stained, and sealed.

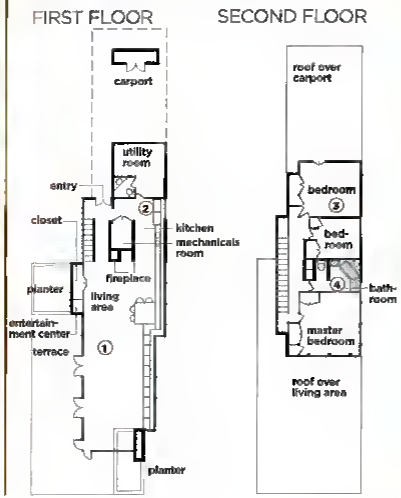
THE PROJECT

RESTORATION COST: $100,000
HOW LONG IT TOOK: 4 years
WHERE I SPLURGED: Tools. I'm a tool junkie. No matter what it cost, if I needed it, I bought it and learned how to use it.
WHERE I SAVED: Milling timber from my woodlot and doing most of the work myself.
WHAT I'D CHANGE: I'd buy a professional-grade veneering table rather than build my own. My home-handyman instincts led me astray that time.

WHAT THEY DID

Since this is a historic house, the footprint couldn't be changed in any way. However, the homeowner did replace the boiler and upgrade electrical systems. He also followed the original blueprint religiously, even re-creating built-in elements that for lack of funds had not been added originally.

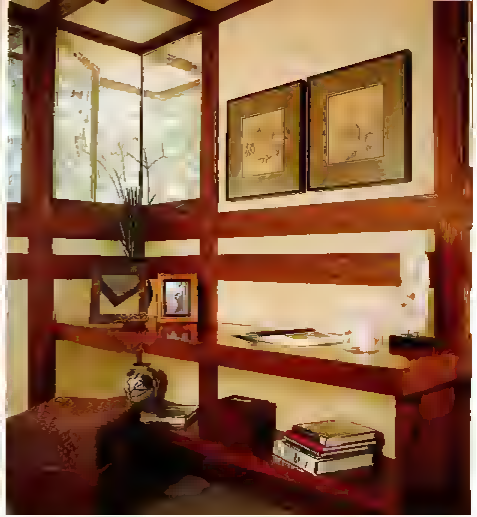
1. **LIVING AREA:** Built banquette, added integral lighted wall shelving and light tower built originally designed dining table and chairs, installed a built-in phone table by the stairs, and added a closet adjacent to the outdoor planter that was part of the original plan.
2. **KITCHEN:** Refaced all the old plywood cabinets in cherry, installed a new cherry countertop, and upgraded appliances.
3. **BEDROOMS:** Built platform beds, bedside tables, and shelving as Wright had drawn them.
4. **BATHROOM:** Resurfaced plywood cabinetry in cherry.



PLETON PLANS: IAN WHITTLE

The massive cinder block chimney runs straight up through the center of the house. To take away the pedestrian cinder-block look, Wright had only the horizontal grout lines tooled. Floating stairs are suspended by rods from the ceiling. The oak treads were refinished and are protected with the same hard-wearing two-part epoxy resin used on bar tops. The area rug and leather swivel chairs are new, and the table is an antique.

Like most of the furniture in the house, the phone table is made of plywood with a cherry veneer fogged from the property. The cushioned chair with decorative cutouts was constructed from blueprints for a second Frank Lloyd Wright house that the homeowner's father commissioned but never built. The chair is made of ribbon mahogany.



sagging cantilevers, leaky roof, rotted windowsills, and burned-out heating system. The most disturbing burden of all. The house was a historic treasure. Because of its listing on the National Register of Historic Homes, I couldn't just move walls over, rip out cabinets, or join rooms together any more than you could repaint the Sistine Chapel.

SAVING ROOF AND WALLS

My only option was to restore the house to the architect's original vision, starting with the roof. The original design had specified a built-up, "hot mop" tar roof over 2x4 tongue-and-groove decking. Once this system begins to leak, there's no fixing it. The more tar you use to cover the cracks, the more thermal mass you build up, causing the repair to open up every summer. I assembled a volunteer crew of friends to strip off the old roofing and lay down a

LEFT: *The light tower while based on a Wright concept, was newly built for a dark corner of the living area to complement the original 8-inch light boxes used throughout the house.* **RIGHT:** *In Wright fashion, a dressing table is attached to the board-and-batten walls in the bedroom, and the hassock conceals storage under its cushion.*

VENEERS FROM SCRATCH

Frank Lloyd Wright designed plywood furniture for almost all of his residential projects. So when furnishing his Wright-designed boyhood home, Paul Penfield turned to the original blueprints that the famed architect had created more than 50 years earlier to fashion new freestanding and built-in furniture just the way the architect specified: with inexpensive plywood covered with hardwood veneers. The drawings included built-in bookcases, desks, bedside tables, and a freestanding dining set. Of these pieces, only the chairs were built for the house when his parents owned it. Paul also received permission from the Frank Lloyd Wright Foundation to reproduce four hexagonal tables that the architect designed for his own home, Taliesin West, in Scottsdale, Arizona.

To build the furniture, Paul glued black cherry veneer to sheets of plywood with a homemade vacuum veneer press, then cut each piece to Wright's specifications with a router. He then sanded and stained the parts before assembling them. The only difference between the architect's original plans and the finished furniture is the type of wood used for the veneers. Wright had specified Philippine mahogany, which would have been widely available when he designed the house in 1953. Today, it's a rare and expensive rain-forest product. Paul needed only to look to the home's surrounding 30 acres of woodland dotted with black cherry trees for a suitable alternative. *—Amy Hughes*

LEFT TO RIGHT: *The homeowner marking backyard trees for their decorative grain, the extralong veneer press he built to accommodate the home's narrow, 8 foot interior doors as well as furniture pieces like this Wright-designed veneered plywood table and chair*

RIGHT: *The solid cherry platform bed in the master bedroom is newly built to Wright's specifications. Overhead shelves include integrated light boxes.*
BELOW: *The home's open plan includes a living/dining area and a kitchen work space.*

rubber membrane over 4-by-8-foot sheets of foam insulation tapered to create a slight pitch, which has held up very well. The few punctures that have occurred have been easily fixed with a rubber patch, just like a bicycle inner tube.

Next came the daunting job of restoring the home's wood surfaces. The house, framed with 4x4 spruce beams centered over a slab floor and concrete-block footings, has wood-fiber wall panels inside and out. These are similar to today's particleboard. On the exterior the stain had weathered them to a dark brown and in the interior to a deep maroon—a far cry from the warm "Cherokee red" called for in Wright's plan. Painting over it wasn't an option, as it would conceal the natural wood grain Wright favored in his architecture. There was nothing to do but to sand the entire house clean. For this, I recruited some local high school kids, giving them each a sander. We'd turn the sanders on at nine in the morning and turn them off eight hours later, wearing out four sanders over the course of the summer. Then we moved inside and started the laborious process all over again. All told, sanding down the entire house took nearly a year.

BACK-LOT LUMBERYARD

I was determined to restore the rest of the house with our own trees. And as luck would have it, during the intervening 50 years the farmland had turned into a hardwood forest. Among the species growing there is black cherry, one of America's premium cabinet woods. With the Wrightian philosophy of nature in the forefront of my mind, I selected trees for specific purposes before logging them out. I learned to "read the bark," that is, to tell what sort of decorative grain lies within the trunk while the tree is still on the stump. For cabinet carcasses and lamps, I used wood low on the stump—just above the roots—where the grain grows tightly

FOR MORE INFORMATION, SEE DIRECTORY PAGE 144

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whorled, an effect that is stunning. For the platform beds, I chose large-diameter trees that were straight grained

Following Wright's architectural edicts even meant using veneer on the kitchen cabinets and all eight interior doors (see "Veneers From Scratch," page 101) It also meant building a vacuum veneer table, complete with pumps, hoses, and a locking aluminum top frame. I soon found out that nothing is less forgiving than a veneer job If the glue bleeds through the grain, no amount of scraping will remove it If the vacuum doesn't clamp down just right, bubbles form under the veneer. I lost count of all the doors and furniture blanks I threw away before I finally got the hang of it. I'd rather have a root canal than go through that again

Having a forest at my disposal had other advantages as well. While cutting out a new logging road, I came across a weathered fence post When I pulled it out and cut 4 inches off the bottom, the wood was as bright yellow as the day my great-grandfather put it in, a century earlier It was locust, a species of tree prized by the Amish hereabouts for its longevity According to my Amish miller, locust "lasts two years longer than stone " It occurred to me that it might be an ideal material for repairing the rotted windowsills; I had plenty of locust trees to choose from I liked the wood so much that I used it for the countertops on the bathroom vanities as well

Above the restored banquette in the living area is a cherry-veneered shelf with integral lighting for reading

ANTICIPATING MR. WRIGHT

Unfortunately, my father never got around to finishing the house to Wright's original plans (though he did commission a second house from the architect, which was never built) And I was determined to add the missing design elements These included wall shelves with integrated reading lights in the living room and bedroom, an entertainment cabinet for TV and stereo off the living room, a built-in phone table and chair by the stairs, and an extra storage nook next to a coat closet.

Fortunately for me, I had the help of architect John Origlio, a friend and an expert on Frank Lloyd Wright's Usonian architecture who lives in nearby Stow Everything had to be done according to what was on the blueprint, but sometimes modern-day choices had to be made that would pose a dilemma "What would Wright do?" When it came to upgrading the house's heating and cooling systems, John came up with a "Wrightian" solution that involved discreetly installing air conditioners in each bedroom closet and venting them to the outside This saved us from having to cut big holes in the siding.

After four years of six-day weeks and ten-hour days, the house was finished at last My wife and I have turned it into a kind of living museum where Wright enthusiasts can stay a few days and experience the house as if it were their own. If we actually lived in it, we'd only accumulate stuff that would end up overshadowing the architecture Now it's pristine And besides, after teaching myself carpentry, cabinetry, welding, wiring, plumbing, heating, masonry, and heavy-equipment operation, it allows me to show off a bit ■

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WALLS WITH CHARACTER

3 easy painting techniques to make a room look special

BY ALEXANDRA BANDON
PHOTOGRAPHS BY PATRIK RYTIKANGAS

It's amazing what a little paint will do—especially if it turns drywall into aged Tuscan plaster, makes new wood paneling look like it's been there for a century, or "papers" your plain walls with a rich, tone-on-tone damask. That's why we asked Pierre Finkelstein, author of *Recipes for Surfaces* and *The Art of Faux* and a decorative painter and teacher, to walk us through three easy-to-execute faux finishes.

On the following pages, you'll learn all you need to know about the materials and techniques. Take a look, and then consider giving up a weekend and four boring walls to gain one elegant room.

[continued]

Decorative painter Pierre Finkelstein layers different colored glazes onto a wall to create a patinaed-plaster effect

TWO-TONE PATINA

Gives a smooth wall the appearance of textured plaster

To create the effect of patinaed plaster, Finkelstein brushes two different colors of glaze over a base coat of paint, then blots it with cheesecloth. The technique works well with colors from the same family, but can also work with unrelated colors. One foolproof method is to pick a "goal" color from a manufacturer's color strip, then go one shade lighter for the base and use the goal color and a shade one notch darker for the two tinted glazes. But remember: Always test a scheme on posterboard before committing to it on the wall.

GETTING STARTED

The secret to decorative painting is glaze, a transparent coating that's tinted and applied over a painted wall. Glazes come in latex (water-based) and alkyd (oil) formulas. Finkelstein recommends the latter for its longer working time. Note, however, that alkyd glaze requires an alkyd base coat, and cleanup means mineral spirits or turpentine.

Glazes are sold untinted, so to get the color you want you'll need to add pigment. Many paint stores will sell you small amounts of the pigments they use to tint paint separately, for as little as $5 you should be able to purchase enough to tint a gallon. To get the color right, fill a small bucket with glaze and add pigment drop by drop. Make sure your base paint and all glazes are thoroughly mixed and that you try them out together on a test piece of primed drywall before you begin.

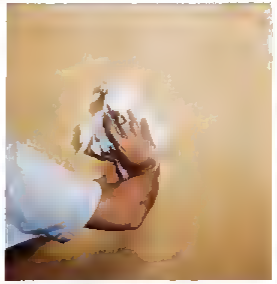
PHOTO: PIERRE FINKELSTEIN

① PREPARE THE WALL
- Paint the wall in the base color. Allow to dry.
- When glazing, work in manageable, 5-foot sections so the wall doesn't dry as you work.
- Using a piece of cheesecloth, spread on a coat of clear glaze to help keep the surface workable longer.

② APPLY THE FIRST COLOR
- Apply the first tinted glaze to the wall with a round glazing brush. Use short, quick wrist movements to make a random, loose X pattern while keeping your elbow steady.

③ ADD THE SECOND COLOR
- Fill in blank spots on the wall with the second glaze color. Using the same wrist flick to make more X's.

④ BLEND THE BRUSH MARKS
- Tap a dry stipple brush against the wall, starting at one side and moving slowly and methodically across the work area.
- Tap from the wrist, at the same time twisting the brush like a dial by raising and lowering your elbow.



⑤ BLOT EXCESS GLAZE
- Crumple a 4-foot section of cheesecloth into a loose ball. Blot the wall, using the same motion as for stippling.
- When the cloth surface is saturated, shake it out and recrumple it. When the whole cloth is soaked, replace it with a new piece.*

⑥ SMOOTH OUT THE COLOR
- Take a dry fine brush and stroke it across the glaze to soften any sharp marks.
- Make broad horizontal figure eights with the brush to feather the colors into one another.

WHAT YOU'LL NEED

STIPPLE BRUSH (oblong, with flat bristles)

GLAZING BRUSHES (round with rounded bristles)

FINE BRUSH (thick and rectangular, with squared off bristles)

CHEESECLOTH (can be bought in rolls)

PAINTS
- Base color
- Untinted glaze
- Two shades of pigmented glaze (one tinted the goal color; the other a shade darker)

PHOTOS (BOTTOM, ST. LEO) DAVID HANDLEY

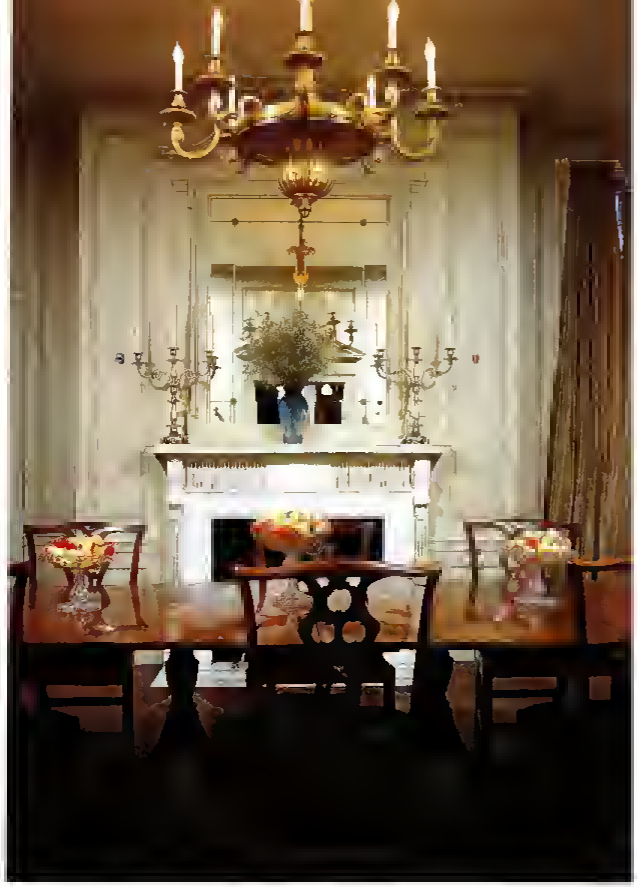
*WARNING: Cloth soaked in alkyd paints can spontaneously combust if disposed of improperly. Place oily rags in a water-filled container, then cover the container and throw it away in an outdoor receptacle.

STRIÉ

Mimics centuries-old painted woodwork

Before rollers and latex, paint was a thick emulsion that went on with tedious brushing. Bristle marks were often visible, and they became more prominent as years and dirt accumulated. The strié technique mimics the look of centuries-old paint altered by dust and sun. It's best used on paneling or other woodwork; in white, it's perfect for creating French country kitchen cabinets.

Finkelstein creates the effect by layering coats of glaze tinted a base color onto a paneled wall; each layer darkens the surface. Then he runs a brush through the glaze to create bristle marks that reveal the lighter base. He accents the most recessed section of the panel with a second glaze in a related color.

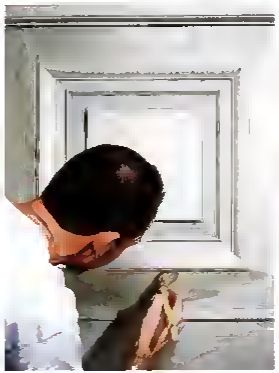


① APPLY GLAZE
- Paint the panel with the base color and allow to dry.
- Using a glazing brush, spread a coat of glaze tinted the base color onto the panel.
- Go back over the glaze, moving your wrist in an X pattern to break up the straight lines and get the glaze in all the crevices.

② BLEND THE BRUSH STROKES
- Remove the brush strokes with a dry stipple brush. Tap from the wrist, at the same time twisting the brush like a dial by raising and lowering your elbow.
- Move slowly across the entire panel, occasionally wiping your brush to keep it clean.

③ STRIÉ THE GLAZE
- Make straight lines through the glaze with a toothed brush, following the shape of the panel.
- Move from the shoulder with a locked elbow. For long sections, start at either end and brush toward the middle.

④ HIGHLIGHT THE PANEL
- After the first coat of glaze has dried completely, apply the second tinted glaze to the recessed parts of the paneling with a small glazing brush.
- Strié this section with a narrow toothed brush.



⑤ LAYER ON MORE GLAZE
- Paint the rails and stiles with another coat of the first glaze color using a glazing brush.

⑥ STRIÉ THE GLAZE
- Using a toothed or regular spatter brush, add brush lines to the second layer of glaze in the same manner as the first layer.

WHAT YOU'LL NEED

GLAZING BRUSHES (various widths)

STIPPLE BRUSH

SPATTER BRUSH (thin and rectangular with squared-off bristles, toothed spatter brush can be used instead)

TOOTHED SPATTER BRUSH (spatter brush with chunks of bristles removed to enhance brush marks)

PAINTS

- Base color
- Pigmented glaze tinted the base color
- Pigmented glaze tinted a related color

PHOTOS: (TOP) PIERRE FINKELSTEIN (BOTTOM, STILLS) RAY B. HANSLEY

FOR MORE INFORMATION, SEE DIRECTORY, PAGE 144

DAMASK

Creates the tone-on-tone look of fine wallpaper

Wallpaper is hard to put up and a pain to remove, but this easy stencil technique creates the look of elegant tone-on-tone paper without the hassle. Flat paint applied in a pattern onto a semigloss base coat catches the light in different ways, reflecting both light and dark, just like woven damask cloth. This method works well with latex paints—all you'll need is flat paint for the stenciling and semigloss wall paint, both in the same color. You can buy stencils ready-made or cut your own out of Mylar.

① LAY OUT THE PATTERN

- Paint the entire wall in semigloss paint (at least two coats). Allow to dry.
- Mark the width of the stencil's pattern, or repeat, on the wall.
- Using a chalk line filled with baby powder (easier to clean up than real chalk), snap guide lines along your marks.

② TAPE UP THE STENCIL

- Align the stencil pattern with the chalk lines.
- Affix the stencil to the wall with blue painter's tape.

③ LOAD THE BRUSH

- Put some of the flat paint on a clean plate or cardboard palette.
- Dip the brush lightly into the paint, then dab off the excess on a paper towel.

④ STENCIL THE PATTERN

- Hold up the plastic stencil tight against the wall, dab the brush over the pattern in quick, straight taps.
- Don't brush across the stencil or paint will get under the plastic and bleed beyond the pattern.

WHAT YOU'LL NEED

CHALK LINE AND BABY POWDER

MYLAR AND RAZOR KNIFE (OR PRECUT STENCIL)

STENCIL BRUSH (round, with flat bristles)

PAINTER'S TAPE

PAINTS

- Base color in semigloss paint
- Same color in flat paint for stenciling

For more decorating and design ideas Go to www.thisoldhouse.com or America Online Keyword, This Old House and select Interiors in the Know-how section

PHOTOS: CRISTINA [illegible] DAVE [illegible]

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MASTER BEDROOM The fireplace, with a simple limestone surround, is raised for ideal viewing from the bed in this suite designed by architect Christopher DiSunno. The rough-hewn that covers the hearth wall extends up to the vaulted ceiling and travels across the 18-by-18-foot room. "It takes dramatic advantage of the single-story roofline," says DiSunno, especially when it's uplit at night with concealed [illegible] lighting.

BY JILL KIRCHNER SIMPSON PHOTOGRAPHS BY WILLIAM R. [illegible] STYLED BY [illegible] MATTIELLO

PRIVATE DOMAINS

TWO LUXURIOUS MASTER SUITES THAT LET YOU GET AWAY FROM IT ALL, RIGHT AT HOME

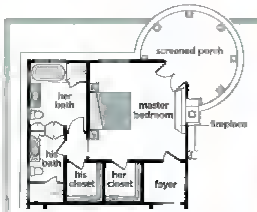
A refuge from the outside world, a romantic haven at home, and a retreat as pampering as any resort—today, master suites function as all three. "Master bedrooms are growing in size, often incorporating sitting areas, exercise rooms, walk-in closets or dressing rooms, even mini kitchens or coffee bars," says Gopal Ahluwalia, vice president of research for the National Association of Home Builders. A separate suite offers privacy away from kids and a place for busy couples to reconnect. Fill it with amenities, and "it lets you feel like you're on vacation at home," says Akron, Ohio, interior designer Alan Garren.

The master bedroom is becoming a second living room, one complete with cathedral ceilings, a built-in sound system, a gas fireplace, and a flat-screen TV. The real star, though, is the master bath, which includes every luxury, whether the space is shared or split into his-and-hers retreats. Here and on the following pages are two idea-packed plans.

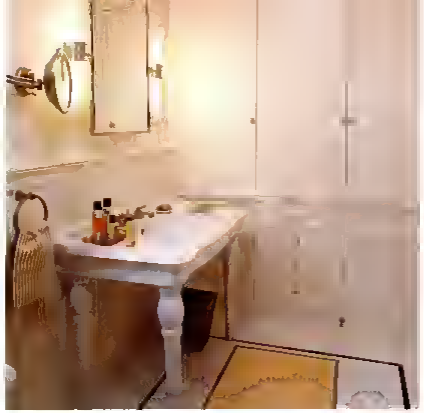
A SLEEK SUITE WITH SEPARATE BATHS

FOR THE OWNERS OF THIS NEW VACATION home on New York's Long Island, a private, first-floor suite was a priority. So East Hampton, New York–based architect Christopher DiSunno designed a separate wing, with its own entry foyer to create a sound and privacy barrier between the bedroom and the rest of the house. "First floor master suites are becoming a trend among baby boomers, who are thinking ahead to retirement and future accessibility," says DiSunno. For these empty nesters, whose children and grandchildren visit often, it serves as a quiet oasis.

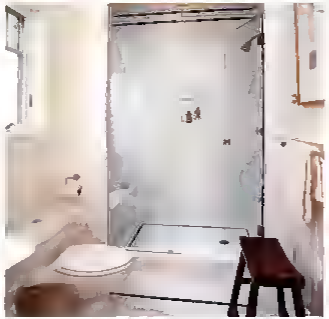
[continued]



THE PLAN His-and-hers bathrooms and dressing closets give both husband and wife their own private spaces. An almost circular porch offsets the largely square geometry of the rest of the 900-square-foot suite.



◀ HIS BATHROOM Custom-built floor-to-ceiling cabinets line each side of the wall shared by the side-by-side baths. In the center is the linen closet, which is accessible from both bathrooms. The husband's bath features a wide porcelain console sink and a steam shower with a built-in bench—and its own window. A fogless mirror makes shaving easier. White tile floors have a dark-green glass-tile border that echoes the dark wood inlay outlining the bedroom floor.



Simple, natural materials—maple and limestone—and neutral colors give the suite a spare, uncluttered look. "I didn't even want curtains," says the wife. "Just the wonderful views out our windows."

A small alcove leads from the bedroom to separate his-and-hers bathrooms, each with a clean, classic look. Equal-size dressing closets are lined with cedar and fitted with custom-built shelves, drawers, and floor-to-ceiling shoe racks. At the owner's request, there's no TV in the master bedroom to disrupt the peaceful atmosphere, but a whole house sound system with satellite radio and their entire CD collection on its server can be operated by touch pads adjacent to the light switches in each room. A separate home office is right next door.

"By placing the emphasis on natural light and natural materials, we created a serene world unto itself within the larger house," says DiSunno.

DESIGN ADVICE FROM THE PROS

■ Determine early on where you want your bed to be because that will affect the placement of windows, lighting, TV, a fireplace, and electrical outlets, advises Greenwich, Connecticut, architect Jay Haverson.

■ Reduce noise by making sure the toilet and shower aren't placed on a wall shared with the bedroom. Locating closets between the bedroom and bath will help, too. If none of these schemes works, use noise-deadening insulation in the bathroom walls and carpeting in the bedroom to absorb sound.

■ Keep work out of the bedroom, advises East Hampton, New York, architect Christopher DiSunno. "A lot of people ask for a desk or small study, but I tell them not to put it in the master suite as a courtesy to their significant other."

■ Provide access to the outdoors in some way. "Create a private outdoor space adjacent to the bedroom if you can, whether it's a small covered porch, deck, or screened porch," says DiSunno. These spaces may include a hot tub or outdoor fireplace.

■ Don't skimp on closet space. "People often underestimate the amount of storage they need," says Akron, Ohio, interior designer Alan Garren. "And add a chair or bench so you don't have to go back to the bedroom to put on your shoes."

■ Think about using skylights in the bath to bring in light without compromising privacy. Avoid them in the bedroom, though, unless you add remote-control window coverings.

■ Consider customizing the height of your vanity. Standard countertops are 30 to 32 inches high; you may want yours 34 or even 36 inches, depending on your height.

■ Think hard about that whirlpool tub, advises Garren. "Often people include one and then find they rarely use it. It takes up a lot of space—and money—that you might prefer to put into a luxurious shower."

■ Don't forget to add adequate drainage for shower rainheads and multiple body sprays, advises DiSunno. "Once you pump in all that water, it has to have some place to go."

◀ HER BATHROOM The wife's bathroom has a glassed-in shower stall and a drop-in whirlpool tub with a paneled surround. With an extra-wide deck, the marble-topped console sink also has convenient hanging space for towels underneath. Double-hung windows with frosted glazing on the bottom sash bathe the rooms in natural light while protecting privacy. The maple flooring matches the bedroom's.

PHOTOS: PLAIN DAN WARNKE

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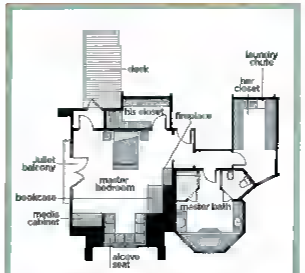
BUCKLE UP

BEDROOM WITH A VIEW "We wanted the master bedroom to be a place where we could relax in the fresh air and in the range of outlook in its surroundings," says architect Jay Haverson. The 17-by-20-foot room features a vaulted ceiling, with a trio of cedar-trusses self-arched windows trimmed in mahogany, and French doors opening to a small balcony and views of the property.

WINDOW-SEAT ALCOVE Craftsman-inspired trim enhances a built-in window seat that's perfect for stretching out with a good book.

MEDIA CABINET Built into one of the eaves is a storage wall for a flat-screen TV and complete audio/video system. The whole suite, closets included, is wired for sound

CORNER FIRE A small gas fireplace, open on two sides, is tucked into the bookcase wall to one side of the bed.



THE PLAN
The bedroom in this 1,200-square-foot suite features a large seating alcove across from the bed. French doors opening onto a Juliet balcony bring in the outdoors; another door leads to a secluded deck in back. The tub placement in the shared master bath makes good use of the tower room's octagonal shape

FLOOR PLAN: IAN WEIGHILL

A SOARING SPACE WITH A SHARED BATH

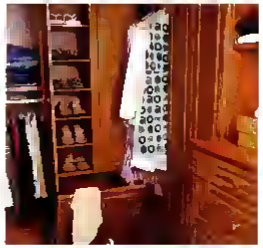
THOUGH THIS MASTER SUITE IS PART OF A NEW HOUSE, THE RESIdence's turn-of-the-century design, with steeply pitched roofs, deep eaves, and a storybook tower, gives the lofty rooms old-fashioned character.

When the homeowners approached Greenwich, Connecticut–based architect Jay Haverson, they asked him to create a private retreat with a unique look and great light. The finished 17-by-20-foot bedroom features a vaulted ceiling with dramatic arched ceiling trusses and soaring Palladian windows. But the grandeur of the space is brought down to a more intimate scale with rich mahogany wainscoting and other Craftsman-inspired details, including a cozy window-seat alcove. "The rooflines offered a wonderful opportunity to create nooks and crannies and tuck bookcases, benches, and recessed storage into the eaves," says Haverson. The mahogany trim and built-in elements also evoke the nautical heritage of the surrounding seaside community on New York's Long Island.

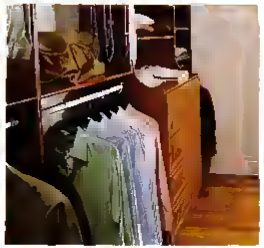
The homeowners were equally intent on creating a spalike master bath with every pampering amenity. "It's a bathroom you could live in," says Haverson of the resulting octagonal tower room with its dramatic 16-foot-high ceiling.

SPA-QUALITY BATH
At the far end of the 13-by-16-foot bathroom, and raised as though onstage, is a two-person whirlpool tub framed by three large windows. The tub is equipped with "chromatherapy" lights that create underwater colored lighting effects designed to encourage relaxation. Generous his-and-hers vanities flank the tub area. Cove lighting highlights the facets of the 16-foot-high tower ceiling at night, while recessed spotlights, a central chandelier, and vanity sconces (not shown) provide ambient and task lighting. Limestone tile is used for the tub surround, wainscoting and radiant-heated floors.

STEAM SHOWER
The large steam shower, wrapped in limestone tile, has a rainhead, a hand spray, and multiple wall sprays. A niche, bench, and niches for toiletries are built in.



▲HER DRESSING CLOSET
Custom cherry cabinets provide plenty of storage in the wife's closet and conceal a chute to the first floor laundry. A window (not shown) brings in natural light.



▲HIS DRESSING CLOSET
The husband's custom closet has ample short hanging space for shirts and suits, and a built-in bureau. It even has a custom tie rack and a standing shoe buffer.

AMENITIES TO CONSIDER

- A "morning bar" or mini kitchen—ideal in a sitting area—with a coffee/espresso maker, mini fridge or refrigerator drawer, a microwave or toaster, and maybe even a compact dishwasher
- A spacious one- or two-person shower with a rainfall showerhead, body jets, a hand spray, built-in seating, a steam unit, and fogless mirror for shaving.
- Heated towel racks or warming drawers for towels in the bathroom
- A gas fireplace with remote control—perhaps two-sided so it can be viewed from both the bedroom and the bath.
- Remote-controlled lighting, ceiling fans, and window coverings, and programmable lighting systems that can create different moods.
- Flat-screen TV (some turn into mirrors or display pictures when the TV is switched off) and DVD/video player in the bedroom. TV and CD player in the bath.
- Integrated audio system with satellite radio and CDs stored on a main server that can be accessed from any room and operated by remote control.
- Whirlpool tub with underwater colored lighting for relaxing "chromatherapy," effervescent bubbles or massaging jets, infinity edges, and waterfall spouts.
- Built-in hair dryers or appliance garages in the bath.
- Dressing closets with glass-front drawers or shelves, built-in dressers, cedar closets, an island for folding clothes, a fold-up ironing board and steamer, pull-down clothing bars, a three-way full-length mirror, and a hidden safe for valuables.

Room for Two: For more advice on designing a master bath, from architect Duo Dickinson, go to www.thisoldhouse.com or America Online Keyword: This Old House and type "Dickinson" in the search box.

FOR MORE INFORMATION, SEE DIRECTORY PAGE 144

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Old Lights, New Glow

What it takes to bring an antique light fixture back to life

BY LAURA FISHER KAISER PHOTOGRAPHS BY JACK RICHMOND

You're strolling through the flea market when you spot it: a three-armed brass chandelier with etched-glass shades that would be perfect for your dining room—and the dealer is practically giving it away. But the brass is pitted, one of the shades is cracked, and the wires are chewed to shreds. Is it worth fixing up?

Unless you know what a restoration entails, your "steal" could end up costing you considerably more than the fixture itself, says Bo Sullivan, senior merchant with Portland, Oregon–based Rejuvenation. Reconditioning an antique fixture can cost anywhere from $5 to $5,000, depending on what needs to be done: stripping and refinishing, rewiring, and replacing any number of parts, from shades and sockets to canopies and chains.

This 1930 slipper-shade fixture is made of low-cost pot metal highlighted with a gold finish. The amber glass shades are original; the two-tone finish was restored. $1,895.

VINTAGE CHARMERS
These fixtures were reconditioned by the experts at Yankee Craftsman. For a look at how they do it, see page 128.

TOP LEFT: *This 1950 Deco-style sconce has its original frosted-glass shade in a curved-glass leaf motif. The nickel-plated brass base was hand-polished and lacquered to restore the luster; $1,195.*

TOP RIGHT: *Because this 1930 six-armed Williamsburg chandelier was made in Belgium, it had to be rewired to American standards. It was also gently cleaned of years of grime to reveal the original solid brass and its dark bronze patina; $1,995.*

BOTTOM LEFT: *The restoration of this 1910 cast-brass-and-glass French chandelier involved cleaning and lacquering the finish, rewiring to American standards, adding porcelain sockets, and capping with satin glass shades; $4,500.*

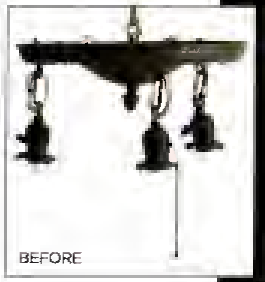
BOTTOM RIGHT: *Meant for candles, this circa-1860 bell jar lantern was wired for electricity, the original brass trim and chain were cleaned, and a canopy was added to cover a modern electrical box; $2,495.*

"You may need one part that costs as much as or more than the fixture itself," says Sullivan. To assess whether it's worth the expense, he advises, "you need to figure out how much potential value the fixture has and go from there."

OFF WITH THE OLD, ON WITH THE NEW

A good tip off to a fixture's worth lies in the base metal. Even if the fixture looks like brass, start by running a magnet over it. One touch can help determine the value of the fixture and the scope of the project. If it sticks, the metal is iron or steel, perhaps under brass plate—an indication that the fixture can be stripped and a new finish put on. If the magnet doesn't stick, there's probably some very beautiful solid or spun brass or bronze worth preserving under all the grime or paint. (In some cases, the magnet might not stick because the metal is aluminum—a possibility if the fixture doesn't weigh much.)

Once stripped, an iron fixture can be plated in a variety of finishes, including brass, nickel, or pewter. In some cases, restorers apply chemicals to re-create an old-looking patina, like the dark bronze color common in Arts and Crafts styles. For a wrought iron fixture, lemon oil or furniture polish can be used to give luster and protect it from rusting, says Bruce Sweeney of Yankee Craftsman, an antique-lighting company in Wayland, Massachusetts.



This old, tarnished brass 1910 three-light fixture **(INSET)** *was originally used in a front entry hall or bedroom. To transform it into a more spectacular six-light "waterfall" fixture for a dining room, three more holes were drilled into the canopy. Brass rods of different lengths create the spiral effect. A two-tone bronze finish and reproduction hand-blown art glass shades complete the restoration; $3,065.*

If you're lucky enough to have a solid brass or bronze fixture, finishing options include polishing, plating, or patinating. Polishing with a high-speed buffing wheel and chemical compounds yields a bright finish; for a softer glow, high-quality, hand-applied nonabrasive metal polish is used. Any restorer worth his salt will advise you to avoid heavy stripping if possible. "Some customers want everything bright and shiny, but we would rather live with some minor imperfections and save the original patina," says Sweeney. The final step is to seal the finish with a coat of lemon oil, pure carnauba car wax, or water-based acrylic lacquer.

MAKING A MATCH

When it comes to choosing a lighting fixture, don't get hung up on matching it to your house's exact architectural style, says Steve Ecalberger, owner of Seattle Building Salvage. It was actually rare for houses to be done all in one period style even when they were built—lighting, like other aspects of the decor, evolved over time. "A highly stylized slipper-shade pendant from the 1930s could just as easily hang in a 1920s Colonial Revival house as a 1940s Craftsman-style house," Ecalberger says.

Rejuvenation's Bo Sullivan has a slightly different take. When in doubt, he says, stay within a particular time period for your lighting. "When you bring things together from a certain era, even if they're not in the same style, they share certain qualities, like finishes and materials, that make them feel as if they belong together. For instance, Arts and Crafts, Deco, and Colonial Revival fixtures all have a 1920s flavor that fixtures from the 1890s or 1940s don't," he says. "I can tell you what's proper, but the bottom line is that you should buy what you love because you'll enjoy living with it all the more."

FOR MORE INFORMATION, SEE DIRECTORY PAGE 144

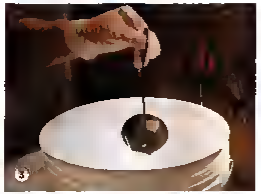
BEFORE *With its glass shades long gone, all that remained of the circa-1900 fixture was a badly corroded brass rod and body.*

Transforming a Diamond in the Rough

Restoring a broken-down old fixture is a multistep process. Here's what it took for the experts at Massachusetts-based Yankee Craftsman to revive a combination gas-electric fixture from the early 1900s

DISASSEMBLE ALL THE PARTS
Taking the fixture apart piece by piece is the only way to see what's missing or damaged. At this time the brass is checked for dents, which are pushed out with wooden dowels, and the finish examined. This determines whether it can be saved and polished up or if it needs stripping and refinishing.

TORCH THE STIFF JOINTS
A blowtorch is used to heat up the gas fittings, which are still sealed tight with the turn-of-the-century putty used to keep gas from escaping. Once the putty is loosened, the arm can be unscrewed to snake a wire through.

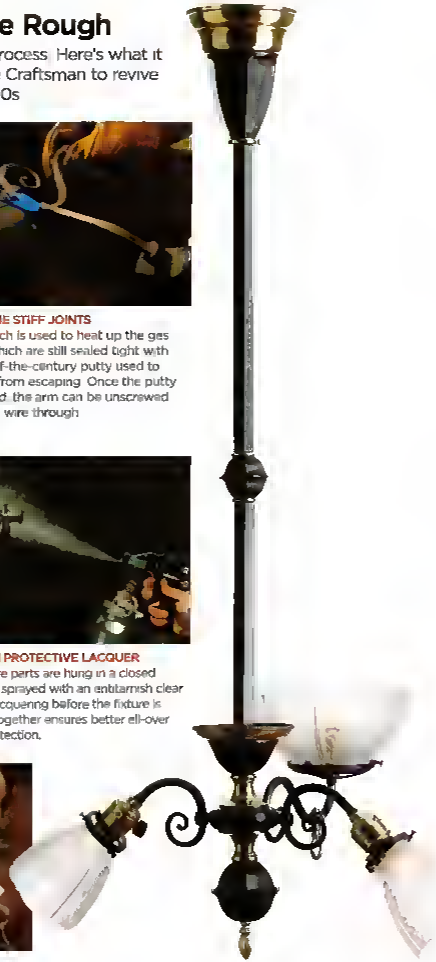


RESTORE THE FINISH
After the corroded finish is sandblasted off, the clean brass is submerged in a darkening agent to replicate the original patina. The longer it's in, the darker the finish. Brighter pieces are polished on a burnishing wheel.

SPRAY ON PROTECTIVE LACQUER
Next, fixture parts are hung in a closed booth and sprayed with an antitarnish clear lacquer. Lacquering before the fixture is put back together ensures better all-over tarnish protection.

WIRE AND REASSEMBLE
After the gas cocks are drilled out of each arm, two Teflon-coated, heat-resistant wires are snaked through the hollow artery to the body. All six wires connect here to the lead wire that runs up to the electrical box.

ADD THE CROWNING TOUCH
Once the arms are screwed back in place, a set of matching acid-etched vintage shades from the same era completes the restoration, shown at right.



REWIRING AND OTHER REPAIRS
For safety's sake, vintage gas or electric lights should be rewired and the sockets replaced. By law in most states, refurbished fixtures must also be UL-approved. Unless your restorer is authorized to put a "UL Listed" sticker on a vintage piece, you may want to go with a reproduction made from all new parts (see box at right) if this is a concern. Here are a few more rewiring tricks:

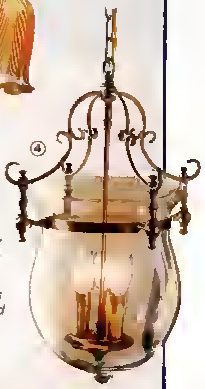
- **Rewiring electric fixtures.** The most difficult part is pulling out the old wire, especially if it has deteriorated and the arms have several sharp turns. "You hold your breath and hope it doesn't break when you get it halfway out," says Sweeney. Once the wire is out, it's just a matter of snaking new wire through the arms.
- **Converting "transitional" (combination gas-and-electric) fixtures to all-electric.** This is one of the most challenging restorations—and one most restorers love, as these Victorian fixtures tend to be top of the line, having been status symbols for the rich at a time when few homes had electricity. The job involves removing the gas cock on each arm and drilling out the interior valve to run wire, then fitting the arms with sockets. The process for converting an all-gas fixture to electric is similar.
- **Updating oil and candle fixtures.** Because wire can't be snaked through the solid arms of these fixtures, a small-gauge wire in a color that matches the finish is run flat along the outside, preferably on top of each arm, where it is less conspicuous.

FINISHING TOUCHES
When you go to the trouble and expense of restoring an antique lighting fixture, you don't want to cheapen the effect by overlooking a few key details. Traditional styles feature a variety of decorative elements, such as:

- **Bobeches.** A holdover from the days of candlelit chandeliers when glass collars were placed over sockets to collect dripping wax, bobeches are now used on electric chandeliers to hold suspended glass prisms. Some fixtures require special brass or porcelain bobeches, but most take crystal, which range in price from $5 to $55.
- **Canopies.** An immediate giveaway of a poor restoration is an inappropriate canopy, the cap that mounts to the ceiling or wall and covers the electrical box. A common mistake is to pair a 1930s pancake-shaped canopy with an older-style fixture. Many restorers have a trove of antique canopies that fit old fixtures.
- **Chains and rods.** Old rods and chains can be replated, but make sure they're long enough for the job. Adding links to an existing chain can be difficult; you are often better off buying a different antique chain or a high-grade reproduction. For authenticity, suspend converted gas chandeliers from rods, not chains; they were originally hung from the pipes through which the gas traveled.
- **Crystal pendants.** Fortunately, old crystal is "very forgiving in terms of matching missing parts like chains and prisms," says Sweeney. "Because the old ones were all handmade, no two

NEWLY MINTED—WITH VINTAGE APPEAL

If you're not a purist or don't have an old light to fix up, there's a huge selection of good reproductions on the market. These are often less expensive than reconditioned antiques and will be made with UL-approved components. Rejuvenation, for one, makes many of its reproduction fixtures with backplates large enough to cover today's bigger electrical boxes, which means you get the vintage look with modern convenience (for more buying information, see "Finding Antique Fixtures and Parts," page 130).



① *A brushed-nickel Deco-style sconce captures the "louvered" motif of the 1930s; it can be installed pointing up or down (Enterprise, $134; www.rejuvenation.com).*

② *A seven-arm chandelier is a meticulous copy of an 18th-century candle-burning one ($3,700; www.ballandball.com).*

③ *This sconce was inspired by the graceful lines and shell-like ribbing of Colonial Revival Sheffield lighting, popular in the early 1900s. It has an antique copper finish and art glass shades (Fairview, $533; www.rejuvenation.com).*

④ *This bell jar–like lantern with bronze finish scrollwork is similar to those used in the 18th century ($200; www.williamsburgmarketplace.com).*

To restore this deep-cut and polished 1930 six-arm crystal chandelier to modern-day magnificence, the old white cloth cord originally threaded through the arms was replaced with clear plastic wires that are almost invisible. $7995.

pieces are quite the same. One might be a little longer or fatter than another, but when you load up a chandelier with a bunch of cut prisms, you're not going to notice." New crystal doesn't have the same clarity and prismatic effect. Depending on the size and cut, vintage drops will cost between $3 and $20 each.

• **Shades.** The crowning touch of an antique light is the shade or set of shades. If your fixture is missing all or some of its originals, you may be able to find an exact match or something similar. "Antique lighting dealers and restorers tend to hoard shades because they're in short supply," Sullivan says. If your restorer doesn't have what you're looking for, chances are someone in his network of dealers does. Or say you have six out of eight originals, you might try trading your six for a different set of eight. Reproduction glass shades are another option. The better ones are pressed or blown by hand, just as they were back when.

• **Switches.** If you have an old house where the ceiling or wall fixtures are wired without an on/off switch on the wall, ask the restorer to put an unobtrusive rotary or pull-chain switch on the fixture's canopy. ■

For more articles on lighting, fixtures, and installation, go to www.thisoldhouse.com or America Online Keyword: This Old House and select Electrical and Lighting in the Know-how section.

FINDING ANTIQUE FIXTURES AND PARTS

If you're in the market for a vintage fixture or expert restorer, be sure to check out these sources.

Ball and Ball, Exton, Pa. Specializes in reproduction sconces, pendants, and chandeliers. They can duplicate fixtures or produce custom ones to your designs, and also do repairs. 800-257-3711, *www.ballandball.com*

Classic Lighting Emporium, Philadelphia, Pa. Restores fixtures and has hundreds of circa-1900 light fixtures in stock. 800-536-7674, *www.classic-lighting.com*

Eagle Emporium, Eagle, Pa. Specializes in restored vintage and antique fixtures in Victorian and Art Deco styles from the 1860s to the 1940s. 610-458-7188, *www.eagle-emporium.com*

Grand Brass Lamp Parts, New York, N.Y. Carries reproduction cast-brass canopies, chains, arms, and other parts. 212-226-2567, *www.grandbrass.com*

Hippo Hardware & Trading Co., Portland, Oreg. A full-service, UL-approved lighting restoration and custom-build shop where you can buy, sell, or trade fixtures and parts. 503-231-1444, *www.hippohardware.com*

King's Chandelier Co., Eden, N.C. This maker of chandelier and gaslight reproductions offers an extensive inventory of bobeches, crystal strands, and pendants. They will search for replacement arms. 336-623-6186, *www.chandelier.com*

Liz's Antique Hardware, Los Angeles, Calif. Offers a large inventory of restored vintage fixtures and its own line of reproductions in Tudor, Deco, Spanish Revival, and Craftsman styles. 323-939-4403, *www.lahardware.com*

Rejuvenation, Portland, Ore. Sells some reconditioned vintage lighting and maintains a restoration operation, but its stock-in-trade is a vast selection of period-authentic lighting. 888-401-1900, *www.rejuvenation.com*

Seattle Building Salvage, Everett, Wash. Offers a broad selection of original chandeliers and sconces with appropriate vintage shades. 425-303-8500, *www.seattlebuildingsalvage.com*

Yankee Craftsman, Wayland, Mass. Specializes in antique lighting restoration, custom fixtures, antique and reproduction shades, and metal finishing. 508-653-0031, *www.yankeecraftsman.com*

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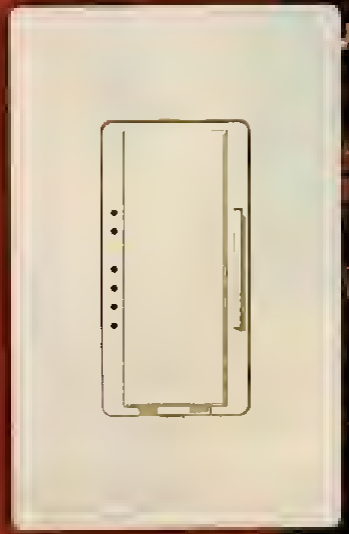

Actual size:
Maestro® smart dimmer in Almond

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Visit www.woodanswers.com for more information. Varathane - Wood's First Choice.

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25TH-ANNIVERSARY TV PROJECT:
CARLISLE

The Carlisle TV project gets a jump start on framing, thanks to floor, wall, and foundation panels

BUILDING BLOCKS

BY MAX ALEXANDER. PHOTOGRAPHS BY RUSSELL KAYE

If you'd blinked, you might have missed the construction of the ell and the new master bedroom suite at the project house in Carlisle, Massachusetts. In the space of a single day, an empty hole acquired a finished foundation of precast, insulated concrete panels. A few days later, prefab I-joist floor sections went in. Then came framed, sheathed, and insulated walls—all at once, using structural insulated panels (SIPs) that were custom-made in a factory 800 miles away. A few more days and the SIP roof panels were lowered into place with a crane, followed by 12-inch-thick SIP floor panels for the 155-year-old barn.

It's all part of the *This Old House* plan to demonstrate how modern building technology can help bring a tired old house back to life in a fraction of the time it used to take. By contrast, it would take *TOH* general contractor Tom Silva's crew two weeks just to frame and sheathe this much house—about 7,000 square feet of exterior walls and roof—plus a day to insulate. That's not taking into consideration the time needed to form and pour a concrete foundation and frame up 3,300 square feet of new floor joists and subfloor.

This form of panelized construction is still a niche business—about one percent of American homes are built with SIPs—but it's easy to see why the industry is growing by 25 percent annually. "The panels are fast, they're straight and true, and they don't move around," says Tom. Plus, they're stronger and more environmentally friendly than stick construction. Still, speed is the main advantage for the *TOH* team, who have to adhere to a television show's strict schedule. With the new construction taken care of, Tom and his crew will have the time they need to carefully renovate the older parts of the house.

Among the several types of panels used to construct the TV project house in Carlisle are those used for the floors in the house's new ell. Made from I-joists sheathed in ¾-inch plywood subflooring, the panels were lowered into place by crane in one day.

FOUNDATION IN A FLASH

PRECAST, INSULATED CONCRETE FOUNDATION PANELS look like a sheathed stud wall but are made of dampproof concrete with thick vertical reinforcements every 2 feet. On the inside foam insulation is bonded to the concrete steel nailers provide attachment for interior drywall

Beneath the SIP walls in Carlisle lies a foundation to match—custom-made of 26 precast, insulated concrete panels that were set in place by a crane one day in July and then bolted together. The precast concrete panels are a proprietary system manufactured by Superior Walls, a Pennsylvania-based company, primarily in factories located in the Northeast and upper Midwest, where full basements are the norm. Unlike the systems used in insulated concrete forms (ICFs), which are poured in place, the concrete in the Superior Walls panels is cured in a factory under ideal conditions, resulting in a wall that is virtually flawless and able to withstand 5,000 pounds per square inch of pressure. "You could probably get the same strength from concrete poured in place, but you'd need perfect job-site weather—no cold, no rain, and no blistering heat," says Mel Zimmerman, the company's founder.

Considering their strength, the concrete panels are remarkably thin—a 1¾-inch concrete face braced by a top and a bottom plate and concrete "studs" every 2 feet—all of it cast in one monolithic pour around a network of steel reinforcing bars. "It's built like a bridge, only vertical," says Zimmerman, who explains that the greatest pressure on any foundation is not from the weight of the house above but from hydrostatic pressure—the force of the water in the surrounding soil pushing on the walls.

But the system offers more than strength. Each panel is bonded to a foam envelope that provides insulation value up to R 12.5. The mix of the concrete makes it dampproof, so no additional water resistant treatment is needed. In fact the company warrants against water penetration of its foundation walls for 15 years. "The basement will be a dry and comfortable living space with nine-foot ceilings," commented Zimmerman as he watched a panel being lowered into place on a bed of crushed stone. (Independent footings aren't necessary—they're part of the wall—although Tom will need to pour a slab floor after the foundation goes in.)

Preattached galvanized steel nailers on each "stud" allow Tom to easily finish this basement in drywall, after wiring and plumbing are run. "It's a great system if you're planning to get a lot of use out of your basement," says Tom. "When you look at it that way, it's about the cheapest living space in a new home."

The Carlisle ell and master bedroom foundation, about 237 linear feet, will cost about $21,000. Tom estimates that a poured-in-place foundation with insulation, interior furring strips, and waterproofing would have cost $28,000. But precast systems are not always cheaper than other foundations. The price depends in part on location because the panels are made in many different factories across the country. Any price advantage over poured in-place would depend on shipping costs, and also the cost of wet-concrete delivery in your area. One thing is clear as workers put the last panel into place: No other foundation goes in as quickly. The company says most foundations are installed in just five hours—with no curing time required. "With a regular foundation," says Tom, "I have to wait several days before I can start laying the sill plates. With this, we're good to go."

A crew from Superior Walls installs the foundation—panels of insulated concrete that are set on a bed of crushed stone, adhered to each other with a urethane adhesive, and then bolted together. The entire foundation was built in a day, no curing time needed.

FULLY FRAMED IN A DAY

Structural insulated panels have many advantages in today's building world, key among them that they go up fast, withstand more stress than stick-frame construction, and conserve energy. That's all due to the way they're constructed, like giant ice cream sandwiches with two "wafers" of 7/16-inch oriented strand board (OSB) around 3 to 12 inches of expanded polystyrene foam (also known as beadboard), all of it bonded together with special glue.

It seems hard to believe that walls with no studs could be strong, but in fact these are three times stronger than conventional construction, according to Jim LeRoy of PanelPros, the Northeast installer for SIPs made by Insulspan, which manufactured the ones used in the Carlisle project. "The panels form a skin that's very much like an airplane fuselage," says LeRoy.

Those panels are fabricated using software that translates architectural drawings into machine codes, which in turn lay out panel sizes down to the fraction of an inch. "It's a one-day job to manufacture them," says Insulspan founder Frank Baker. "Contractors often wonder how long they'll have to wait for the panels, but usually we're ready before they are."

Speed and strength are just part of the SIP equation. Because SIP walls have no studs, as long as they're properly sealed there's no place for heat and cold to seep through. "It's a total energy envelope," says Baker. So while an SIP's R value—the standard measure of thermal resistance—is already higher than that for fiberglass batts (a 6-inch SIP wall is rated at R 24 to R-27, versus an R 19 for a 6-inch stud wall with fiberglass), the overall performance is even greater. According to the U.S. Department of Energy, SIP construction can result in a 12 to 17 percent saving in energy costs, though tests currently under way at the Oak Ridge National Laboratory suggest that that saving may be even higher. A home built with SIP walls generally calls for smaller, less expensive heating and cooling appliances, notes *TOH* plumbing and heating expert Richard Trethewey.

However, because SIP homes are so tight, Richard recommends installing an air exchanger to cut down on the moisture trapped in the house. This added expense offsets the energy saving in the first few years. Moisture has also proven to be a problem with SIP roofs in colder climates. If the joints are not properly sealed, escaping moisture vapor can get trapped beneath the roofing, eventually rotting the OSB. That's why when working with SIPs Tom takes no chances. On a simple gable roof, he ventilates by nailing furring strips to the OSB and adding another layer of ½-inch exterior-grade sheathing before putting on the felt and shingles. "This keeps the underside of the roof shingles cooler and the top side of the panels dry," says Tom.

With a complex roof that has many intersections and valleys, as at Carlisle, Tom will roof right over the SIPs, but first the installers, in addition to joining the panels with flexible caulk, inject a foam sealant into the joints and tape the underside of the panels. They also tar the seams as a temporary measure before the roofing goes on. Tom takes an extra precaution by covering the whole roof with a layer of waterproof membrane before he lays the shingles.

Still another advantage of SIPS is that they're environmentally friendly. First, they help conserve old-growth trees, since the OSB panels are made

FOR MORE INFORMATION, SEE DIRECTORY PAGE 144

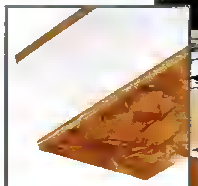
My little handyman is great I say, "Okay, small, dark and handsome, do your thing → get me all the best home improvement shows → plus any funny flicks from the '80s Or shows about dolphins" Then when I take a break from scraping windowsills or whatever, I call up my menu and see a gem from my own personal top 10 list of '80s comedy classics, The Money Pit. BUT I don't watch it Why? Hey, I'm living it.

So I watch Flipper instead

You've got a life. TiVo gets it.™

25TH-ANNIVERSARY TV PROJECT:

CARLISLE



STRUCTURAL INSULATED PANELS (SIPS) a sandwich of orientad strand board on either side of a rigid core of expandad polystyrena foam are stronger and quicker to put up than stick-framad walls

Tra [illegible] the assembly of the SIP [illegible] at Carlisle. It took just a few days to [illegible] the SIPs—when it would have taken [illegible] crew [illegible] and a half weeks to frame the same area. INSET ABOVE: On the first floor of the barn, Tom used 12-inch-thick SIP floor panels for their added strength.

of fast growing sustanable wood. And the controlled factory environment means less job-site waste and more recycling. Also, the foam itself is inert, and its manufacture does not use ozone-depleting chemicals. Making the foam, on the other hand, does require toxic substances, like benzene, a known carcinogen. Environmentalists are also concerned about the addition of widely used brominated flame retardants, which may be toxic and are probably "bioaccumulative," meaning they hang around the environment forever. But Alex Wilson, editor of *Environmental Building News*, still gives SIPs high marks. "There are some issues related to materials used in SIPs, but because they allow us to build energy-efficient homes, they are considered green," he says.

Two downsides of SIPs. They can be a draw to insects (unless treated with boric acid), and rodents can be attracted to the warmth of their insulated wall cavities. Another complication associated with SIPs is running wiring in the walls. SIP panels can be ordered with predrilled channels through the foam, designed to accommodate wires at standard heights for outlets and switches. (Plumbing chases can also be predrilled, although in cold climates you shouldn't run anything but a vent pipe in an outside wall.) Another wiring solution is to use baseboard outlets, available in a range of styles. The most versatile method is to cut vertical slots into the SIP panel (through the wood and about half an inch into the foam) using a plunge router. "That gives you the flexibility to run wires wherever you want," says LeRoy. Drywall covers the slots, and because the walls are so straight and completely sheathed in wood, even that goes up more quickly and with less waste. ■

RUNNING THE NUMBERS

Though it would seem that tha spaad of SIP construction would automaticaily lower costs with savings on labor, that isn't always tha casa. Tha actual cost relativa to conventional stick-frama houses dapands on whara you liva. In southarn climatas, whare job-sita labor is fairly cheap and anargy standards more ralaxad, SIPs are ganarally more expansiva than convantional framing. But in tha North, SIPs can ba compattiva with 2-by-6 walls and spray foam. (Six-inch-thick custom-cut SIPs, like tha onas at Carlisla, run $4.50 to $5.50 par square foot dallvarad.) To find out whathar thara's a cost benafit to SIPs in your area, contact a manufacturer (*www.sips.org* has listings), who will run your housa plans through thair computer and give you a pracise estimate at no charga. Than you can taka that figura to your buildar and stack it up against othar options.

PHOTO (LEFT): SPENCER JONES

The Webcams are on
To watch the crew right now, on one of our five live cameras, go to www.thisoldhouse.com or America Online Keyword: This Old House and click on Television Programs.

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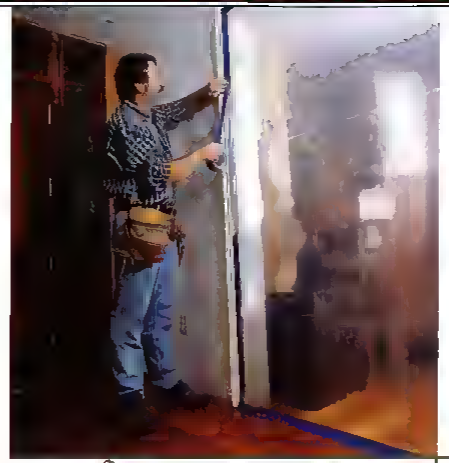
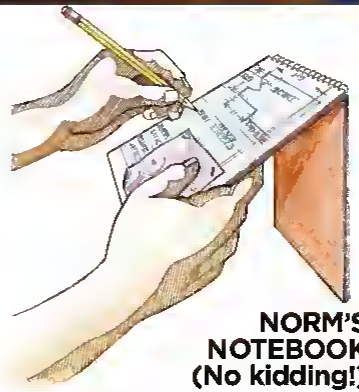


DUSTPROOFING A ROOM

When I rebuilt the main stairway at my house, I didn't want construction dust getting into the adjoining rooms and hallway. I wasn't only worried about the clean-up, dust also ruins the sensitive electronic equipment found in most homes these days.

Contractors often set up specialized dust containment systems before they start work, but you can do pretty much the same thing with some 6 mil thick clear polyethylene sheeting and a roll of 3 inch-wide painter's tape—the blue stuff. It won't lift paint or leave an adhesive residue on surfaces, even if left in place for weeks. Tape the sheet to the casing and floor around every opening leading to the work area, including closed doors.

To get into the adjoining rooms during the project, attach a peel-and-stick zipper vertically in the center of the opening and then slit the plastic to create the doorway. These zippered openings are very effective at stopping dust—as long as you remember to close them tight every time you walk through.



NORM'S NOTEBOOK (No kidding!)

I've been doing this column for three years now, and someone finally asked whether I actually keep a notebook. I do. It's pretty crude, nothing fancy, and I'm probably the only one who can read my scribbled notes. But it's an invaluable record for me.

For example, when I had to open up one of my bathroom walls during a project a few years ago, I sketched the piping and wiring arrangement and jotted down their distance from an intersecting wall. Now if I ever have to work on this wall again, I won't have to worry about drilling through a pipe. I also keep a record of the dimensions for each room I work on so I won't have to remeasure each time I paint walls or arrange furniture. With my notebook, I only have to measure once.

NO-MATCH PLUG

An old carpenter's trick for giving wood screws a little more bite in worn holes is to push a couple of wood matchsticks or toothpicks into the hole and then install the screw. But I've found that these don't always work as well as I'd like. Here's a different approach.

Make a peg by whittling down a sliver of softwood, then dab it with yellow glue and tap it into the hole. After the glue dries, shear off the excess with a sharp chisel. Now you can drive a screw in the same spot—or right next to it—as if the hole had never been there.

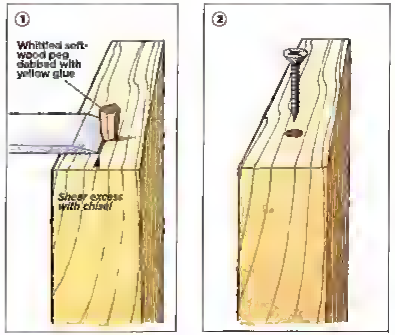
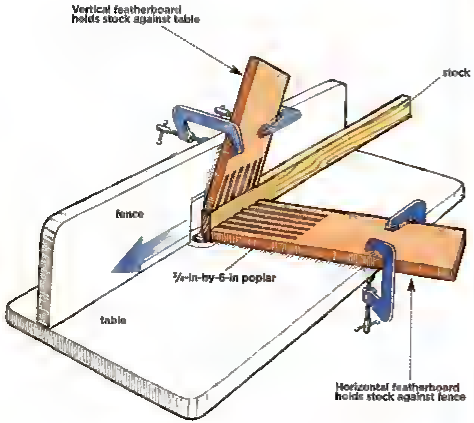


PHOTO: KIMBERLY LUSTIG; ILLUSTRATIONS: HEATHER LAWRENCE

SAFER, BETTER CUTS ON A ROUTER TABLE

When you do any work on a router table, one of the cardinal rules is to keep the stock tight against both the table and the fence during the entire run to get an accurate cut along the entire piece. Another important rule is to keep your fingers well away from the spinning bit. So whenever I have to run narrow or thin stock, I use featherboards to hold the stock firmly in place without putting my fingers in danger. They also prevent dangerous kickback.

I'm sure the plastic featherboards you can buy work well, but I've always made my own out of 6-inch-by-18-inch boards of ¾ inch poplar. That's bigger than most commercial featherboards, but it gives me plenty of surface area for clamping. To make your own, first cut across one end of the board at a 30- to 45-degree angle. Then use a bandsaw to cut a series of kerfs about 4 inches long and ⅛ inch apart into that angled end. In use, the angled, flexible fingers should press firmly against the wood, but not so hard that the stock is difficult to push through.



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DOUBLECHECKING A LEVEL

Like any tool, bubble levels get knocked around quite a bit, which can throw off their accuracy. That's why I never trust a level someone hands me. But I can determine whether it's trustworthy in a few seconds. Here's how.

Set the level against a post, for example, and take a reading on one of the plumb vials. Then flip the level end for end. If you get the same reading from the same vial, the level is fine. (For the most accurate reading when sighting a vial, the lines that wrap around it should line up front to back as you look at the bubble.)

But if the readings don't match, that doesn't necessarily mean the whole level is bad. Try the other plumb vial; most levels have at least two. If it's good, mark it with a pencil.

Now if both vials are bad, see if they have adjustment screws where they mount to the level's frame. If they do, use the same procedure described above to set them right. Your level has fixed vials and all are out of adjustment? Then it's no longer a level—it's a straightedge.

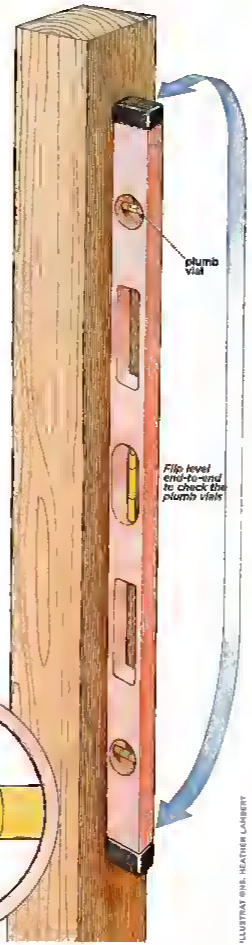
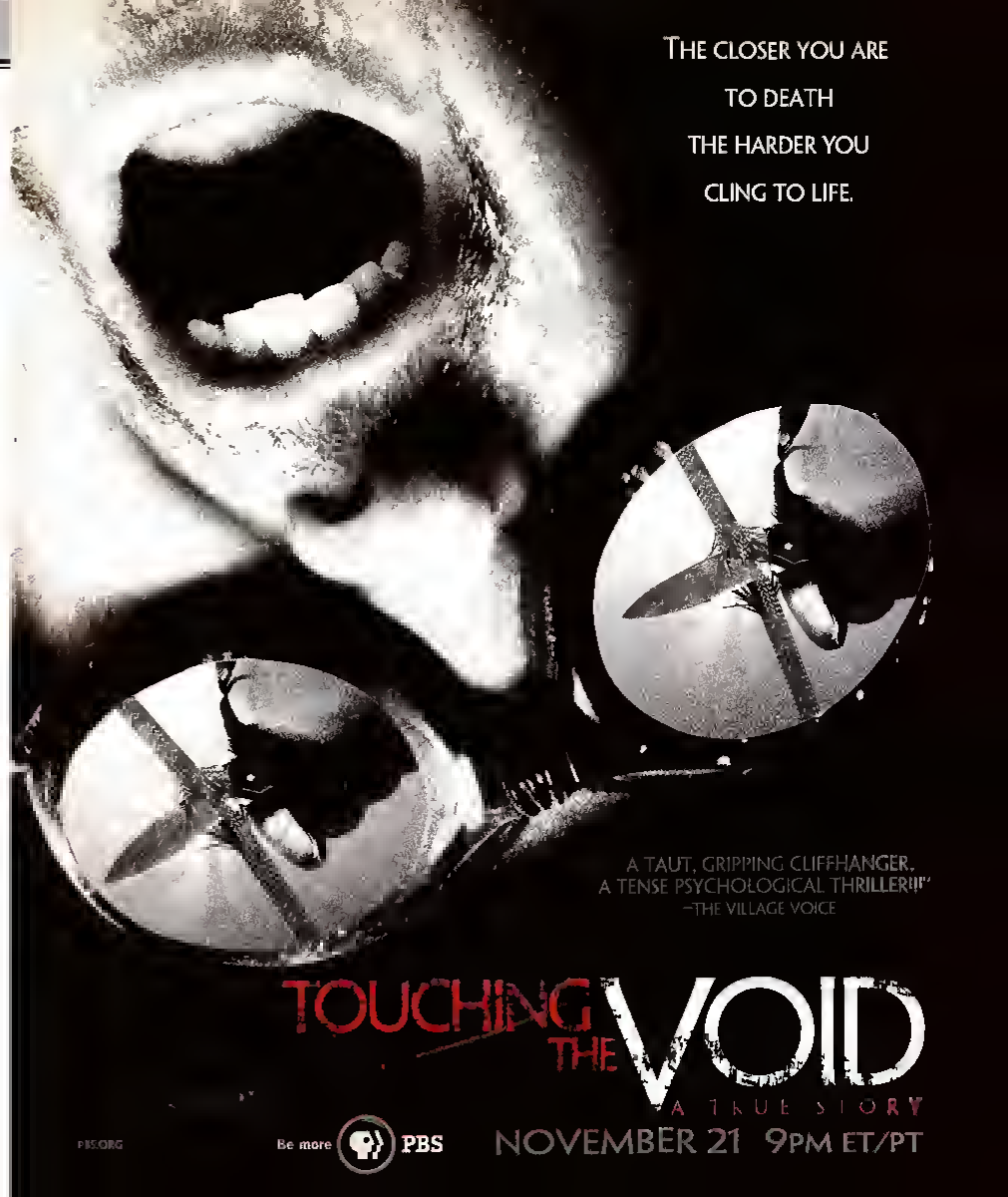


ILLUSTRATION BY HEATHER LAMBERT

FOR MORE INFORMATION, SEE DIRECTORY PAGE 144



BE THE JOB
pp 18–24

These Boots Are Made for Working— **Featured boot** Pro Titan work boot, Timberland, Stratham, NH, *www.timberland.com* **Kevin O'Connor** Timberland Pro, *www.timberland.com.* **Norm Abram** Dunham leather oxford, 800-843-2668, *www.dunhamfits.com* **Roger Cook** Dunham work boot, *www.dunhamfits.com* **Tom Silva** Carolina work boot, *www.workbootsonline.com* **Richard Trethewey** Herman's Survivor Boot, *www.hermanssportgoods.com* **Our thanks to** Red Wing Brands of America, Red Wing Shoe Company, Red Wing, MN, 651-388-8211; *www.redwingshoes.com*

Laser-Guided Saws— **Circular saw** 7¼ in. model #CSB140LZ, Ryobi Technologies, Inc., Anderson, SC, 800-323-4615, *www.ryobitools.com*

Smart Windows— **Andersen Windows**, Bayport, MN, 651-264-5150, *www.andersenwindows.com* **Research Frontiers Incorporated**, Woodbury, NY, 888-773-7337, *www.refr-spd.com.* **Velux America**, 800-888-3589, *www.velux-america.com.*

Older May Be Wiser— Our thanks to real estate guru Thomas Lucier, *www.thomaslucier.com.*

Try Before You Buy— **Maytag Corporation**, Newton, IA, 641-792-7000, *www.maytag.com* **Best Buy**, Minneapolis, MN, 888-237-8289, *www.bestbuy.com*

Off-the-Wall Color Trick— **Color samples**. Benjamin Moore Paints, Montvale, NJ, *www.benjaminmoore.com*

HOUSE CALLS: FARM MEETS FUNCTION
pp 26–30

Architect Benjamin Nutter, Benjamin Nutter Associates, Topsfield, MA, 978-887-9836. **General contractor** Steve Nutter & Rollie Cognac, Topsfield, MA, 978-887-3434. **Cabinetmaker** Carman Woodworking, Ipswich, MA, 978-356-4277. **Restoration glass for cabinetry** Shards, Peabody, MA, 978-977-0460. **Honed granite countertop and sink** Adrich Stone, Walpole, MA, 781-762-6111. **Refrigerator** Sub-Zero Freezer Company, Madison, WI, 800-222-7820, *www.subzero.com* **Range, dishwasher, and trash compactor** Viking Range Corp., Greenwood, MS, 877-834-8222, *www.vikingrange.com* **Antique chestnut flooring** Carlisle Flooring, Stoddard, NH, 800-595-9663, *www.undeplankflooring.com* **Recessed lighting** Lightolier, Fall River, MA, 508-679-8131, *www.lightolier.com* **Windows** Brosco, Brockway Smith Co., Andover, MA, 978-475-7100, *www.brosco.com.*

On the Job, p. 18: Guess which TOH show guy puts on which boots to go to work.

ASK THIS OLD HOUSE
pp 32–38

Renovation plates Delta faucets; 800-345-3358, *www.deltafaucet.com* **Sleeve anchors** Dynabolt Sleeve Anchors, Red Head Anchoring Systems, ITW Inc., Michigan City, IN, 800-348-3231, *www.ramset-redhead.com* **Spray lubricant** Slipit Indusrnes, Inc., Highland, NY, 845-691-8400; *www.slipit.com* **Marine-grade polyurethane sealant** 3M Marine Adhesive/Sealant 5200, 888-364-3577; *www.3M.com* **Subfloor screw system** Squeeeeek No More fastening system, O'Berry Enterprises Inc., Crystal Lake, IL, 800-459-8428, *www.squeaknomore.com.*

WALL-TO-WALL STYLE
pp 42–46

For more information The Carpet and Rug Institute, Dalton, GA, 706-278-3176, *www.carpet-rug.com*

TALKING SHOP: FILES AND RASPS
pp 49–52

Craftsman files Craftsman Hand Tools, Sears, Roebuck and Co., Hoffman Estates, IL, 800-377-7414, *www.sears.com.* **Simonds files** Simonds International, Fitchburg, MA, 800-343-1616, *www.simondsinternational.com* **Nicholson files** Cooper Hand Tools, Raleigh, NC, 919-781-7200, *www.cooperhandtools.com.* **Collar files** Tome Feteira, AngloAmerican Tools, 800-223-8600; *www.angloamericantools.com*

FROM THE GROUND UP: COMFORT CONTROL
pp 56–60

Heat Blockers— **Radiant barriers** TechShield Sheathing, Huntersville, NC, 800-648-6893, *www.lpcorp.com.* Reflectix Insulation, Markleville, IN, 800-879-3645, *www.reflectixinc.com.*

Insulation Options— **Cotton batts** Bonded Logic Inc., Chandler, AZ, 480-812-9114, *www.bondedlogic.com* **Loose-fill fiberglass** Johns Manville Building Insulation Division, Denver, CO, 800-654-3103, *www.jm.com* **Extruded polystyrene.** Dow Chemical Company, Midland, MI, 800-258-2436, *www.dow.com* **Cellulose** Cocoon Insulation, U.S. GreenFiber, LLC, Charlotte, NC, 888-592-7684, *www.cocooninsulation.com* Cellulose Insulation Manufacturers Association, Dayton, OH, 888-881-2462, *www.cellulose.com* **Fiberglass batts** Johns Manville Building Insulation Division. **High-density spray foam** BioBased Systems, Spring Valley, IL, 800-803-5189, *www.biobased.net.* **Mineral wool** Therma-fiber, Wabash, IN, 888-834-2371, *www.thermafiber.com.* **Low-density polyurethane spray foam** Icynene Insulation System, 800-758-7325, *www.icynene.com.* **Foil-faced polyisocyanurate** Dow Chemical Company, Midland, MI.

FIND! PLASTIC FANTASTIC
pp 62–68

Radio parts. Antique Electronic Supply, Tempe, AZ, 480-820-5411, *www.tubesandmore.com.* **Radio repair** Dave's Antique Radio & TV Restorations, Syracuse, NY, 315-457-5099, *www.borg.com/~dave2/dave3.htm* **Further reading** *The Complete Guide to Antique Radios: Tabletop Radios, 1933–1959*, by Mark V. Stein (Radiomania Publishing) **Our thanks to** Alan Voorhees, Oakland, CA, 415-310-9535, *www.antiqueradios.com.* Steven Turner, Catalin Radio; 304-525-8890; *www.catalinradio.com* Phil Nelson, Phil's Old Radios, 425-488-8244, *www.antiqueradio.org*

Q & A— **Babe Ruth baseball** Leland Auction House, Seaford, NY, 516-409-9700; *www.lelands.com.* **Cast-iron mirror** Margaret Caldwell, New York, NY, 212-472-8639. **Yarn winder** Peter Curran, Wilton, CT, 203-762-5469 **Coca-Cola tray** Rudy Franchi, The Nostalgia Factory, Boston, MA, 800-479-8754, *www.nostalgia.com* **Caning repair** Our thanks to Morrison's Chair Caning, Gaithersburg, MD, 877-825-1133; *www.morrisonschairs.com* **Caning supplies** H.H. Perkins, North Haven, CT, 800-462-6660, *www.hhperkins.com.* Constantine's Wood Center, Ft. Lauderdale, FL, 800-443-9667, *www.constantines.com.*

UPKEEP: OLD CABINETS, NEW COLOR
pp 70–76

Polyester wood filler High-performance Wood Filler, Minwax Co., Upper Saddle River, NJ, 800-523-9299, *www.minwax.com.* Bondo Home Solutions, Bondo Corp., Atlanta, GA, 800-622-8754; *www.bondo-online.com* **Brushing putty** Fine Paints of Europe, Woodstock, VT, 800-332-1556, *www.finepaintsofeurope.com* **Paint:** Dutchlac Traditional Oil Paints, Fine

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HGTV

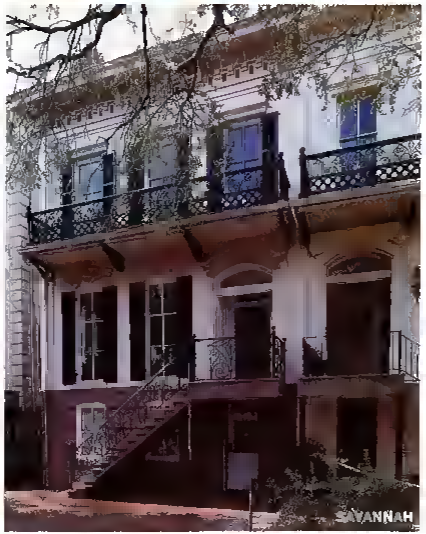
WINCHESTER (2002)
Healthy but tired, the 1920s Colonial Revival in Winchester got an improved kitchen and master suite, an updated heating plant, and a cosmetic freshening inside and out.

NANTUCKET (1996)
The This Old House crew transformed a small 1887 Victorian cottage into a summer home with year-round capabilities.

DIY NETWORK

SALEM (1995)
A neglected circa 1784 Federal rejoined the ranks of other historic homes in Salem, Massachusetts.

SAVANNAH (1996)
This Old House helped the Flemings preserve their Georgia peach – a 1884 Italianate Victorian rowhouse on Monterey Square.



LOCAL BROADCAST STATIONS

WAYLAND (1991)
The historical renovation of "Kirkside," an 1915 Colonial Revival–style home in Massachusetts, included new septic and heating systems, a new roof and chimneys, and repair of the master suite.

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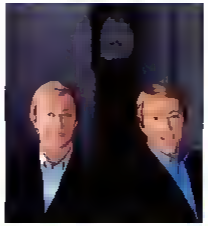

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HOMEOWNER'S HANDBOOK: HANGING A CHANDELIER
pp. 87-94

Electrical contractor: Peter Eng, Electrical Enterprises, Inc., New Milford, CT. **Chandelier:** Lamps Plus, Model 53967, 800 782-1967, *www.lampsplus.com* **Fan brace** Reiker Model 22200, Pass & Seymour/Legrand, Syracuse, NY, 800 223 4185, *www.passandseymour.com* **Decorative medallions** Style Solutions Inc., Archbold, OH, 800-446-3040, *www.stylesolutionsinc.com*

PUTTING THINGS WRIGHT
pp. 96-104

Consulting architect John Origlio, Stow, Ohio, 330-475 1522. **Wood veneer** Easr Aurora, NY, 716 655 0206, *www certainlywood.com* **Paint** Schilling Enamels, Cleveland, OH, 216 252 6242. **For more information** The Frank Lloyd Wright Building Conservancy, Chicago, IL, 312 663 5500, *www.savewright.org*

WALLS WITH CHARACTER
pp. 107-112

Featured expert: Pierre Finkelstein, Grand Illusion Decorative Painting and Pierre Finkelstein Institute of Decorative Painting, New York, NY, 888-328-9278, *www.pfinkelstein.com* **Brushes** Pierre Finkelstein Institute of Decorative Art, *www.pfinkelstein.com* **Books** *Recipes for Surfaces*, by Mindy Drucker and Pierre Finkelstein (Simon & Schuster); *The Art of Faux*, by Pierre Finkelstein (Watson-Guptill Publications)

PRIVATE DOMAINS
pp. 114-123

Architect Christopher DiSunno, DiSunno Architecture, East Hampton, NY, 631 324 6676. **Contractor** Doug Bennett, Men at Work Construction Corp., Wainscott, NY, 631-537-6600. **Trim and cabinets** D. Reis, Mineola, NY, 516 248-5676. **Framer** Garrett Construction Corp., East Hampton, NY, 631 537 0344. **Tile** Island Tile & Marble Inc., Easr Hampton, NY, 631-329-2845. **Electrician** Stewart Electric, East Hampton, NY, 631-329-0500. **Plumbing** JHK Plumbing, East Quogue, NY, 631-653-2926. **Audio/video** Sensoryphile, Water Mill, NY, 631 726 1920. **Painter** Shore Painting, Southampton, NY, 631-287-5480. **Door hardware** Baldwin Hardware Corp., Reading, PA, 800-566-1986, *www.baldwinhardware.com*. **Plumbing fixtures and fittings** Waterworks, 800 998 2284, *www.water works.com* **Electrical devices** Lutron Electronics Co., Coopersburg, PA, 888 588-7661, *www.lutron.com*. **Windows** Dynamic Windows & Doors; 800-661-8111, *www.dynamic windows.com* **Architect** Haverson Architecture & Design, Greenwich, CT, 203-629-8300, *www.haverson architecture.com* **Contractor and ceiling beams** Mott, Derry & Simmons, Sag Harbor, NY, 631 725-4533. **Cabinets** Hibernian Millworks, Hopewell Junction, NY, 914-804 0088. **Windows** Pella Architectural Series, Pella Corp., Pella, IA, 800-374-4758, *www.pella.com* **Fireplace** Heat-N-Glo, Lakeville, MN, 888 427-3973, *www.heatnglo.com* **Plumbing fixtures and fittings** Kohler, Kohler, WI, 800-456-4537, *www.kohler.com*. **Tile** Ceramic Design, Greenwich, CT, 203 869 8800. **Flooring** Hoboken Woods, New York, NY, 212-759-5917. **Hangers and closet accessories** The Container Store; 800 786-7315. **Bathroom accessories** The Terence Conran Shop; 866-755-9079. **Our thanks to** Allan Garren, Garren McCuan Renner Interiors, Akron, OH, 330 666-1155. Gopal Ahluwalia, National Association of Home Builders; 800-368-5242, *www.nahb.org*

CARLISLE TV PROJECT: BUILDING BLOCKS
pp. 133-138

Architect Jeremiah Eck Architects Inc., Boston, MA; 617-367-9696, *www.jearch.com*. **Precast concrete walls** Superior Walls, New Holland, PA, 800 452 9255, *www superior walls.com* **SIPs** Insulspan, Blissfield, MI, 517-486-4844, *www.insulspan.com* **Northeast insulspan distributor and SIP installer** Panel Pros, Keene, NH, 800-721-7075, *www.panelpros.com* **Green building newsletter** *Environmental Building News*, BuildingGreen, Inc., Brattleboro, VT, 800 861-0954, *www.buildinggreen.com*.

NORM'S NOTEBOOK
pp. 141-142

Low-tack painter's tape: Scotch Blue #153, 3M, St. Paul, MN, 888 364-3577, *www 3M.com*. **Dust-control zipper:** ZipWall Zipper, 800-718-2255, *www.zipwall.com*

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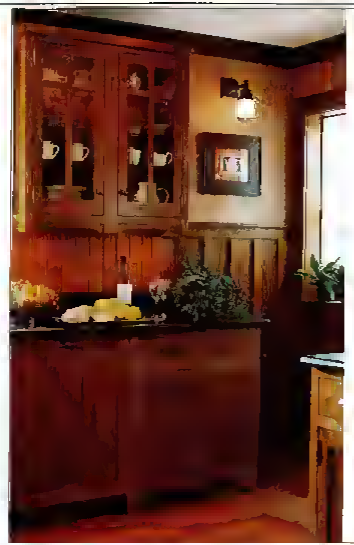

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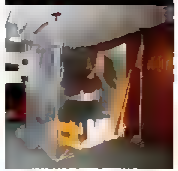

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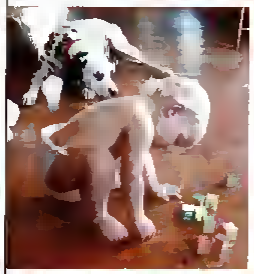

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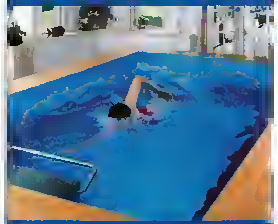

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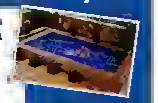

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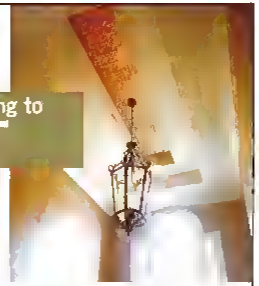

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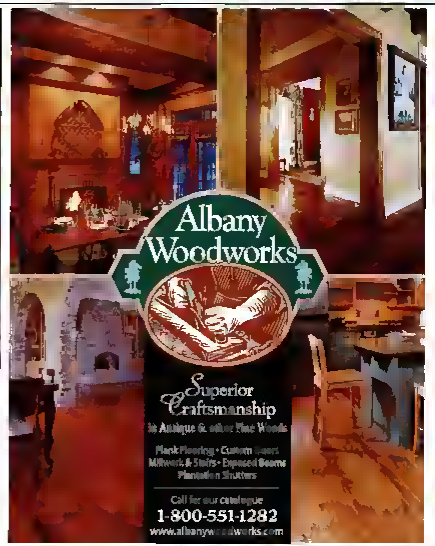

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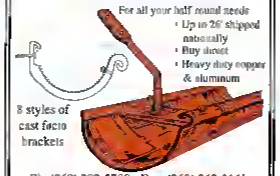

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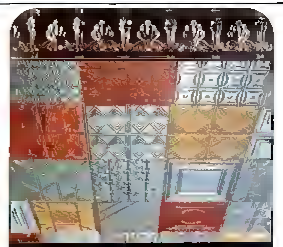

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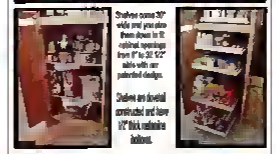

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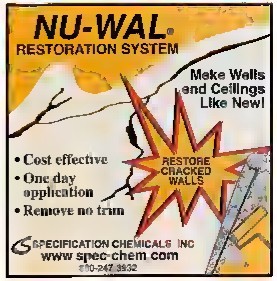

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In the 1890s, early developers of Phoenix were eager to shed the city's Wild West reputation. They envisioned its dusty roads, once roamed by gunslingers, prospectors, and bandits, giving way to orderly housing developments. So one of them hired prominent pioneer architect James M. Creighton to design 13 Queen Anne houses, to be sold for around $2,000 apiece. Apparently the effort was successful: The neatly finished houses were touted in the local newspaper as "models of neatness."

Today, only three of Creighton's tract houses survive, including this 1893 cottage located just three blocks from the capitol building. Its Victorian-era facade is largely intact, with pressed red brick walls, cedar fish-scale shingles on the front gables, and a veranda with turned supports and a delicate spindlework frieze.

Until recently, the cottage was entombed in stucco, much like its post-World War II-era neighbors. Its current owner, William Link, painstakingly removed the offending siding by hand. He also replaced the roof sheathing and swapped the original worn cedar shakes for fire-resistant asphalt shingles.

The 1,400-square-foot interior has two bedrooms, a front parlor with a period mantel, a dining room, and a kitchen. Much of the plaster and lath have been removed from the walls, and Link is in the process of updating the electrical and plumbing systems. Other recent improvements include a new, three-car garage with a large attic.

The cottage, which is listed on the city's historic register, is eligible for a $10,000 matching grant from the Phoenix Historic Preservation Office to complete the restoration of the exterior. It's also under consideration for inclusion on the National Register of Historic Places and may qualify for property tax credits.

TOP: *This 1893 cottage was built in the Queen Anne style, which was popular in the East but made its way to Arizona only after the arrival of the railroad in the 1880s.* **ABOVE LEFT:** *The veranda's spindlework frieze meets carved brackets at the top of each post.* **ABOVE RIGHT:** *The parlor's simple wood mantel was salvaged from a Queen Anne that was razed.* **LEFT:** *A three-sided bay is the focal point of the parlor.*

PHOTOS: CHRISTIAN BLOCK

If you know of a house that should be saved, please write to: Save This Old House, 1185 Avenue of the Americas, 27th Floor, New York, NY 10036.

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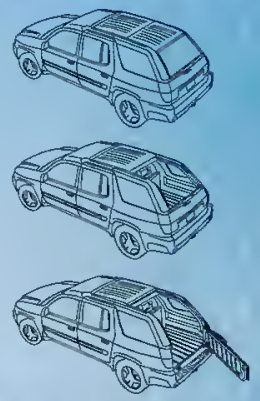

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