

68 PAGES OF SMART REMODELING SOLUTIONS

39
TOP
PRODUCT
PICKS

This Old House

SEPTEMBER 2005

Annual Kitchen & Bath Special

- ▶ Cut costs, not corners
- ▶ Plan the best layout
- ▶ Avoid the top 10 mistakes



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letter FROM THIS OLD HOUSE

Kitchen Sink Wisdom

"OKAY, RICHARD, WHAT DO I NEED TO KNOW?"

"So very much, my son, so very much."

"About my kitchen remodel?"

I had asked Richard Korfberg, TCM's plumbing and heating expert and—if you're over 10 years on any of our TV shows—something of a wise guy.

"Oh, sorry," he said, "I thought you meant about life. If you mean remodeling, you should just read the magazine."

He had a point. You can't get better renovation advice than what you'll find in *This Old House*. And that's doubly true with our Annual Kitchen and Bath Special. From the remodeling of new products on page 95 to the cabinetmaking fancy work on page 104 to the must-read "Don't Get Burned: Guide to Remodeling" on page 114, it's an ocean full of great ideas, insider knowledge, and sage know-how.

Still, as we were pouring drink warm-up drinks, I wondered if we hadn't overlooked some detail or budget item that could be crucial to you—or my—success. I needed to seek the wisdom that only three decades of steady 5-week job-site experience can provide.

And here's what I had to say: "Keep it simple, stupid."

"Thank you, sir. I'm building a house right now, and it's so overwhelming. The kitchen's got a stove, sink, refrigerator, and a trash compactor—some of that other fancy stuff that does everything for me at the touch of a button. Same in the bath." (Maybe that explains why he's holding a house.com-made over there in the picture and not what he called a "hand-wound steel double later coprocessor hobble-dabble.")

It's true that he's against the fashion, peacock, big-brother stuff that can make the bath relaxing and the kitchen's prechord sleepplace. It's just that he knows about prioritizing.

"Good plumbing is sweet and unobtrusive, which is why so many people forget how important it is," he said. "And once they think it's not important, they think they don't need to spend on it. So they fight the \$600 to move the sink, supply lines away from their cottage wall but spend \$6,000 on a gas appliance without blinking. I'd rather you come out once over a bill for a pipe you think you don't need and then don't see every year when that whole pipe don't freeze."

That's worth remembering. As much as all the great stuff you'll find in any of our pages, it's what's hidden—the framing, the wiring, and of course the plumbing—that's going to make your dream kitchen—or bath—a reality.

Scott Casperson
SCOTT CASPERSON
EDITOR



TCM plumbing and heating expert Richard Korfberg embraces the heart of the subject: pipes. In kitchens and bath fixtures.

"I'd rather have a customer curse me once over a bill for a job he thinks he doesn't need and then thank me every year after that when his pipes don't freeze."



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contributors

29 If you can't discover it on your own, it's a good bet that associate editor **Amy Hughes** will write about it for *The Old House*. Hughes is a person for whom nothing runs through her work. She edits our Around the House section and eco-friendly Green House column as well as the monthly Salvage column. This month's discussion of old-car, rainwater pond and the creativity of some people's brainpower ("Porch-Hill + Post," page 32). Hughes is sometimes nowhere at home; she shares a renovated New York City apartment with her husband. "We spread out the pulled-out 1920s kitchen appliances, including a base and utility sink, and replaced the whole lot."



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41 **Samuel Kays** follows *The Old House* master carpenter Mark Menzies with his camera regularly. His photos documented the work on last season's television project in Galesville, Mass., and will again this season in Connecticut ("The Silver-Hill Too Many Plans," page 132). Following accompanying home to Wrentham, Mass., he's focused for looks at a massive antique shoe ("The Feet of a World Renowned," page 124) and especially near spending—"I called the Woodstock of antiques," he says. Kays, who also shoots for *National Geographic Adventure* magazine, has in *in* *Rescue* Menzies with Sandra Lutz. He's also a photographer and has two children.

39 "When it comes to kitchen design, organization matters a whole lot more than square footage," says **Margaret E. Gage**, who wrote this issue's kitchen remodeling survival guide ("The Don't Get Stalled Guide to Remodeling," page 124). Gage, whose words here may just make your next meeting with a contractor 100 times painless, speaks from experience; she's remodeled two homes in New York's Hudson Valley and has been about home lifestyle in and out of the kitchen for 20 years, most recently as editor of *Country Living* magazine.



- Resists damage from heat and strong odors
- Resists insect damage
- Resists damage from mold, mildew, climate



46 Illustrator **Robert Lauer** says he had no problem convincing those for the kitchen remodeling survival guide. Lauer is a survivor himself. He lives with his family in a house built in 1770—one that's needed lots of work. "I have spent countless sleepless nights with images of old, broken beams, rotting roofs, flashing, plumbing, etc.," he writes. Says Lauer, also contributor to *The New Yorker*.



- Resists damage from mold, mildew, climate



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Porch Swing

Your article about hanging a porch swing, "The Good Bird [Met] in the House" [June] was perfect timing. I had saved the old swing my grandfather had out many many years ago. The instructions helped me hang the swing on the screened front porch of my 1920s Craftsman-style house. Thanks for all the tip-and-knowledge you bestow every month.

STEWART GOODMAN SANDSPRING, AZ

Carpet Smudge-Watering

I had a situation much like the one in "Mystery Carpet Smudger" [Ask The Old House, June]. My wife wanted to replace the carpet in the bedroom (the old carpet was all along the baseboards). The carpet salesman who came out to measure said the stain, which he had seen on other homes, might be due to a leak in the water heater. He suggested we contact an HVAC service. We did so, and sure enough they found the second very hard exchange was cracked. Apparently the stain came from a properly combined water leak. To your answer may be wrong, but such advice does indicate a serious situation.

STEVE KIDDERMAN, CHAMPAIGN, ILLINOIS

The editors reply: Thanks for the caution. In most cases, the stain probably developed a pattern in correlation from ordinary sources—friction or soil. Discoloration, cracking, etc., furniture polish. But if you notice this problem and have an oil or gas forced-air system play it safe. Get your furnace inspected by a licensed, certified HVAC technician and have it inspected every fall. Be sure, too, that you have at least one carbon monoxide detector on every level of your home.

Apple Boxes

Although you didn't mention it, boxes like the Utility Support Box [Marvin's Notebook, June]. But Marvin boxes with the T24 components are part of a modular system of building blocks called "Apple" boxes used in the film and TV industry for prop sets. The sizes are standard, a "full" Apple



being 24 by 24 inches, is half 4 inches high, a "quarter" 24 inches wide, 6 inches high. They use them for everything from leveling concrete to back to building platforms, or in a quick step up (a "man-riser") when a ladder is too much or as you're rated for a stool (a "prop for ground adaptor"). They are so handy I've often thought of building a few to have around the house.

DAVID WELLS, OREM, UTAH

Buy Certified Lumber

Thank you for "Trouble in the Topsoil" [Around the House, June]. As a longtime volunteer for Deering Foundation International (deeringintl.org), I've been to Indonesia many times and am well aware of the devastation caused by deforestation. The rainforest of Borneo is particularly at risk, peering below the horizon and in the north. Since our clients are found only in Borneo and the Indonesian rainforest, this destruction means the extinction of orangutans in the wild. Without major human intervention, the present population for these extinctions by the year 2030. The article was a great reminder that by looking for the Forest Stewardship Council or Sustainable certification the next time you purchase lumber you're helping to make a difference in ensuring a chance for our survival.

CONRAD KILGUS, COVINGTON, LA

Corrections

"Peak Performance" June: We printed an incorrect price for the Marvin's Notebook Steel Case for Folding Products for only \$25. It should have been \$75 per 125 square feet, not \$225. We also wish to note that the product described in the article is not a wood product and is not a wood product. Visit www.marvin.com for more information.

Get an even closer look

Most windows and doors have telescopes—i.e., gaps—up to 1/2 inch. Marvin keeps ours to a paper-thin 1/16 inch. Does it matter? Only if you do. Learn more about what to look for in windows and what you will (or won't) see in ours. Call 1-800-268-7044 (in Canada, 1-800-263-6161) or learn more at marvin.com/the-difference.

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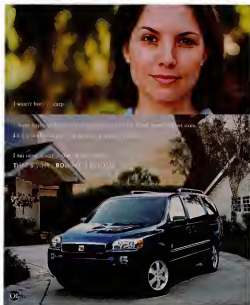
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I wasn't born a carpenter.

I never built a house, and I never owned a house. I just lived in one.

I did a lot of home improvement projects, though.

I was never a real carpenter, but I was a homeowner.

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around the HOUSE

GOOD TO KNOW

Carpenter Peter J. McGowan, 49, prepared the holiday we now call Labor Day to honor America's workforce.

One Well-Rounded Tool

Part screwgun, part hammer drill, a cordless impact driver is a versatile job-site companion.

IT HAS THE TORQUE of a socket wrench, the versatility of a screwgun, and the precision and class of a hammer drill, all in the body of a lightweight. No wonder cordless impact drivers are popular.

Great for making deck screws, installing kitchen cabinets, and replacing garage doors, impact drivers are the best bet for handy homeowners with a heavier-duty tool to settle and an extension to blow steam. "While torque and speed make short work of many jobs," says TCM general contractor Tom Iida.

The tool operates much like a drill driver when starting a screw, but once it senses resistance, a permanent mechanism locks in to deliver several thousand rotational impacts per minute. This provides a four-fold increase in torque compared with a similarly powered drill driver. And because the force is applied perpendicular to the driver's axis, little effort is needed to hold the tool in place, reducing user fatigue on lengthy jobs. —DAVID FISHER



Home improvement expert the company to GMA. This award driver has fast forward button and an LED light that shines as a flashlight. The full model shown is \$149. For more information, visit www.makita.com.

AND THEN THERE'S...



TORQUE AND THE TYLEE
Jack Johnson, the first All-Star American League pitcher, is a baseball player, not a carpenter.

2022. But unlike George Foreman's Banana Grill, Johnson's baseball career caught on.



SQUARE DEAL
The square drive screwdriver—designed to securely grip a bit and maximize torque—was patented by Goodwin.

Inventor P. L. Robertson in 1909. Goodwin called the system "Screw-Max."



THE DRYWALL DRIVEY
At Lobbly Lumber's annual Customer Appreciation Day in Thonerville, George, a customer drove in every drywall screw as they ran in Thonerville. Peter's compressor, hot dogs, and t-shirts.



ATTENTION, KSMART SHOPPERS

Tools and appliances debut at the superstore

Ever dreamed of a blue-light special on Jap-saws? It may soon be reality.

After merging with Sears this spring, Kmart has started carrying Craftsman tools to tempt weekend-wielding shoppers to a territory more associated with screaming children and racks of grocery parties.

Call it a handy makeover: In stores and cities across the country, the stores now include home-improvement, appliance, and lawn-and-garden aisles stocked with Sears's top-selling brands: Craftsman, Kenmore, Maytag, and General Electric. Though the merchandise varies by location, the Kmart in Norridge, Illinois, for instance, now sells angle grinders and cordless drill drivers as well as washers and dryers, lawn mowers, and leaf blowers.

The Burbank, California, store even has a Home Improvement Kiosk where you can call up a Sears salesperson for information on windows, cabinets, and just about anything else you might need for a renovation project.

A superstore for home improvement isn't a new idea, but a store where you can price table saws and water heaters while your great-aunt Mable peruses the linens and sweater shoes is the kind of novelty no one else has. —ASHLEY WORTH



Colorful Caulk

It's white, gray—occasionally a dazzling shade of, well, beige. But now, caulk—like Sierles—is available in all the colors of the rainbow for coordinating with paint, tiles, and countertops. Red Devil's Create-a-Color Caulk Coloring System lets you inject any hue of latex paint into a tube of its caulk. Just pop the cap out of the back of the tube, squeeze paint into the well with the syringe provided, and screw on Red Devil's plunger. Then pump away until the color is mixed. Sounds complicated, but it's as easy as those multicolored snakes your kid makes with his Play-Doh Fun Factory. If you're still daunted, Dap—which owns Phenoseal caulks—will do the mixing for you. Just send them a paint chip, and in about three weeks the company will deliver your customized caulk. —ALAN MACHIN

Create-a-Color Mix tubes are \$19 for the single plunger. Sendmix.com for details. Phenoseal is \$24 for a minimum order of 30 tubes (our \$25 for color-matching). For more information, see page 20.

CRISPER COIN

Coin-operated vending machines are no longer your typical snack or beverage dispensers. Now they can dispense anything from beer to coffee to even a massage. The Dutch word "massage" is "massage" in Dutch. Today, an entire new market for these machines is being created.

What did the modern machines first serve a purpose?

A. 1988 B. 1995 C. 2000 D. 2006

(Circle One Answer) (page 20 for answers)



Photo: The Coin-Operated Machine Co.



Play-Doh snakes are \$1.99.

Snake is a trademark.

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{ TIP }

Drill Without Tear-out

When drilling through finished wood, such as a cabinet door, ICI technical editor Mark Powers avoids splintering and chipping its backside by clamping a wood scrap to it. As the drill bit exits the door it continues uninterrupted into the scrap, leaving a clean hole.



Stealing Home

A new breed of thief wants your house, not the stuff inside.

EARLY THIS YEAR POLICE IN MAINE, TEXAS, arrested two men who had dismantled a house lock by lock. The thieves, who worked in broad daylight over the course of three months, gathered more than \$15,000 worth of construction materials—all along working as gypsies, who figured they were workers.

With a rash of new building and rising material costs, small-time crooks across the country are reaping big-time profits in stolen house parts, particularly in hard-to-find vintage elements. They'll sneak through garden gates, take a screwdriver to front doors, and climb into attics to steal, for example, a 1920s-style cast-iron garden bench in Philadelphia, an original door knob from an 1817 Richardsonian Romanesque in Chicago, and a 1920s Felt Art washbasin vase from a barn in Illinois, Michigan. They then make these pieces for sale on Internet auction sites and at the shops of antiques and vintage dealers.

Sometimes they steal big pieces from wealthy neighborhoods, assuming they are strong enough to hold them off. In one case, a man stole a large hall. The thieves group, many of which buy rednecked houses and sell them to individuals for renovation, caution that a house always belongs to someone and that making architectural details will only cause present or future owners to sue.

Case in point: The Alliance to Conserve Old Fashioned Neighborhoods in Richmond, Virginia, recently acquired an 1890 Queen Anne that had been robbed of its staircase's handrail, balusters, and steel posts. The new homeowners will now have to find replacements, which could cost several thousand dollars, says David Herring, an Alliance spokesman.

When shopping for architectural salvages, ask dealers what precautions they take to ensure their wares aren't stolen, says Jason Karchow, owner of Cornwell's Salvage Yard, who in Richmond. "We always can tell whether something has been carefully dismantled or ripped out," he says. —ANDREW DODD

GARAGE GUSTER

Stanley's new industrial strength ventilator is like the Jeti. It cools the air with three wind settings from a gentle breeze up to gale force. It's easy to use, quiet, and it's also got related air quality features, and it's also got a built-in timer. The fan is 18" and spins 350 degrees—useful for jobs at a steep angle. And it's 12" and can be built in electrical outlets or into a wall.

It's a great idea.
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—CAMPBELL
000000

The 12" plumb
Down the
—CAMPBELL
000000



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we'll turn it into reality



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Design your own sofa or find a store nearby at www.norwalkfurniture.com



Yurt Time Has Come

High-tech descendants of ancient round tents offer affordable, portable housing

MORE THAN A THOUSAND YEARS AGO, somewhere in Central Asia, a nomadic builder pieced together a circular felt tent and belched-out a name for it: yurt.

Not the portacabin, monkey, but it took

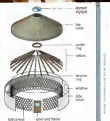
A cross between a Tackamir Yurtler grooves down and a luxury safari tent, a modernized version of that original yurt is fast becoming one of the Western world's most desirable forms of shelter. Among its most popular uses are temporary on-site lodgings for people building new permanent homes, workshops and art studios, home offices, and guest or temporary the average a tent's weather in low water. Yurts also make great vacation retreats and backyard up-and-downers.

"Some people travel long distances for a getaway spot, but we are increasingly finding that people want to create their own little retreats in their back yards," says Allen Ross, founder of Pacific Yurts, in Cottage Grove, Oregon.

Today's circular, cone-roofed yurts have plywood subfloors, which can be upgraded with tile or hardwood, and wood lattice walls that unfold like accordions. Their roof sections look like the underside of an umbrella, with ridges forming a cone-shaped frame that's pinned at the top with a poleless design. Yurts have windows and framed-in entry doors, and they can be equipped with decking and plumbing for kitchens and baths.

Locally built to house hikers on the granddaddy of Mount Rainier and Shasta, yurts are tough enough to withstand high winds and extreme fluctuations in temperature. Pacific Yurts, in fact, guarantees its cone-roofed yurts for 15 years—longer than the average shingled roof. With added insulation, a wood stove, and a ceiling fan, the structure efficiently retains heat in the winter and cooling in the summer.

A 700-square-foot yurt can be erected on a wood platform in less than a week with the help of a few buddies. Though it's designed to stay up year around, it can be taken down and rolled into the bed of a pickup truck (or lashed to the back of your pickup) in a day. In both cases, says Pacific Yurts's Ross, "as long as one person could read the manual fine, and we're not saving the log until the job is pretty much finished." —SAM H. KATZ



Almost half dozen companies make yurts with prices and features ranging from \$4,000 for a 200-square-foot yurt to \$30,000 for a 1,000-square-foot one. For more information, check out Pacific Yurts' website at www.pacificyurts.com and Pacific Yurts at pacificyurts.com.

(Around the House continued on page 26)

handrails

Massachusetts homeowner Levent Pinar needed handrails in his stairways, but was puzzled by how to put them in. He emailed Ask The Old House, and Tom Silver showed up to lend an expert hand



irrigation

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

sinks

Homeowner Kathleen McCreedy tried to fix her rusty bathroom sink stopper with a paperclip stick. Richard Trechinsky provided a more professional solution



closets

California couple Brandon and Marlene Gaultner's sliding closet doors were stuck. They emailed Ask The Old House, and before long Tom Silver put them back on track

what's your problem?

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



(Check local listings or visit www.thisoldhouse.com)

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BEATING RISING BUILDING COSTS

If you've been building off and on, that new house that took you right into the next decade is looking a lot like a house that's been built out of building materials that suddenly started dropping. We've got some bad news: It isn't going to happen—at least not anytime soon.

A recent report by the National Association of Home Builders in Washington, D.C., found that prices for building materials, including cement, steel, wood and brick, rose about 22 percent for the year ending February 2005. The real increases were due largely to unusually high global demand—particularly in developing China and hurricane-ravaged Florida—short supply and rising fuel prices.

Rising prices have had a lot of people to rethink their home remodeling projects, says Merleyn, a Phoenix, Ariz., lawyer. "People are definitely scaling back," he says. "Every one starts out with a checklist: 'Is it worth it?' When we get the preliminary numbers, it's a big wake-up call." To help cut costs, many of Merleyn's clients are reusing items they originally planned to replace. "Instead of buying new cabinets for the laundry room, they'll put their old kitchen cabinets in there," he says. They're also reusing decked-out windows, as well as kitchen and bathroom fixtures. —KATHY FROST



Bit Player

SOMETIMES A SMALL ROUTER IS ALL YOU NEED

Not every shaping, trimming, or grooving job calls for a sumo-size router. For small jobs there are mini ones, called laminate trimmers or trim routers. Originally devised to cut off excess plastic laminate

at the edge of a countertop, these spinny minis are increasingly being used to shape wood. The tool accepts standard 1/4-inch shank bits and can be operated with one hand, leaving the other to steady the workpiece.

Light and maneuverable, trim routers are ideal for excavating hinge mortises, forming decorative beaded edges on shelf boards and easing the sharp edges of corner trim. Weighing in at just 3.3 pounds, the latest model from Bosch offers a variable-speed trigger, an improved grip, a muscular 1-hp motor and a blistering top speed of 35,000 rpm.

Bosch Bit Player trimmer costs \$165. See boschtools.com for details.



CRANE ARM

C. 2002, *aiming to help "planners, paper designers, carpenters and other artisans,"* Charles H. Thomas of Columbus, Ohio, conceived a machine with an adjustable height and length. Eighteen gears allowed, even the adjustable workpiece with flexible clamps and metal workpiece with V-shaped clamps. But even when still, the machine did, because the workpiece was not.



Throw everything you know about wood out the window.



Decorative Window



Decorative Window



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Safe Wood

A nontoxic alternative in pressure-treated lumber

Leave it to a chemist specializing in immune deficiency disorders to devise a pressure-treated wood that's rot-proof, bug-proof, and so clean you could eat out of it. Its maker says it's even safe enough to put in your mouth. But we're not sure why you'd want to do that.

What you should do with it is build a deck, raise a garden bed, and erect that tree house you promised the kids. And sleep well knowing the wood won't leech toxins or corrode the metal fasteners that hold all those weekend projects together.

The new lumber is called TimberSIL, and it's an alternative to wood preserved with potentially hazardous heavy metals like arsenic, chromium, and copper. Instead, TimberSIL is infused with sodium silicate, a nontoxic mix of sand and soda ash. The latter is a common ingredient in washing detergent. Once treated, the wood is baked in glass kilns to permanently encase the fibers with a flexible layer of inorganic glass. (Note that the amount of silicates used in the treatment process is too small to produce harmful dust when sanding, says TimberSIL vice president Ron Hobbs. But standard respiratory and eye safety wear is recommended, as when working with untreated lumber.)

TimberSIL arrives on the rack dry and ready to paint or stain. It offers more stability than other treated woods, which shrink as they dry, leading to cracks, splitting, and checks. And unlike its green-tinted counterparts, TimberSIL retains its natural color.

Because it's essentially sealed in glass, TimberSIL won't break down in wet or moist conditions. "We've pulled the stuff out of the ground after more than a year and it comes out without as much as a nick," says Hobbs. "After washing it off, it looks brand new." —MICHELLE D'AMICO

TimberSIL comes in 12-year warranty and a competitive price tag over other pressure-treated woods. And, red-bellied 2x4 softwood yellow pine for instance, costs about \$4.50 per board foot for outdoor.



10
USES

Magnets

In the 18th century B.C., Thales of Miletus, a Greek philosopher, noticed that a magnet's power of attraction was the result of science, not magic. After that, it was only a matter of time (and a few millennia) before magnets turned up in TVs, toasters, vacuum cleaners, and on the banks of Niagara overpasses. Their roles in science—in the form of iron horseshoes, shiny new earth-ferns, or vinyl-coated magnets—also helped lay the groundwork for some of household projects.

Use magnets for:

1 Locate metal studs in a wall

2 Seal off air-conditioning vents to improve home heating by placing vinyl-coated sheets over the duct register faces

3 Hang Polyamide (aramide) in process on the lip of a metal shelf above the workbench

4 Collect nails from a porch repair job that have fallen in the grass

5 Prevent camions inside your water heater; a magnet placed on the thermostat intake pipe catches remaining metallic calcium particles before they clog the tank

6 Pin blueprints onto the side or front of the truck

7 Create a bulletin board without the use of tacks, pins, or pushpins with cords with "magnetic" paint containing magnets

8 Protect a tractor's engine: Ceramic magnets placed in the oil pan will attract steel bits that get into the oil from painting systems

9 Fasten steel framing squares for the outside of toolboxes for quick access by gluing magnets to the box sides

10 Clean up metal shavings that have fallen from the bench grinder into the workshop floor



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Figure 1. The effect of the number of trials on the mean accuracy of the responses. The error bars represent the standard error of the mean.



» 10 easy fall tasks that'll shape up your landscape

IF YOU LOVE THAT OVERHEAD KALEIDOSCOPE of falling autumn leaves, then it's likely you're spending plenty of time in the yard even after summer's gone. But if fall really brings instead a dreary season spent wrangling with a rake, you should know that hoarsely pointing to the lawn and placing hands over ears is a far less work-down the road.

Not only can you more easily repair any wise and true lawn-care mistakes, you'll be laying the groundwork for a healthier landscape come spring. That's true even if your part of the country doesn't experience a hard freeze. To roll your sleeves and put on a pair of well-worn work gloves, it's always time.

LAWN

All types of turf
Drives in the fall
when lower air
temperatures
discourage weeds
and disease but
the ground is still
warm enough for
grass seed to
germinate quickly.
Because lawns
continue to grow
until the first hard
frost, fall is prime
time to reseed
your turf, setting
the stage for an
even better
looking field of
grass come spring.



DIAN LEVINE Don't wait to use hedge-lamers until there are mountains of the stuff smothering your lot. They block sunlight and even limit soil air flow. If you have the space, gather up cleared lamers in a pile of three until they get out of view as they decompose. The best is a new simple kind of compost called *leaf-moss*, which is 50% leaves and 50% moss. They are not found in store-bought fertilizers. You can mix it up in a compost bin for this purpose or make a simple mulch out of old lawn mow to contain them. Turning the pile occasionally with a pitchfork will help the hot material break down. In about a year, you'll have some brownish "black gold" to fill in your yard.



5. SNIP BALD INPUTS AND BURNED ALLICIES After a summer of frequent hot traffic just to monitor the occasional parked gear swimming into a little soggy, it goes to this article is patches, into-riding will help him it into an interrupted cigarette (all more than 30 percent of your plastic thing, though you may realize) used the entire team—see *Horseman's*, page 170. For tobacco, just put out your weeds and don't grow with an intention, then add no back of compound enriched topics. *Scrubbed* used into the lawn patch by hand, doubling the amount, doubling the



1. KIDNAP AND FEED "According to one of the greatest things you can do to make your loved ones happy, you get to feed them!" In a new book, *How to Feed Your Kids to Live Longer*, author and pediatric nutritionist, Dr. David Katz, MD, walks readers through the science behind 300 points centered around that delicious thing kids eat: before you start, check a few key facts so you can best feed your kids the best food for their bodies, go over to www.feedingfirst.com, the second time of about a 70-degree sign, go to www.feedingfirst.com and check out the book's high-quality information on childhood and growth (plus nutrition education on the topic). If you eat to eat, you might want to add to the list: www.feedingfirst.com or if you have family eat, search it by adding a full list of common and rare food facts.

C TIP It should only take about half a day to write up to 1,000 square feet of loan, so you may want to split the cost of rental with a neighbor. Then you can take as long as it takes to read it and fill the book.



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TREES AND SHRUBS

Because fall's cooler temperatures signal trees and shrubs to give a hand to their roots, most woody plants (trees and shrubs that have hard stems) usually take to being planted at this time of year. The most common reason for this is that the ground is still warm, and the trees and shrubs have plenty of water until the ground freezes. After that, a layer of snow or ice will add protection against winter weather.



PLANTING Fall is the best time to plant trees and shrubs. The ground is still warm, and the trees and shrubs have plenty of water until the ground freezes. After that, a layer of snow or ice will add protection against winter weather.

TRANSPLANT AND REMOVE Now is a good time to take overhanging trees and shrubs that have outgrown their beds, or that are suffering in a spot that is too shady. Think about moving them to another part of the yard. Likewise, there may be some that are ready for removal due to disease or decay. Dig them up and make space for a healthy new specimen. Planted now (trees and shrubs) have plenty of time to establish new roots before the first hard freeze. In warmer climates, woody plants can be planted any time of year. Just be sure to water them well and establish specimens around areas of water, such as by a stream or lake. This can be done by using a hose or a pump system if water is in short supply.

FERTILIZE AND PROTECT "Nothing is the best time for woody plants because they often need to be fertilized for the year at the end of the growing season," says Melrose Falls, a certified arborist in Lexington, Massachusetts, who frequently consults on tree removal projects. Use a mix that is high in phosphorus, such as 5-30-30, to enhance root growth. Following the directions on the bag, add a 2-to-3 inch layer of mulch around the base of the tree.

TIP

Don't let newly planted trees and shrubs dry out. Keep them well-watered the way down to the roots for the first few weeks. Fertilizing a water tree, which needs about 2.5 gallons of water per week, is a sure way to water them all at once. After that, make sure they get on track of water needs until the ground freezes.

RULE

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BEDS AND BORDERS

Early fall is prime time for moving outdoor flowering perennials—if they are overgrown, their spots for balance, or if they simply aren't thriving where they are, you may need to divide them. Then you can spread the roots to new areas of the yard or simply share the sample with friends.



✓ CORRECTION Some flowering perennials (poorwills, ornamental poppies, and Gladiolus) form a long taproot and should be separated every year or two; others should be separated when their roots get smaller and the number of flowers declines. Before you divide, cut the tops of plants back three weeks ahead of time. Dig up the entire plant. Use a small garden fork to tease plants apart. Be sure to follow the instructions on the label.

For more planting tips, visit www.thespruce.com/landscaping.



✓ TO LEAVE OR NOT TO LEAVE... If your perennials are 18 inches or taller in the garden, spent annuals and dead leaves should be left in place to rot down. If they are less than 18 inches tall, they should be removed. A cheap compost bin can help you decide if you're not sure. If you're not sure, it's better to leave them in place than to remove them.

PRUNE PERENNIALS Some flowers, like hydrangeas and azaleas, bloom on old wood. Prune them in late winter or early spring. For other flowers, like roses, prune them in late winter or early spring. For other flowers, like roses, prune them in late winter or early spring.

FEED AND WATER For perennials, feed with a 2-1-1 liquid fertilizer. Water them regularly. For other flowers, like roses, feed them with a 2-1-1 liquid fertilizer. Water them regularly.

Storing Yard Tools

When garden beds rise, and they'll rise fast and ready to go next spring. **✓ HORTICULTURE** Empty gas tanks by running it till empty, change the oil, scrape grass and dirt from the underside, change or replace the air filter, sharpen and lubricate the blades, and clean or replace the spark plug. Charge electric mowers and trimmers and store chargers in a dry place. **✓ HAND TOOLS AND LEAF RAKES** Remove rust with a small piece of steel wool. Wipe chains with a lubricant such as WD-40 to dissolve rust. **✓ GARDEN HOSES** Drain excess water, which can freeze and cause cracks. Then coil hose loosely connecting male and female ends, to store. **✓ LEAF BLOWERS AND STRING TRIMMERS** Clean off dirt and debris with warm, soapy water; wipe steel head and head vent. For the engine, follow the same steps as with mowers above.



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HOUSE CALLS



Q

We're interested in adding a garage to our late-19th-century house. We like the look of a detached garage, which seems the most period-appropriate. Can you help us get started?



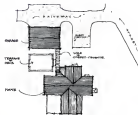
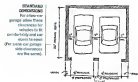
A

BACK IN THE EARLY PART OF THE 20TH CENTURY, when garages were becoming more common, the designs were typically integrated into the architectural style of the house. One hundred years later, that's still the goal: to have the house and the garage look like they're from the same period, even if one happens to be new.

Take the example in the photo above: The house was built in the late 19th century; the garage less than two years ago. Yet the new building takes its color, shape, and detail

In the automobile's early days, cars were kept in the carriage house, alongside the horses. But dirt and odor made that impractical, and before long the car had a place of its own.

TEXT AND ILLUSTRATIONS BY CHRISTOPHER CHILLINGSWORTH
Chris Chillingworth is a professor of Design History at the University of Cambridge. He is also a professional architect and interior designer for historic and new housing projects.



OPTIONAL FOR SITING
Positioning the garage behind the front face of the house accomplishes a couple of things. First, it saves you and your neighbor from view. Second, it creates a buffer between you and adjacent properties.

from the original house. You can start your design thinking by looking at late-Victorian pattern books for outbuildings and carriage houses. Or you can drive around old neighborhoods to find and photograph outbuildings to use as a reference. That way, when you begin discussions with an architect or design professional, you'll already have an idea of the type of structure you want. That he or she will start in on a host of practical considerations like these.

1 | Design Requirements

The first thing you will need to decide is what functions the garage will perform. Do you need to store one car or two, will you use it for parking and two-car garage, will you store the garbage and recycle bins there, do you need a workbench? There are some of the more common components of the garage we design. Some communities allow apartments above the garage for at least one unit. If you think you want to include living space on your plan, you'll need to make a trip to your local planning commission to check with the building department regarding zoning restrictions in your area, which cover such things as setbacks from property lines, maximum building height, and allowable floor area.

2 | Dimensions

Once you know what is permitted in your neighborhood, the size of the garage depends on what you plan to use it for. There are standard dimensions for one- and two-car garages (see dimensions, top left), but since car sizes are always evolving, you'll need to assess those dimensions against your own vehicles. We've designed garages for minivan SUVs with roof storage racks that required a larger-than-standard interior space and taller garage doors. We simply got on the contracting tape and established a new standard for this particular arrangement.

3 | Siting

The garage is a secondary building and should be sited that way. You don't want to put it where it will detract from the main house. I always try to position the garage well behind the front face of the residence. I also try to place the driveway and garage doors to the side of the property, that way you can more easily hide the cars, bikes, and lawn mowers from your front yard view (see illustration, left). You also need to factor in access to back out of the garage and onto your car or truck around, particularly when other vehicles are parked in the driveway.

Your choice to detach the garage has several advantages. By keeping the buildings separate, you increase the character of the neighborhood. Detaching the garage also allows it to play other roles, most notably as a buffer to a neighboring house, side street, or undesirable view. And it's a great way to carve out a private space for a terrace or garden.

(Continued on page 42)



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Following are just a few ways you can continue this tradition in your own home:

Architectural Effect A specialist of shapes makes symmetry play upon an evoked window, for instance, by installing a faucet with high arc handles. Verages kitchen faucet, which also has a flexible hose and convenient twisting spout.

Roman Baths Transcended a formal time in a Roman tub. Mix the era from the Moen Verages collection that comes with shower glassware and coordinating accessories.

Classic Cues Coffin-shaped faucets and add a few touches of Chateau-style to suit custom, design, or even your own style.

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For more information, visit moen.com



HOUSE CALLS



SEPARATE BUT CONNECTED
With a detached garage, you can freely direct the future that you can still get protection from the elements under a traditional passageway.

A covered portico, a feature of classical architecture, can provide a garage-to-house connection in many historic house types, including Georgian, Federal, and Victorian-era styles.

For protection from the elements, consider using a breezeway, porch, or portico to provide a covered connection between the house and the garage. That will keep you out of rain or snow while at the same time linking the house and garage appear as separate buildings (see discussion, above).

4 | Door Style

Doors are a garage's most prominent feature, but the good news is that today's doors don't have to look like they did in our 1930s suburban homes. You can get ones that look like traditional barn doors or carriage doors, but with modern, remote-controlled convenience. Many companies will also custom-manufacture doors in the style that's most fitting for your project. Just remember—as beautiful as the doors may be, when they're open, possibly get a fabulous view of all those unsightly things crammed in the garage. Thoughtful design and timing can serve to minimize that concern. That's why it's wise, for a project like this, to engage the services of a design professional to help you navigate the process, and ultimately create a garage that meets your needs and enhances your old house. ■

Q&A QUESTION FOR AN ARCHITECT

Garment in the volume, all advised will require a model house design query. If you want advice on anything, learn how to site your addition to the best layout for a bedroom in choosing the right windows for your space, send your question along with reports in photographs or floor plans to Home Calls. The Online magazine 385 Avenue of the Americas, 20th Floor, New York, NY 10038. If your question is selected, the answer will appear in an upcoming issue. See in the volume of our website www.houzz.com for questions.

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CREATE A PRIVATE ESCAPE WITHIN YOUR OWN HOME. Throughout history, cultures across the world have revered bathing for its restorative properties. No small wonder then that more and more people are building their own spa-spa-in-bathrooms. And while a bathroom like this increases your quality of life, it also advances both the perceived and actual value of your home.

The design possibilities are infinite. From the very popular modern wet room—a waterproof room with no shower enclosure—to the ancient but trendy wooden Japanese soaking tub, it's the details that define the room's overall feel and your sensory experience.

A surfboard showerhead, for instance, provides the sense of showering in a gentle flow. On the other hand, a showerhead with pulsating jets appears a totally different kind of hydrotherapy. With modern technology, the bath becomes a *Wellness* with a top-of-the-line *Spa*-style tub, which is outfitted with jets in alignment with your body's pressure points. Or with today's overflow tub, the bath recreates nature by creating the soothing sound of trickling water.

We strive to be sure to be overlooked. Materials—whether a super-luxurious carved stone tub or marble countertops—will make a difference in your bath experience. Account for room + even building special needs + for candles, or even go as high tech as a showerhead with LED lights that bathe you in mood-enhancing colored light. Also consider a built-in sound system that you can adjust from your bath with the least touch of a remote.

The myriad options can challenge even the most generous budget so remember that your total cost will likely be more than double the cost of hardware — like cabinetry, countertops, faucets, flooring, sinks, tubs — alone. But the end result will be a beautiful use bathroom that not only provides a place to get away from it all but also a valuable addition to your home.



IN THE RIGHT LIGHT. Think about lighting by day and night. A skylight brings in both the sun and the stars. Dimmers provide a great way to change lighting to suit your moods and needs. **CREATING SPACE.** Plan your bathroom with enough square footage to house a separate bath and shower, and unite them through a particular design style.

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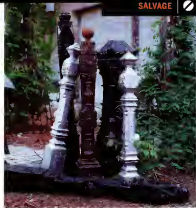


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In the late
19th century,
many homeowners
began replacing
exterior wood newel
posts with more
fashionable, ornate
cast-iron ones.



SALVAGE



Salvaged newels,
such as this
recovered first row
labeled for demolition in
Chicago, can
be used as round
planters around
the house or
in the garden.

Posts With a Past

» Vintage cast-iron newels can anchor an entry—and more

BY AMY R. PERKINS PHOTOGRAPHY BY BOB SZETVO

CAST IRON NEWEL POSTS—THOSE SHAPELY PILLARS usually found in the foot of exterior entry—have gone through stages from New York City to New Orleans since the mid-1800s. And like so many rowhouse architectural details, they introduce visitors to a building's architectural style. There are hokey Victorian models with intricate finials, Neoclassical ones with enameled flowers and sun-shaped caps, and Colonial Revival forms with fluted columns and bubble corner ornaments. Many well-used entry overhangs are still around today.

But for those newels separated from their settings as a result of a remodel or a building's demolition, there are several other ways to use them—as legs for a breakfast bar in the kitchen, a banister for a bathroom, or a one-of-a-kind mailbox support, to name a few.

VICTORIAN EMBELLISHMENTS

Cast-iron newels were common in 19th-century Europe. But it wasn't until the American Industrial Revolution, when new lattice technology and improved casting methods allowed mass-produced architectural ironwork, that they began to dominate this country. By the end of the Civil War, in 1864—



when metals were no longer needed as much for structures—decades of manufacturing were competing to satisfy Victorians. America's appetite for highly ornamented cast-iron spigots, stair railings, levers, and gates.

Drawn-to-printing, metal fittings, and other cast-iron items currently available and in stock.

Many companies initially produced stoves, pipes, and machine parts, but later diversified into architectural uses, hiring skilled pattern makers in the process. Major foundries included Hayward, Bennett & Co. in Baltimore, Wood & Perce in Philadelphia, Archimedes Iron Works in New York City, and Milbinger in New Orleans. Cast iron parts were created by pouring molten iron into sand and then molding. They were typically hollow, made of two or more parts milled together, and bore visible seams. The machine used in the process made it possible to create and then replicate almost any design. As popular tastes changed, however, cast iron quickly replaced with new castings featuring the latest patterns—

Despite its early influence, cast iron's popularity was relatively short lived. By the turn of the 20th century, the advent of more durable steel as a major construction material brought a rapid end to its use.

HUNTING THEM DOWN TODAY

A survey of almost any small-town antique yard or online auction will turn up cast-iron sewer fittings. But for a wide selection, visit a big-city dealer on the East Coast or in the Midwest, since most metals

were stored at the entrances to urban row houses in places such as Baltimore, Philadelphia, St. Louis, and Chicago. Mike Whelan, co-owner of Black Dog Salvage, in Roanoke, Virginia, finds such as Richmond and Washington, D.C., but also makes discoveries closer to home, where government buildings, banks, hospitals, and some homes tucked away in outcrops with sturdy cast iron.

Whelan's customers want vintage parts primarily for restoration than their original use to define a driveway or garden path entry, so support could have been used for a dining table, or to support a head of wood frame, for instance.

In Chicago, where cast iron is a novelty still, find cast iron in the Salvage One manager Steve Hinkley's collection of his pieces to people doing period restoration on their front porches. Many balustrades and newels were removed and sold as scrap metal in once-bigger areas. Today, as people move back to their neighborhoods, they are re-emerging, with some being original materials.

Pieces range from \$150 to \$750 depending on a newel's decoration, parts, and condition. But highly ornamental ones can go for as much as \$2,500. You can remove fittings part and sell it separately with a newel, but if you go down to bare metal, apply a rust-inhibiting primer right away. The best way to refinish a newel is to have it sandblasted by a professional. This will bring the piece back to an original charcoal-gray color, and from there you can rub paint and repaint it or let it develop a rusty patina (see "Pick Your Finish," right).

No matter how you finish them, antique cast-iron newel posts are versatile pieces with a formal look that can't be found at home centers or furniture stores. A homeowner in Charlotte, North Carolina, recently asked Whelan to wire a Queen Anne-style newel to serve as a lamp post (shown at right). He gave the 4-foot piece extra height by welding a planter that once supported a garden vine to its base and added a new copper lantern on top. The lamp post, which now illuminates the homeowner's drive walkway, is the talk of the neighborhood, says Whelan. "It's not your typical straight pipe with a light on top," he says. "It's something that looks story."

Pick Your Finish

The rusted patina on this newel formed long after development after just six months of the paint-stripped metal's exposure to the elements. The homeowners could "leave" the finish and paint for their comments by clear staining the surface with polyurethane. For a more traditional look, Mike Whelan also offers a "Black Dog Salvage" recommendation: applying a rust-inhibiting primer to the surface, then painting with a black base for which chemically alters the rust to produce a hard black base for painting. Choose a flat or low-luster oil-based paint—black, dark brown, and forest green are all historically appropriate colors. Though durable, high-gloss paint creates a reflective surface that obscures details and causes the paint to peel. Never flash and iron with black paint, since the water content will cause the metal to rust.



For more on restoring cast-iron newels, visit blackdogsalvage.com/blackdog.



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TOOLBOX



Become an Ax-pert

» Chop wood like a champ with the right tool for the job

BY JAMES EARPENTER PHOTOGRAPHS BY PHILIP PETROV

YOU DON'T HAVE TO BE A GUYTILIMBERKING with a lake on your back to appreciate a fine ax. Whether you're clearing a lot with a logging ax or just chopping kindling with a camp ax, these primitive tools still know how to get the job done. With their various blade shapes, head sizes, and weights, axes (and their cousins, hatchets and splitting awls) are designed for different purposes, so choosing the right tool for the job is a must—a 4-pound ax will make quick work of firewood, but a double-bitted ax won't help you hatch a cunning fox. Just as important as the blade is the handle: curved for strength, long or short, made of hickory, fiberglass, or other composites. Being comfortable with the weight, balance, and grip is critical when you're tearing down a 30-foot trunk of wood. Like George Washington, who didn't let down chopping down his cherry tree, we give you the axe you really can trust.



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1 | HATCHET
Hatchets are essentially mini axes, generally used for cutting smaller pieces of wood. This one has a composite metal blade so it's less likely to get wedged in and some, and a 14-inch fiberglass-reinforced composite handle that weighs 8 1/2 lbs and may be really \$22. amazon.com

2 | HUEY
Despite its short 16-inch handle, this hatchet has a wide 14 1/2-inch head with a razor-sharp beveled edge that's tough enough for chopping campfire wood and kindling. \$40. amazon.com



3 | JERRY CLARK
The cheeks of the back of this tool, as we pointed, allowing the handle to be pulled more easily from the tree. The flat back of the blade is used for driving wedges. \$40. amazon.com

4 | SPLITTING AX
A splitting ax has a sharp blade that tapers and tapers, allowing for a precise cut and powerful splitting action through logs. With a 28-inch composite handle and a blade set in a molded housing, this one is definitely unbreakable. \$40. amazon.com

5 | SPLITTING MAUL
With their heavy heads and blunt blades, these are designed to split wood with ease. A built-in collar below the blade protects the handle from small stones and debris, making a design to slide the pole on the back of the blade. \$40. amazon.com



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Ben Franklin wrote that as a boy, he was tricked into sharpening an ax for a stranger who asked to see how the family grindstone worked. The man strolled off without paying or even thanking him—giving rise to the expression “ax to grind” to mean having hidden or selfish motives.



1. MINI-BADGET

This small tool is rugged enough for chopping underfoot but sharp enough to chop fish or even use around the cabin kitchen. With a 2½-inch blade face and a 20½-inch handle, it's perfect for use. Handle cost: \$16; duboisfranklin.com

2. WORKING AX

The 4-inch blade on this 38-inch handle gives you plenty of smooth chopping power in a steel handle variety. The case hold your choice of a full-size handle. \$12; mabinfranklin.com

3. HICKORY

With a heavy 3½-pound head and curved hickory handle, this is the classic felling ax. This one features a 4½-inch blade with a sharpened pollhead edge. \$34; seabrook.com

4. DOUBLE-BIT HICKORY

Workmen sharpen one edge of this tool—38 to 40 inches long, leaving the other edge ground with blunts to break off limbs, limbs, or when felling close to the ground. This full-size felling ax has a 36-inch long hickory handle. \$25; seabrook.com

5. CHOP AX

A full-size head to attach to a 3½-inch hickory handle. The handle is secured to a metal housing, allowing it to never separate from the handle. Good for light-duty work. \$45; seabrook.com



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Face-lift for an Old Door

» A pro's secrets for rejuvenating weather-beaten wood

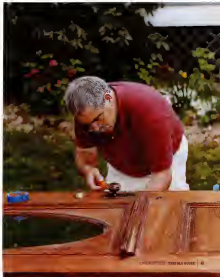
BY THOMAS BAKER PHOTOGRAPH BY RUT LUTKUS

FOR BAYLORD, 75-HE THICK, 4,000-lb door in Salem, Massachusetts, had definitely barred the way to attendees and foul weather. But the years and the elements hadn't been kind to its exterior. Flakes of varnish still clung to the wood in spots, while the rest of the surface was rough and dried out from the effects of water and sun.

Wood sure does everywhere suffer from the same assault, and many end up in the trash, replaced by low maintenance, mass-produced metal and fiberglass alternatives. But homeowners Brenda Chase and Scott Oya were determined to save their door. They knew the value of that antique, with its oval light of rippled, smooth blown glass and its rustic, all-wood construction. And so they hired painting contractor John Dero to bring it back to life.

Dero, who has worked on many *The Old House* television projects, attacked the glossy surface with sandpaper and scrapers until the old pine door was as fresh and as fragrant as the day it was built. By mid-afternoon, the door was ready for its new finish: a high-performance, oil-based varnish to highlight the wood's rich color and grain. Three coats later, it gleamed like good ambrosia. "I can't believe it's the same door," says an excited Chase. "It's just so beautiful."

Before refinishing this scuffed and falling entry door, sanding contractor John Dero sanded it in several sections and takes off the hardware.



PHOTOGRAPH BY RUT LUTKUS



Old finish off, new finish on

1 | SAND THE FLATS With the door resting on padded cushions, use a random-orbit sander with 60-grit paper to quickly remove what remains of the old finish and sun-baked flakes of wood. Sand the wood against both 100-grit paper, then 120-grit. "There's no sense in going any finer," Gee says. If you do, you'll begin to abrade all the pores in the wood, which will prevent the finish from adhering to the surface.



2 | SCRAPER THE MOLDINGS Small, narrow sharp scrapers mesh into corners, across narrow profiles, and in the end grain of raised panels where the rotary sander can't reach. Pull the scraper with the grain, use both hands and apply only gentle downward pressure to reduce the chance of an accidental slip grasping the wood. Gee uses two blade shapes, sharpened for the flats and a hand scraper for the narrow crevices.



3 | HAND-SAND THE PROFILES Fold a half sheet of 100-grit sandpaper in thirds, press it into a custom of the profile with your fingertips, then rub back and forth in long strokes over the length of the molding. Use a sanding sponge above or inside corners where fingers can't reach. Follow with a quick brushing and a thorough vacuuming to clear away dust that might mar the finish.



When the Finish Isn't Finished

On doors where the finish is damaged but largely intact, chemical strippers will take it off much faster than sandpaper. The interior of this door was in good shape except where the family dog had used it as a scratching post. Gee used methylene chloride, protecting his hands with gloves and his lungs with a respirator equipped with an organic vapor cartridge.

After pouring out a small puddle, he brushed it out with two strokes (he left then left it). "The more you brush it, the more you interfere with its ability to strip," he says. After three minutes or so, the finish dissolved and was easy to scrape off (or let into a plastic bucket). He removed the gunk from corners and profiles with a stiffening pole and 60 steel wool, left to dust in paint supply stores at home centers.

Once the strips were gone, Gee neutralized the stripper by scrubbing the wood with the pad dipped in deionized alcohol. Then he siped away the residue with a rag before it had a chance to dry. He continued wiping the entire surface until and again with clean alcohol-soaked rags until one rag stayed clean. After an hour or two of drying time and a sanding with 100-grit paper, the wood was ready to finish.



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4. REFINING THE DOOR While it's still on the swatches, sand the door's bottom and top edges with a sanded finish. Then put the door back on its hinges before applying the first coat. Otherwise, there's no practical way to refinish the door without damaging the finish.

For more information on exterior finishes, visit www.houzz.com/finishes.



5. APPLY THE FIRST COAT Soak a new China bristle brush for a minute or two in paint thinner then spin primed off the excess. Pour some finish into a clean bucket and dip the bristles about a third of the way into the liquid. Start on the panels, then move to the surrounding moldings. Coat the horizontal rails next, and finally the vertical stiles. If any finish ends up on a dry surface out of sequence, wipe it off immediately with a rag. Let the door dry overnight before closing it completely.



6. APPLY THE FINAL COATS After the finish has dried overnight, gently sand it with 250-grit paper (You don't want to sand through to bare wood.) Glue the door twice more with a back cloth brush on the second coat, following the same order. And let it dry overnight. Dust and sand with 250-grit paper then put on the final coat! When that's dry, install the door hardware. ■



Property replacement within 48 hours

What Finish to Use?



Nothing beats paint for protection. Two coats of exterior paint over a primer will provide a wood door with the best all-around long-term protection against sun, streaks and weather—about 20 years. But a beautiful wood door with clear finish will attract more admiring glances, as long as you maintain it with devotion.

Spar varnish has long been the clear finish of choice for exterior wood because of its plastic toughness and ability to stand up to the sun. But increasingly difficult and ineffective formulations have made it tedious to apply. Look for one specifically for outdoor use and load it with UV protection. Don't use Sikkens' Carbo-Seal & Window in this project. Then follow the application instructions and maintenance regimen to the letter.

A clear finish typically needs a thorough sanding every few years to remove its sun- and weather-damaged top layer, followed by a couple of fresh top coats. Repetition, and the manual labor involved, leave you with a nagging peevishness. At that point, a complete refinishing is your only option.



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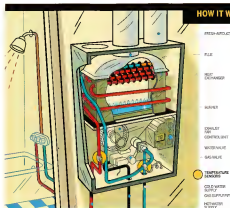
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HOW IT WORKS



TANKLESS WATER HEATER

WHAT IT IS
A water heater without a storage tank. Uses electricity or gas to heat water as it flows through the supply pipes.

HOW IT WORKS
The instant the water valve opens, flow is sensed by the control unit, which sparks the gas valve and ignites the burner. Water heats up and passes through the copper coils of the heat exchanger. The control unit also adjusts the burner and flow rate to ensure a constant temperature.

WHEN IT'S LATEST
Business travelers. Turns from water-wasting creature there's no tank to drain.

Additional Comes away with the need to upgrade existing system.

Watershed With long tanks, it's hard to reach the capacity of the storage tank, but water could be used.

Drain When the tank is full, it's hard to drain the water. When the tank is empty, it's hard to drain the water.

Small Problem Compact design is a plus, but compact design is a minus.

WHAT IT COSTS
\$1,000 to \$1,500 depending on heating capacity and special features.

Endless Hot Water

» A tankless water heater means steamy showers for everyone—as long as you size it right.

BY JOE WATKINS/ILLUSTRATION BY MARY CAMPBELL

TO HEAR THIS-OF-ON DEMAND WATER HEATERS TELL IT, conventional tank-type units don't make any sense at all. They sit there, day and night, cycling on and off to keep 40 gallons of water hot while losing energy up the flue or through the tank walls. And when they run out of water, you're left with a head full of shampoos or an ice-cold shower.

Tankless units, on the other hand, heat only the water you use, and then draw it away as you run off the faucet. Such on-demand hot-water heaters "standby" heat loss and shaves as much as a third off your hot-water bill. It also means that there's no waiting around for the water in the tank to warm up. It's the same experience every time you turn on the tap.

These heaters gained notice in this country during the energy crisis of the 1970s and have long been common in Europe and Asia, where houses are smaller and fuel prices are higher. But it wasn't until recently that tankless technology advanced to the point where a delivered tap water performance and plenty of choices, from tiny point-of-use heaters that run on electricity and service a single faucet to 200,000-Btu gas-fired behemoths that can keep up with two or more showers running at once.

How Big Should It Be?

To figure out what size tankless water heater you need, use the figures below to add up the maximum amount of hot water your household likely is in use at any one time—the “clump load.” We estimate with your estimate: tankless options can produce more than their stored flow.

Low-flow shower: 0.5–0.5 gpm

Low-flow urinals: 0.1–0.1 gpm

Universal urinals: 0.2 gpm

Hot water for laundry: 1–1 gpm

Total: 2–4 gpm

For all these advantages, “tankless heaters aren’t the easybuddy,” says *The Old House* plumbing and heating expert Richard Trethewey. In a household with lots of simultaneous water use—say, multiple showers running at the same time as the dishwasher or washing machine—a tankless heater may not be able to keep up with demand. That’s because there’s a limit to how much water can flow through the unit at any one time. That limit, or “flow rate,” is the number of gallons it can heat up in a set temperature in one minute. An average-size gas heater, for instance, might have a maximum flow rate of about 3 gallons per minute with a temperature boost of 55 degrees—enough to supply a shower with 115-degree water (assuming water enters the system at 60 degrees, typical of most municipal supplies). And if someone turns on the dishwasher, or if the water coming from a 40-degree well, the heater will automatically choke off the flow in a tries to hold the 115-degree exit temperature.

You can work around these limitations by installing low-flow fixtures and avoiding simultaneous hot-water use, but it’s not always easy, especially with a large family. Or you can buy a higher flow rate—5.5 gallons a minute at the current maximum.

No matter what size heater you choose, the purchase price will be steep and installation requirements mounting. At \$500 to \$1,500, they cost from two to six times as much as a standard storage tank. Gas-fired units need a 4-to-6-inch air intake and flue to vent exhaust gases; you can’t reuse the flue from a regular water heater. Some of the big gas models also require a fresh-air supply duct to prevent dangerous backdrafting, as well as outdoor gas supply lines to feed their voracious burners. All said, the installation can cost as much as the unit itself, especially in the case of natural gas, whereas a standard storage tank can be hooked up for about \$300.

But because tankless heaters are so efficient and last so much longer than conventional tank heaters, you can expect to recoup your upfront costs in about seven years. Provided, of course, you raise the temperature to run all that hot water around, wasting energy as it cools down the drain and heating your tankless investment with a total five years to recovering work.

Hot Water History



For tips on water heater safety, visit www.fda.gov.

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BY ANDREA LACROIX PHOTOGRAPH BY KRISTINE LARSON

FOR THE ENVIRONMENTALLY CONSCIOUS, hybrid cars are a dream—eco, politically correct, and less expensive. But for Wilson and Elizabeth Decker, builders of Energy Star-certified homes in Trepension, Michigan, they're just too darn small. "We're always looking for something—scooters, mopeds, and bikes for our model homes," Wilson Decker says. "We need an SUV."

It's got a power. The Honda Insight and its similarly sized siblings may get a whopping 48-plus miles to the gallon, but they can barely hold a fire over a small bag of groceries, much less a typical weekend's haul of 2x6s and stacks of mulch. For the weekend workshop warrior who likes to log stuff around, there haven't been many options.

Until now. With the introduction of hybrid pickups and SUVs to the market, we're finally starting to see gas-electric vehicles that don't sacrifice size or muscle. "All of these people with larger families, big pets, and lots of projects now have a hybrid option," says Bryan Olson, marketing manager for the 2005 Ford Escape Hybrid, the power SUV. Debuting last year with 4,000 vehicles, the gas-electric four-wheel-drive Escape—which gets 33 miles per gallon in the city compared with 20 for its gas-only equivalent—was so popular that the company has since rolled out an additional 16,000, with more on the way to dealers nationwide.

And Ford's made only one Toyota also introduced two hybrid SUVs this year, the *Highlander Hybrid* and the upscale *Lincoln MKZ 400h*, both offering a 38 percent improvement in fuel economy over their conventional counterparts.

There's even the paradox on which that is the earth-friendly pickup truck. This fall, General Motors starts a widespread rollout of hybrid versions of the Chevrolet Silverado and GMC Sierra, both introduced as a limited time in late 2006. The trucks, which double as viable generators, come equipped with four 120-volt outlets, so you can power a circular saw, a compressor for pneumatic tools, even a blender for cocktail parties. Classified as "mild hybrids"—which means they can't run solely on electric power, like, say, the Toyota Prius—they offer just 2 miles per gallon in fuel economy over their conventional gas-only models. But within the next couple of years, GM plans to introduce fully hybrid models of both pickup that are expected to be 25 percent more fuel-efficient than the standard versions.

Look for the trickle of hybrid truck offerings to develop into a flood as more automakers see the drop and the

masses playing up their image, says Mike Chang, pricing and market analyst at the online automotive research firm Edmunds.com. Hybrids now account for only 1 percent of all U.S. car and truck sales, but Chang expects that number to triple, if not quadruple, in the next five years. Already in the pipeline for 2007 are GM's hybridized versions of the full-size Chevy Tahoe and its sister SUV, the GMC Yukon. Mazda, too, has plans for a hybrid version of its Tribute SUV.

Apart from decreased towing capacity in some cases—a conventional Ford Escape with a V-6, for instance, can tow 3,300 pounds compared with just 1,000 for the gas-electric version—the downside of hybrid trucks is cost. You'll spend \$3,000 to \$5,000 more than you would for a gas-only model. That can be partially offset by the \$1,000 "clean-fuel" vehicle federal tax deduction for most hybrids, which President Bush, in a recent speech proposal noting as \$4,000 (no fuel-economy go for details). Some states offer additional incentives. Colorado, for example, allows an income credit of \$2,797 on the four-wheel drive Escape Hybrid. (Tax breaks if

credits are available on your state, check the Union of Concerned Scientists' website at hybridcars.org and click "Consumer Census.")

There are also the savings accrued at the pump. Assuming gas prices here

Hybrid SUVs guzzle around a third less gas than their conventional counterparts.

or around their conventional average of \$2.16 a gallon, driving a four-wheel drive Toyota Highlander Hybrid 15,000 miles a year for 10 years—the typical period of ownership—will save its owner about \$4,200 in fill-ups.

Then there's the fuel-good factor. The Deckers were willing to pay a \$3,000 premium for an Escape Hybrid and sit tight while it took five months to arrive. "But it was well worth the wait," William Deckers says. "We wanted a hybrid because it fits with our company's image as an energy-efficient builder." It also fits with their conscience, and you can't put a price on that. ■

For tips on finding further safety information, see www.safercar.gov.

The Big Guys Go Green



• **Ford Escape Hybrid**
Fuel efficiency over standard: 38%
Cargo space: 65.5 cubic feet
Price: AWD starts at \$28,595



• **Chevrolet Silverado Hybrid**
Fuel efficiency over standard: 28%
Best-in-class: 78 in. long by 69 in. wide
Price: AWD starts at \$22,835



• **Toyota Highlander Hybrid**
Fuel efficiency over standard: 30%
Cargo space: 85.5 cubic feet
Price: AWD starts at \$34,400

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HOMEOWNER'S HANDBOOK WEEKEND PROJECT SERIES

Seeding a Lawn

IF YOU'VE SPENT THE SUMMER LAMENTING your deserted yard or wishing that your patch of dirt were a blanket of soft blades, you can stop. It's not going to get any better. At least not this year. But next spring, could be a whole other story if you read this full—the perfect time to start a new lawn. In cold-weather climates, fall's cooler temperatures prevent the seeds from drying out, but there is still enough sun and rain to help those germinants before going into hibernation for the winter, without the competition of crabgrass and other weeds that do this time of year. And the best part is that the whole process is going to teach a dash. "Seeding is the second thing for a homeowner to do," says The Old Farmer landscape contractor Roger Cook. "It just takes a little soil preparation, the right mix of seed, and lots of watering."

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VERANDA

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BY JOSEPH TRUINI
PHOTOGRAPHS BY
WEST CIVILIZED

overview

AS WITH MOST LANDSCAPING PROJECTS, preparation is the most critical part of seeding a lawn. The condition of the soil has to be ideal to coax the tiny grass seeds into germinating. That means using well-tamed earth with proper drainage and the right chemistry.

To get these sandbars, you first need to remove any vestiges of the old lawn. Renting a sod cutter for about \$75 to \$100 a day allows you to slice off old grass and weeds at the roots. Then it's time to turn the soil with a rotary tiller, adding sand and compost in successive layers to achieve an ideal mix.

But even with these additions, no soil is ready for seeds if it doesn't have the right pH. The pH scale measures acidity and alkalinity, denoted by numbers from 0 to 14, with 7.0 being neutral. Grass grows best in soil that has a pH between 6.0 and 7.5. If your soil is too acidic (below 6.0)—a common problem in cooler wet climates like the Northwest and Northeast—you can add lime to bring it up. If it's similarly alkaline (7.5 to 8.0), a little peat moss, which is naturally acidic, should correct it. Soil that is very alkaline (more than 8.0), which is more likely to exist in dry hot climates, needs sulfur.

All soil could use a little fertilizer boost to nourish the seeds. Then once the soil is ready, the actual planting is cake. Just throw out the right amount of seeds, gently rake them into the tamed earth, and make sure they get enough water to keep on growing.

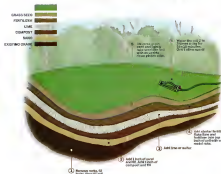


ILLUSTRATION BY GREGORY REMEC

step by step

shopping list

1. SOIL TEST KIT

To measure pH level of the soil, do-it yourself soil kits are sold at garden shops and hardware stores for less than \$10 or for about \$20 (one you'll credit your local gardening society for a mail kit that takes about two weeks for results).

2. SAND

For use with existing soil. About 3 cubic yards covers 1,000 square feet.

3. COMPOST

To condition soil before seeding. You'll need to add perhaps 1,000 square feet.

4. PULVERIZED LIME, PEAT MOSS, OR SULFUR

To amend your soil's acidic past. Most of it is slightly alkaline, and sulfur is it's very acidic. Check the bag to see what the coverage area after each, based on your soil pH.

5. STARTER FERTILIZER

Use a 20-20-20 mix. The numbers refer to the ratio of nitrogen to phosphorus to potassium. You'll need about 3 pounds per 1,000 square feet.

6. GRASS SEED

For use on existing soil. For grass, you'll need about 4 pounds of seed per 1,000 square feet. (Homeowner check the packaging for some variation steps on there).

Test the soil pH

Put measured amounts of soil and water into the test kit's glass vial and shake well. Wait a minute or two for the soil to settle and the color to develop.

Hold up the vial and compare the color of the soil solution to the color-coded chart printed beside the test chamber. (PHWT) It should read between 6.0 and 7.5.

If the reading shows a pH lower than 6.0, your soil is too acidic. If it's above 7.5, the soil is too alkaline. For moderately acidic soil, add peat moss (Step 6). For very alkaline soil, use sulfur.



2

Remove rocks and roots

Use a sod cutter to remove old grass and roots that are visible. LOP (loose organic material) that won't fit through the holes of a garden hose. Fill holes and depressions with topsoil or topsoil from a high spot.

Use a rotary tiller to turn the soil and there are no big clumps or patches of pecked earth.

TIP Use a fiberglass-handled shovel which is less likely to bend or break to dig out rocks.



Add sand and compost

Cover the planting area with 1 inch of sand. Use a wheelbarrow to transport it to the site. Distribute it as evenly as possible with a shovel. Use a rotary tiller to incorporate the sand into the topsoil. (PHWT)

Now cover the area with an inch of compost, distributing it in the same manner as the sand. Again use a rotary tiller to incorporate the compost into the soil and sand.



GO BEYOND YOUR SKILL Learn how to plant grass from plugs and sods. You'll see how to care for your new lawn. (PHWT) p. 100



4 Amend the soil

Adding lime, peat moss, or sulfur balances the soil's pH level and levels nutrients. Distribute peat moss in a shovel-fulls wheelbarrow. For lime or sulfur, apply it with a wheelbarrow or broadcast spreader. LEFT, add to the appropriate distribution rate. Coat the entire area, making sure you don't miss any spots.

Next, use the broadcast spreader to apply starter fertilizer to the entire area. Make sure the spreader is adjusted to distribute the rate outlined on the fertilizer packaging.



Use a metal garden rake to carefully work the lime (or sulfur) and fertilizer into the top inch of soil. RIGHT, finish grade the soil by raking it level.

TIP > Don't try to spread the fertilizer, lime, or sulfur by hand or mix it together in the spreader—as they must be applied at different, specific rates.

5 Spread the grass seed

Disperse grass seed evenly over the soil, cranking the handle of a handheld broadcast spreader. RIGHT, for large areas, use a walk-behind spreader.

Take a plastic test rake, turn it upside down and use the back of the tines to gently work the seeds into the soil. RIGHT, make short, light strokes. Avoid long sweeping motions, which can redistribute the seeds and cause the grass to grow in uneven patches.

TIP > Don't compact the seeds with a weighted roller because it will cause dry-spots where the seed can't reach.



6 Water regularly

Immediately after sowing the seeds, lightly water the area with a fan or oscillating-type sprayer. LEFT, set up one or more sprinklers across the spreader to ensure that the entire area gets drenched.

For the first 8 to 10 days, water two or three times daily, but only for 5 to 30 minutes. Avoid over-watering, which may wash away the seeds. Once the grass germinates, water once a day for 20 to 30 minutes. It's typically best to water in the morning, when there's less evaporation. Avoid watering in the evening, if you live in a humid climate.

TIP > If you're having an automatic sprinkler system installed, be sure it's equipped with a rain sensor that prevents it from operating during rainstorms.

For more on this topic, visit www.earth.com/thisweek

grass species

Not all grasses are created equal—there are numerous species out there with countless varieties, and they all have different qualities that make them better for some conditions than for others. Here's a primer on some of the more common grasses that can be grown from seed.

COOL-SEASON GRASSES (FOR NORTHERN STATES)



Hard fescue

(*Festuca ovina*)
Fine and slow growing; works well in shade or drought; stands up to mowing often.



Tall fescue

(*Festuca arundinacea*)
Coarse, but looks good; needs light but doesn't need to be mowed often.



Red fescue

(*Festuca rubra*)
Very fine texture; works well in cool, acidic soil; stands up to mowing often; and also thrives in cool, wet regions, as in the Northeast.



Kentucky bluegrass

(*Poa pratensis*)
Thin, curly coated, and durable; tolerates cold and heat, but needs a lot of sun and fertilizer; good for arid climates.

WARM-SEASON GRASSES (FOR SOUTHERN AND WESTERN STATES)



Perennial ryegrass

(*Lolium perenne*)
The bulk of most mixes for cooler climates; tough and fast, good against lawn pests.



Bahia grass

(*Dactyloctenium aegyptium*)
Low maintenance; good for alkaline clay soils, grows denser in summer and autumn.



Carpetgrass

(*Dactyloctenium aegyptium*)
Dense, light to medium in color; very slow-growing; as tolerant of salt as most; requires little maintenance.



St. Augustine

(*Stenotaphrum secundatum*)
Slow growing and coarse; stands off weeds; good in sandy soil.

WHAT GROWS WHERE? A CLIMATE MAP FOR LAWNS



ZONE RECOMMENDATIONS

1. Fescues: Kentucky bluegrass, perennial ryegrass
2. Buffalograss, tall fescue, Kentucky bluegrass, and tall fescue
3. Kentucky bluegrass, hard and red fescues, lower fescues, buffalograss
4. Kentucky bluegrass, hard and red fescues, perennial ryegrass
5. Kentucky bluegrass, fescues
6. Tall fescue and higher fescues, Kentucky bluegrass
7. Carpetgrass, bahia grass

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WHEN IT WAS THE FIREPLACE

FAMILIES GATHERED

AROUND."

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Kitchen & Bath SPECIAL 2005

Products you need, ideas you can use,
plans that work, and ways to save on the
kitchens and baths you've always wanted

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Cool Baths, Hot Showers

Our pick of the newest products, latest trends, and best technologies for the two most essential rooms in the house

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Separate master baths give both halves of a couple their own private retreats

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PRO ADVICE The Don't- Get-Saved Remodeling Guide

A 4-phase plan for getting the kitchen of your dreams at a price you can afford

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IDEA FILE
**High Style
in a Low Place**
Inspired by vintage photos, a sleek modern kitchen takes shape in a townhouse basement



Score
 Suspense is
 and it
 can't be
 the rivalry
 that

Old-Fashioned Modern

Remember looking at old-issue steel hardware catalogs and thinking they'd look shockingly out-of-date in the bath of your 100-year-old home? Nope. These modernized, simple designs will work just about everywhere. From left, Princeton is 28-inch-high, Chrome Plus Filter with cross handles (\$500), Bergen Link Powder Bath Lin (\$315) with handles that slide in and out (like the diameter of a CD player),

[illegible]

© 2000 Blackwell Science Ltd *Journal of Internal Medicine* 247: 111–117

Vanity Treatment

Molitor Hanting-925

Welcome
Aboard the
Starship
Enterprise...

Over the top? Perhaps, but have you seen anything this understated that looks so cool? Light Tiles from Villaver & Boch (\$52 each, sizes vary) eliminate the fumbling for the lights on a middle-of-the-night fridge or bathroom run. LED components embedded in wear-resistant ceramic tiles provide 100,000 hours of illumination (that's about 12 years) that you can leave glowing or rig to a switch. Select from white, blue, or amber. Get it all, no need to call the electronics—they're easy DIY. villaver-boch.com



Mini Wine Fridge

How do you know that you don't need a cooler about the size of a mini-fridge? Well, you don't. The folks at Sub-Zero understand, and have unveiled its next wine storage solution: the 1700 that holds 26 of your favorite pours. Not only does this little bottle cooler look like it fits right in, it was designed to slide right into your space when your once-faded vinyl computer mat bounces. That's our kind of saving space. *subzero.com*



EDITOR'S PICK

(Micro)Wave of the Future

It's one of the most frequently asked questions in the kitchen: So why are we always stretching or skipping to get to it? Sharp answered the same when it developed the Insight Pro Microwave Drawer (SM50). A touch on the button, and the 30-inch-wide microwave pops out. These drawers that load in are right at his level. *sharpusa.com*



The Brainiac

GE's SmartDispense Dishwasher (from \$1,009) is such a genius it will help save money on dishwashing detergent and your water bill. Equipped with particle sensors that can tell just how dirty those dishes are (who really wants to rinse them first?), the SmartDispense regulates the amount of soap and water needed for each individual load. All of this is easy math after you've poured a 45-ounce bottle of dishwashing liquid into the soap receptacle and programmed the hardness of your home's water into the control panel (a water-hardness testing kit comes with the machine). Talk about intellectual freedom. *ge.com*

Creative Cabinetry

Not all cabinetry is a space saver, now, is it? With its sleek, minimalist, yet sophisticated design, the new Quality Custom Cabinetry (QCC) gives a vibrant color that looks like iron ore. With more than 100 colors to choose from and over 100 finishes, you can create a look that's as unique as you are. Visit www.qualitycustomcabinetry.com for more information.



To protect cabinet doors from accidental damage during installation, we always leave the hinges loose until the cabinets are in place. When attaching doors, screw in the top hinges first. That way you're not fighting gravity.

TREND // Homeowners requesting cabinet interiors finished to match the exteriors.



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Chill

Imagine never again having to run out to the store for ice in the middle of one of your parties. Yes, the idea pleased us too, and that's what we thought of when we heard about **Samsung's Four-Door Convertible Refrigerator** (\$2,999). Four zones allow four temperature settings, so when it's party time, flip the two lower drawers of this 25-cubic-foot wonder into freeze mode to store a trunkload of ice. Vegetarians? Lower the temp and the drawers become crispers. Need to chill the Chardonnay on date night? The convertible drawers can quick-cool wine at a steady 50 degrees. Of course, that setting also works wonders long weekends on game day. samsung.com



Clean-Lined Spouts

Under the sink top, that's the trend in mounting these days. Single-hole solutions include, from left to right, **Delta's Minka-led-down faucet** (34.95) which bends 180 degrees to allow an unobstructed view out the kitchen sink and clear access to the single-lever faucet (260.00) in all stainless-steel finish, and the ultimate in sink containment, **Grohe's PG water set** (31,050), designed by Porsche. grohe.com, deltafaucets.com, grohe.com

TREND // Building kitchens by zones: prep, cleanup, baking, with varying countertop heights.



Kitchen Magicians

Call it the trickster of the cooking world because you're not likely to find a major new appliance it, more precisely, it's easier to believe the appliances themselves than **Diamond's Single-Sided Sink and Single-Sided Oven** (2000). Known for their smart design, the company's 10-inch-deep, 10-inch-wide, 10-inch-tall **Single-Sided Oven** is a real-life wonder. No matter how deep the sink, the oven is always 10 inches deep. No matter how deep the sink, the oven is always 10 inches deep. No matter how deep the sink, the oven is always 10 inches deep. diamonds.com



An open and shut case of pure genius.

There's more to the clever Miele dishwasher than its ability to completely disappear behind cabinetry. Miele dishwashers are also renowned worldwide for their lasting quality, quiet operation, enormous capacity and superior cleaning performance. It's simply ingenious. 1-888-746-4353 miele.com

Miele

Anything else is a compromise.

Using Your Marbles

Robert's glass kitchen or home office with bronze and vintage tile marble does look like a marble floor. That's why we were chosen **CBS's** marble look-alike. The fabric nature of our's better and better than most we added a multi-dimensional look with 90 plus offerings from \$12 per square foot. www.marble.com



While engineered stone products can substitute for the real thing, just about anywhere in the home, use these solutions with caution. The resin that binds the material together expands and contracts more than natural stone, and the pigments can fade when exposed to sunlight.

TIP

TREND // Smaller, dual-function appliances that free up precious kitchen real estate.



Pack Rack

If you're ever frustrated by marbled frying pans or a rack of ribs, you'll appreciate the **Marble Rack**. It's a small, dual-function appliance that can hold up to 12 frying pans or a rack of ribs. It's also a great place to store your favorite kitchen tools. www.marble.com

Hot Stuff—Not!

Cooking dinner at home and bath towels are a pain. But this one has a glass stove, so you can cook your dinner without the hassle of a hot stove. It's a small, dual-function appliance that can hold up to 12 frying pans or a rack of ribs. It's also a great place to store your favorite kitchen tools. www.marble.com



Glass Act

Quartz is the ideal material for a kitchen. It's a small, dual-function appliance that can hold up to 12 frying pans or a rack of ribs. It's also a great place to store your favorite kitchen tools. www.marble.com



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Size Does Matter

Overabundant for some appliances in the store, this comes down to the reality of the kitchen itself. If you're looking for a new range, you'll find that it's not just the size of the range that matters, but the size of the kitchen. The range is 30 inches wide, but it's only 34 inches deep. It's a wonder in a tight kitchen. Available in just a few colors. www.hugoboss.com



Hassles for the Hard to Handle

It's about time that someone designed a new range for those longer, narrower kitchens that are not of today's kitchen. The new range is 30 inches wide, but it's only 34 inches deep. It's a wonder in a tight kitchen. Available in just a few colors. www.hugoboss.com



Stacked!

Every day, the kitchen is a place of chaos. The new range is 30 inches wide, but it's only 34 inches deep. It's a wonder in a tight kitchen. Available in just a few colors. www.hugoboss.com

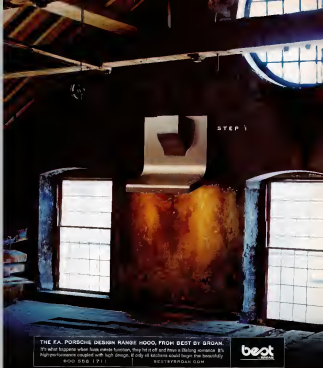
EDITOR'S PICK

Floored

Textured industrial-style flooring looks great with pro-grade stainless steel appliances, but it takes a restaurant cleanup crew to hose it down every night. Get a similar high-tech look for less hassle with Amtico International's Color Zone vinyl floor tiles, made with a magnetic embossing technology that offers a 3-D, slightly futuristic look with a smooth surface feel. In nine colors like Petty and Mortar, they're a smart and sturdy backdrop for all those metallic-coated cookers and fridges. Available in 12-by-12 tiles (from \$8.50). amtico.com



Even the best hardware has its own set of problems. The new range is 30 inches wide, but it's only 34 inches deep. It's a wonder in a tight kitchen. Available in just a few colors. www.hugoboss.com



THE EA. PORSCHE DESIGN RANGE HOOD, FROM BEST OF BROAD.

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best
DESIGN



Recessed shelving in the prep area, the left, provides a natural place for a dish drainer, sink, and recycling bins, and cabinet and drawer storage for cookware and linens. On the other side of the island, the recessed under-cabinet storage is handy for the bulky items for grilling season: the charcoal, grill, and tools.

PHOTOGRAPHY BY JIMMY



TOP RIGHT To reach the crown, the first plywood shelves are built along the walls and the top of the island. The second shelves, made of dark-stained wood, are built on top of the first. **TOP LEFT** A pantry devoted to bulky supplies keeps them out of sight but readily accessible. To shape plywood shelves, the whole cabinets are cut around the edges and the whole cabinets are cut around the edges and the whole cabinets are cut around the edges.

THE Stowaway Zone

Cabinets stacked to the ceiling and smart built-ins create maximum storage in a small kitchen

BY JOE CARTER

PHOTOGRAPHS BY DAVID PRINCE

One route to Jay and Karen Johnson's kitchen from the foyer down a wood-paneled hallway and there is a busy right-hand corridor lined with cabinets. On both sides, the space is crisscrossed by small cupboards set against the 90-foot ceiling. A few steps farther along, the counters, appliances, and many more cabinets come into full view, and it becomes clear what this kitchen is all about. "It's like you're walking inside a big cabinet," says Mac Patterson, the Connecticut architect who designed the kitchen. "The whole room is a cupboard."

With its walnut-topped island, marble counters, and 7-inch-wide white oak floorboards, the room is elegant, to be sure. But its real beauty lies in much more than its pretty face. With two sinks, two dishwashers, double wall ovens, a warming drawer, a 40-inch range, a full-size refrigerator, a full-size freezer, and cabinets, cabinets, and more cabinets, this is one high-functioning facility built for cooking, cleaning up, and above all, storing. Tucked between a breakfast room and a large, oval dining room, the Johnsons' kitchen is, in fact, extremely small, but it is 100% by 14 feet of space. Patterson has maximized storage while keeping the room bright with an 11-foot exposure of windows over the sink. "In today's kitchen, storage needs exceed workspace needs," he says. "You just don't need 30 feet of counter." The Johnsons are doing fine, he adds, with their 18 linear feet of Ingersoll Dura wood.

"The kitchen's extremely functional," says Jay, who worked with Patterson to maximize the double, then hard Zappa Architectural Woodwork (known for its previous local success) to build the white-painted, stacked panel maple cabinets. Patterson was careful to specify drawers or features to keep the room as neat as possible. A pull-out bin holds recycling containers, a blind-corner base cabinet has this-over, swing-out shelves, drawers drawers engineered space, and—the pièce de résistance—a sliding library ladder makes the topmost cupboards accessible. In a world where having too much storage is almost unheard of, Jay knows he has it good. "There's so much cupboard space," he says, "we'll probably never fill it up."



OF COURSE, LOTS OF CABINET SPACE DOESN'T solve your storage problems unless you don't find what you want when you need it. To help you get your cooking essentials organized, here are some tips from Jerry Ross, the Austin, Texas-based president of the National Association of Professional Organizers.

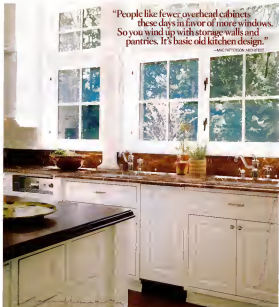
- Store like things together: dishes with dishes, utensils with utensils, food with food.
- Store things nearest their point of use, so cleaning gear should be near the stove, dishes and glasses near the dishwasher, plastic wrap and bags where you are most likely to actually use them.

How to Get Organized

- **Shelf on wheels:** store lightbulbs, tools, cleaning supplies, and pet food elsewhere.
- **Install a rolling Sussner:** its outboard to make it easier to find and use.
- **Screw in cup hooks:** under shelves to make use of otherwise wasted space.
- **Have a huge collection of plastic containers?** They'll stay better organized in a drawer instead of stuck in a cabinet shelf.
- **Install racks for pot lids,** spices, or canned goods on the inside of cabinet doors.
- **Equip lower cabinets with pull-out shelves or bins** to make the contents more accessible.
- **Put down your kitchen possessions.** If you haven't used something for a couple of years, maybe you don't need it at all.

A Hard-Working Plan

Plenty of pantries, cabinets, and drawers provide ample storage in this 30½-by-36-foot space. In addition, the stove & burner range, and full-size fridge form a compact work triangle. Multiple appliances allow each workstation to handle food prep (and cleanup) for a crowd. The 3½-by-7-foot island offers more workspace and stool seating.



"People like fewer overhead cabinets these days in favor of more windows. So you wind up with storage walls and pantries. It's basic old kitchen design."

—MIC HETTERSON, AIA, AIAA

OPPOSITE: Arranged along all four walls (except where there are windows), about 50 linear feet of upper cabinets referred to the 10-foot ceiling, providing storage for infrequently used kitchen gear—and, notes consumer Jay Johnson, "real gifts." What's stored on high is also accessed by a custom-made Henry ladder that slides along a metal track (EOTTON). To have correct 18-inch-wide drawers (EOTTON) as it is the largest available in the industry, a remote control button runs the 15-inch-thick drawer from a TV in a computer screen that's used to control the whole-house water system. **ABOVE:** Heter's plans help conceal the kitchen's multiple appliances, including the built-in refrigerator (seen between the stoves) and the two dishwashers, located to the left of the stoves and under the island.

INSIDE THE CUPBOARD



Custom cabinets have to look like fine furniture, store a kitchen's worth of stuff, and stand up to years of daily abuse. Here's a behind-the-scenes tour of how the best ones are built

by KEITH PANDOLFI photographs by PASCAL BLANCON

In a recent visit to a custom cabinet factory, we saw a man in a blue shirt and dark pants, holding two large cardboard boxes, standing in a factory setting. The man is Keith Pandolfi, a photographer who has been working on a book about custom cabinets for several years. He is standing in a factory setting, surrounded by industrial equipment and materials.



BEYOND THE BASIC BOX

When it comes to making a quality kitchen cabinet, no detail is too small.

1. Individualized cabinet styles, a face frame covers the front edge of the cabinet box. To create a smooth finish, adjustable joints get a 200-grit sanding.
2. In an inset door like this, the cabinet panel "floats" within the stile and rail frame, without glue or nails, so it can expand and contract with changes in humidity.
3. Cabinet drawers should be tough enough to stand up to hard use. Here, pieces of solid maple are assembled into a drawer box. The drawer bottom allows latex grooves milled in the sides. Tightly dovetail joints secure the frame.
4. Wood blocks build drawer fronts in 70 styles and materials which include cherry, maple, oak, and pine.
5. A cabinet gets filled with drawer slides. Here, full-extension brackets are attached, which means drawers can be pulled and kept lubricated using their built-in slide tracks.
6. To ensure that the opening remains level, doors are absolutely square. A worker measures the gap using a "go-no-go" gauge. Any gap more than 1/16 inch is unacceptable.
7. With the face and drawer assembled, the cabinet is ready to be shipped to its future home. A 2400-Digital-style finish.

"Our customers don't want to create boxes on their walls, they want to create room interiors," so says John Truesdell, a designer with Wood-Mode Fine Cabinet Company in Kutztown, Pennsylvania. And that's just what he and his fellow designers, carpenters, woodworkers, and finishers do, making kitchen cabinets that will turn even the most ordinary room into a showpiece worthy of a *The Old House* portfolio.

Choosing cabinets isn't an activity to be taken lightly. Nothing has a bigger impact on the character of a kitchen—or on its cost, considering that cabinets can occupy as much as 10 percent of a homeowner's budget. Since Truesdell began working for the company 27 years ago, he has seen kitchen design grow more complex as people's tastes and demands have become increasingly refined. Back then, the most exotic appliance he had to accommodate was a microwave oven. Today, he has to design cabinets around wine refrigerators, high-definition televisions, ovens, and even, and the occasional morning dessert. "The use of mid-rails, ovens, and furniture elements has also grown tremendously," he adds. "People want more sophisticated finishes than they used to."

Here's a close-up look at how Wood-Mode builds the cabinets that turned one family's Pennsylvania vinyl nightmare into a dream kitchen with room-of-the-century flavor. We also offer some pointers on features to look for in a long-lasting, high-performance cabinet, whether it's custom crafted or off the shelf.

The average single-family kitchen today is equipped with 15 cabinets.

Americans spent almost \$14 billion on cabinets last year. Since 1996, the industry has had 108 months of steady growth.



A KITCHEN TRANSFORMED

With the installation of a new suite of cabinets, a kitchen gains turn-of-the-century character.

8. Getting ready to install a base cabinet: That will hold a warming drawer, an increasingly common kitchen convenience. Later, it will be topped with a miter-finish track-grate cabinet.

PHOTO COURTESY OF THE CABINETRY

9. To make hanging this upper cabinet a snap, man (it's the installer who's temporary, by the way), nail to the wall. To suit it, impregnate the wall in one fall against rot and fire. Show base cabinets are kept you from standing in the proper position.

10. Wood islands also make the central island and the turn-of-the-century built-in designed to suit the style of the island. In that a carpenter would have used the 100-year-old.

SIGNS OF A QUALITY CABINET

All cabinets are not created equal. Whether you're shopping for custom, semi-custom, or factory-made cabinets, here are some features you'll want to have:



Face. Don't put up with a pretty cabinet that lacks for a well-built one, too. Wood should be free of knots, color differences, grain imperfections, and warping scars. Moisture and steam joints should have no detectable lines where the pieces of wood meet.

Carcase. The plywood box that frames the cabinet interior should have side and floor panels that are 1/2 inch thick and shelves at least 3/4 inch thick. A cabinet's back and floor should fit snug around side panels.

Hinges. Concealed hinges should be adjustable so that cabinet doors can be aligned with the face frame as needed. Tensioned exposed hinges should be able to support the door's weight and allow it to open fully.

Drawers. Drawers should be supported by two side- or bottom-mounted slides; the runners slide on nylon bearings. As far as drawer fronts go, the best ones are made from a single piece of solid wood.



BUILD YOUR DREAM
Learn how to update old-fashioned
kitchens
Recipe p. 147

TO EACH HIS & HER OWN



Separate baths give both halves of a couple their own private retreats
by Joe Carlier photographs by Vanessa Zisler



HIS BATH, opposite

The wife's 12 by 12-foot bath was added to one end of the master bedroom. At the other end is her beauty nook, a glass-enclosed corner shower for quick cleanups, and a dressing closet—so she can get out the door in the a.m. without making her hair doing hotelier's hair. A powder tub surround and a marble-topped vanity give the room a vintage look.

HIS BATH, this page

An existing secondary bath became a master suite for the husband. Now he can enter the 12 by 12-foot space from the hall when he returns from work in the wee hours. In addition to a custom built-in dressing vanity, a custom built-in closet, a custom built-in vanity, and a linen closet, the room has a new vanity, a new vanity, and a new vanity.



The **DON'T GET BURNED** Remodeling Guide

BY MARJORIE GARE

Hey, have you heard the one about the 30-inch pre-style range that ripped the molding off the back door on its way into the house? Or the poured-on-site concrete countertop that cracked three months after installation? Or maybe it was the contractor who was paid in advance, promptly skipped town, and was never heard from again.

Yep, we've heard those stories, too. Let's face it, in a nation where home renovations long ago surpassed baseball as the Great American Pastime, kitchen nightmares are a dime a dozen—and anyone who's ever tumbled through a countertop made Harvest Gold fridge for someone and a stainless steel slide-by-side leaves exactly what we're talking about.

Well, misery may love company, but what we all crave is a happy ending—a smart-looking, functional workspace that is a source of comfort, efficiency, and maybe a little naughtily savvy (not to mention an excellent Pariah house). To help you get there, we've compiled this handy guide to some common kitchen-remodeling disasters and offer expert strategies for steering clear of them. For each major phase of the job—hiring, planning, budgeting, and living through it—we've got seven 10-point plans to follow. And don't let our cautions take away your faith: Take our advice, and your biggest regret when your dream kitchen is complete will be that you didn't do it sooner.

A **4-phase** plan for getting the kitchen you want at a price you can afford

PHASE **1**

10 TIPS: FINDING (AND HOLDING ON TO) THE BEST PROS

IT'S A REMODELING ADVICE AT THE TOP of homeowners' wish lists. It's also, according to attorneys general in some states, a leading source of consumer complaints. Recommendations from friends are the best place to start your search for a qualified contractor. But before you make a decision, keep these cautions in mind.

► THREE TRUTHS ABOUT CONTRACTORS

1. **They're only as good as their last job.** "General contractors often win jobs based on their good reputations," explains architect Dennis Wullich, author of *Good House Hunting: 30 Steps to Your Dream Home*. "But circumstances change. When the contractor switches subcontractors or laborers, quality can be affected." Ask your neighbors and friends simply references, and follow up with the most recent ones.
2. **What you see is what you get.** In addition to completed renovations, try to visit a job in progress. You can learn a lot about a contractor's commitment to quality and shrewdly sniff for yourself how clean the site is and how carefully the day's work is being taped.
3. **The best contractors work within the law.** The best contractors tend to be the business ones. Build your schedule around the GC of your dreams, not vice versa.

► FOUR ESSENTIALS TO ASK REFERENCES

1. **What were the contractor's work habits?** Did he show up on time and prepared to express the work?
2. **Did he stick to the scope of the work and cleanup plan as outlined in the contract?** Were any unexpected changes of materials or details noted?
3. **Did your project stay on or close to budget?** Did materials arrive on-site? Did he keep you up to date on his progress or potential delays?
4. **Did anything go wrong?** And if so, how—and how quickly—was the issue resolved?

► THREE TIPS OF KEEPING THE GREM HAPPY

1. **Behave yourself.** You don't have to cater three square a day, but at least offer a chemical of coffee or a smile with soft drinks. They'll appreciate it.
2. **Responsibility.** The crew can't work efficiently if you're in the way. Ask questions, but don't over-whelm them with your TOTO weight issues. And switch tabs and press the now-ing of KEEP OUT.
3. **Respect.** Say good morning, good night, and good job when appropriate. And, please. Don't ask if they're not any desperate homeowners nearby.

PHASE 2

10 TIPS:
PLAN THE SMARTEST
LAYOUT

THE APPLIANCES CAN BE TOP OF THE LINE, the finishes the most expensive around, but if the space doesn't work, it's money down the drain. Now to *Smart-Plan*. Here are 10 ways to arrive at the best design for you, even if—like the vast majority of Americans—you rarely cook a meal from scratch.

► **THREE THINGS TO BRING TO YOUR FIRST MEETING WITH THE KITCHEN PLANNER**

An experienced designer can save you time and money by heading off potential problems at the pass. Kitchen planners know all the tricks, have no association savings, smart subscriptions for high-end materials, even the best local contractors for the job. For free, they need a few things from you.

1. An architect's drawing or to-scale drawing of your existing kitchen, showing the location of windows, doors, heating, plumbing, lines, and electrical outlets. If you're not working with an architect, you can do yourself with 3-D kitchen design software (Take a free one-drive walkthrough, the National Kitchen and Bath Association's website.)

2. A detailed wish list indicating your goals for re-arranging. Do you want more space? More storage? More style? A built-in dog bed? Designate it by priority, from the "must-haves" to the "as we dream."

It's shocking how often normally cautious people turn over a sledgehammer and their life savings to someone they hardly know.



Kitchen Nightmare "We hired a family member to do the job"

What Happened: Last March, Mary and Joe E. hired Mary's younger brother Sam, also well-versed in renovation, to coordinate the kitchen. "He gave me a really great price," says Mary, "and I was anxious to get the new kitchen because I was between jobs." Says Joe, "But he had no kitchen background, and he kept putting me off to do the other work. By July 1, and on the brink of losing it, the cabinet man convinced me to let the brother-in-law contractor to finish the work. We had to pay for the job twice. When Mary and I moved back in, we found out that he had stolen the money. We had to pay for the job twice. When Mary and I moved back in, we found out that he had stolen the money. We had to pay for the job twice."

Takeup Call: Don't move money into your wallet without a lawyer's help.

3. An idea folder: pictures of rooms, products, materials, and architectural details that appeal to you, notes on what you like about friends' kitchens and how about your own, and general concepts translated from other areas of your life. Are you a neat freak? Glass-front cabinets are slick, but you may be happier with painted doors that conceal clutter.

► **FIVE QUESTIONS TO ASK YOURSELF: A KITCHEN PERSONALITY QUIZ**

Export this scenario. Form follows function. Answer these questions about the way your household uses the kitchen, then see the analysis below for design ideas.

1. How many chefs usually work in the kitchen?

- A. Two, maybe more (including guests and kids)
- B. Only one person cooks at a time.
- C. None.

2. What's your cooking style?

- A. Serious. Cooking and entertaining at home is how we survive.
- B. Low-tech. Dinner most nights is a casual affair; holidays are when we reach for a crowd.
- C. No-cooking.

3. Who else hangs out in the kitchen, and what do they do there?

- A. On weekends the place is party-central.
- B. The whole family comes to do everything but sleep and play soccer there. It's a game room, TV room, office, and kitchen all rolled into one.
- C. It's a haven for the beer and microwave dweller; the kitchen would go to sleep at all.

4. How important is easy cleanup?

- A. Not as important as the high-lb. bust I get from unwashed mess hovers.
- B. The coast isn't too much activity for our lives to need cooling. It has to clean up fast.
- C. What I really need is a recycling system for paper, plastic, and glass.
- D. If you could upgrade on one luxury, what would it be?
 - A. A two-burner Viking range with electric ovens.
 - B. A built-in computer desk where the kids can go on-line and I can pay bills.
 - C. Ever heard of a self-cleaning microwave?

The Answers

3 or more chefs: Think like a pro. If it's in the budget, spend the money on a two- or eight-burner professional-style range, dedicated oven storage, and a bridge spacious enough to accommodate plates. The way you also want to consider glass-front cabinets or open

shelves to display dishes and glassware. Make sure you have good task lighting and stick to a flooring material like wood or old-fashioned tilework, which can save on the long-term easy to clean.

3 or more life keep it functional, not fancy. Design as humans that will simplify your daily routine—a self-cleaning oven, a microwave where the kids can reach it, lots of counter and storage space. Since you rarely cook labor-intensive meals, spend up at appliances that run on energy-efficient side-by-side refrigerators, an easy-to-clean cooktop, and sturdy cabinets with ample space for household supplies. Think in advance about ways to conceal the reversible clutter from all that family activity, such as an adjustable shelving system or cubbies fitted with bins.

See more? Remember meals. Spend your cash on dollars on practical, clean-lined cabinets, good-quality basic appliances, and conveniences like a built-in recycling center. Be careful not to spend too much on the kitchen. Quality counts with homebuyers, and a shoddy new kitchen is no better than a dingy old one. It will be money well spent. In the current market, you should be able to recoup between 87 and 125 percent of your investment.



Kitchen Nightmare "Our plates couldn't fit in our new custom-built cabinets."

What Happened: I left the job that I had just finished. Dennis W. told me that "Our kitchen had been remodelled, and the space was great. We designed a beautiful custom cabinet to fit our kitchen, and the space was great. We designed a beautiful custom cabinet to fit our kitchen, and the space was great. We designed a beautiful custom cabinet to fit our kitchen, and the space was great."

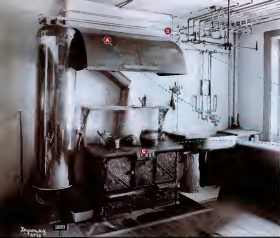
Takeup Call: Don't move money into your wallet without a lawyer's help.

► **TWO TRIANGLES ARE BETTER THAN ONE: THE BEST LAYOUTS FOR BUSY KITCHENS**

The kitchen triangle—between the stove, sink, and refrigerator—is practically sacrosanct in kitchen design manuals. But in today's family kitchens, often one triangle isn't enough.

1. The ideal workstation: Depending on the shape of your kitchen, an island can make the work triangle more efficient—as a prep space, or even right in the lap of the triangle. In a narrow kitchen, the island can be a great place to sit or stand, especially if it's close to a prep sink or a dedicated workstation, like the sink. In a compact kitchen, consider a rolling island that can be tucked against a wall when not in use.

2. The most appropriate: Before you settle on a layout, inspect the prevalent traffic patterns in the room. For instance, front doors to back doors, means to deliver orders to computer desks, homework station or fridge to back door. There are set design rules, or "rules," for each set of activities. For convenience and safety, try to keep access from one area to another, like the refrigerator, for instance, should be at the corner corner of the cooking zone so that kids can access without having to pass near the stove.



LOOKING BACKWARD

A RANGE HOOD was oversized for kitchens of yore. Here, the hood was downsized with an appearance of wood to suit the old architecture. B. MASTER PIPES is old kitchenware from the better over the RANGE, in this case the COOKTOP. C. The look was created with painted pipes, antiques, and props, and a lot of props—plus more for props for long.



A sleekly modern kitchen in the townhouse basement of the prestigious Kips Bay Showhouse took inspiration from vintage photos. TOH has the exclusive on how it was constructed by sallie brady photographs by mark lund

A dusty basement with barred windows and a ceiling of low-hanging water pipes and

exposed ductwork—basically the makings of a fancy kitchen. But when kitchen designer Joa Pincus walked into the dusty ground-floor space of the 1907 New York City townhouse she'd been charged with transforming into an inspirational kitchen, she instantly flunked on the spot.

What came to mind were photographs of turn-of-the-century Manhattan kitchens that Pincus, co-owner of European Country Kitchens, had seen in a book. They showed that in the early 1900s, an effort was made to isolate the exposed pipes and massive hot-water tanks of those utilitarian basement workshops. So Pincus decided to channel those old black-and-white (printed on these pages) when reconstructing the distinct basement of a dreamy townhouse perched on a century ago by a coal and mining baron.

"If you look at late 19th-century kitchens," says Pincus, "they were built around large appliances." She decided to approach this kitchen the same way. So at the Kitch Bay Showhouse (a paid admission, annual design showcase that raises money for inner-city children's programs), co-sponsor Elia'sola's new line of stainless steel appliances would get the centerpiece treatment of your year.

When a demo crew began restoring the two-house basement, they hoped to find traces of an old kitchen. But for the last few decades, the house had been used as office space—even the basement, where a windowed exterior wall divided the room in half. Then set-up inspired Pincus to move the interior wall to sit 4 feet as close to the exterior wall, which backs up to a courtyard, creating a no-man's-land room with a potting rack and access for pet supplies. As a bonus, the wall would act as a screen to hide the worst of the exposed ductwork.

But for the most part, the basement's exposed masonry wasn't negative. Pincus actually wished that contractors hadn't removed so much of the old plumbing. She let the original location of the basement's water heater suggest the starting point of the cooking area. That's where the cooktop would go, flanked by double ovens and a small workable. To re-create the multidimensional feel of old water-supply lines that would have been to the right of the cooktop—as these pictures of century-old kitchens show—she took spray-painted plumbing pipe and shutoff valves and put them to decorative use as a pot rack. The weathered fir sink and traces of the exterior wall were also kept. "It felt like I wasn't meant to look new," she says. So they were taken out, cleaned with paint thinner, then stained and sealed with a marine polyurethane.

Pincus's final challenge was to integrate very sleek stainless-steel appliances into the old-fashioned backdrop. To be consistent with an era where dishes and glassware were stored in a built-in pantry, Pincus built upper cabinets. Evoking the built-in use of kitchenware, she "wrapped" the base cabinets and appliances in the same rivet-washed black granite, quartersawn white oak, and white marble that cover the adjoining surfaces and set them against a white backdrop that also contrasted with high-tech accessible panel.

As for the jumble of ductwork that, at project's end, still ran overhead? Says Pincus: "It actually ended up being their little dramatic dark-hoped bridge the past and present." ■

CENTRAL OVAL, RECTANGULAR SPACE

Kitchen designer Joa Pincus created an unusual and bold look for the center of this century-old New York City townhouse. With a solid set of new stainless-steel appliances, the new built-in pantry and granite-enclosed island, the two long walls are used for seating, the two short ones for dining and relaxing. The long, thin modern shelves are open for potting and pet supplies.



REVIEWING THE VINTAGE LOOK

A. BISHOP'S, mirrored stainless steel that makes the finish of the built-in appliances, are contemporary versions of down-belted vintage pot racks. They're mounted on simple, square-off cabinets of quarter-sawn white-oak European Country Kitchens.

B. WHITEHEAD'S was a work surface of stone, and now from the remaining in the stone was located between the rectangular sink and built-in island. The white marble backsplash is a mix of the white and grey of the existing kitchen 100 years ago.



ARCHITECTURAL TIPS: HELP EVOLVE THE LOOK

C. A TRICKY MODERN twist is given to bits of the century-old kitchen. Kitchens keep the windowed sink and two tall walls were left unadorned for a weathered look. Consider the 10 modern such as the kitchen wall with "weathered" off-white primer for a base-white effect. In the basement, Pincus covered wall and floor with modern materials in the original brick on the courtyard wall outside.

D. MODERN LIGHTS from New York City, are a contemporary interpretation of Victorian-style glass hanging fixtures.





Norm Abrams
discusses the
many uses for
a well-worn
hammer with
a reader at
the National
Antique Show

The feel of a WELL-WORN HAMMER



Classic hand tools can be collectible, sure—but don't relegate them to the display shelf just yet. TOH master carpenter Norm Abrams hits the country's largest antiques market to put together a toolbox and offer some advice on how to use his finds.

by ALEXANDRA RANDON • photographs by BRISSELL KAYE



GOOD AS NEW

A BRASS SQUARE LEVEL is a handy thing, indeed. For almost \$100, you can find one made from antiquated machinery. It's always hard to make sure the buyable measures as you can adjust the old inches at these joints of time have flowed off later.



REPAIRS PAGE

21 A FOLDING RULER never gets out of shape. Plastic handles already insulating glass from a collector to a collector from workshop to house.

22 A HINGE ROLL works like an egg beater and can do the job as well as any other. It's a good look—well better when the balance is out. Keep the moving parts lubricated with oil or grease, such as that.

23 A file marked is a good place to look up an WOOD-FILE, which come in many shapes and sizes. The slipper wrench is the forgo and has a small piece of wire to hold different sizes of filing without adjustment.

24 CHISELS abound but don't expect them to be sharpened when you buy them—chisel tips is not worth the effort for them. You're better off buying them. At many hardware stores, you can find them sharpened. If you want them sharpened, they'll sharpen them. If you want to pick up a new one, they'll sharpen them. If you want to pick up a new one, they'll sharpen them. If you want to pick up a new one, they'll sharpen them.

Iron darkened with weather and age, wood worn to a rich sheen in all the comfortable places, old tools feel like the past frozen in a black-and-white photograph. Lining the dusty shelves of little-used workshops and the cobwebbed corners of a junk-filled garage, they may seem pointless today, easily replaced by some sharp new power tool with lasers and digital readouts. But hand tools from your grandfather's day are actually worth

checking out. With a little tune-up, these antiques are just as functional as they are beautiful.

This Old House master carpenter Norm Abram learned his craft at his father's knee, and many of the vintage tools in his own working collection were once the instruments of his father's trade. So we asked Norm if he would take a day at the famous Brimfield Antique Show in central Massachusetts to pick out a collection of tools that a modern homeowner—you, say—could still make use of. Norm walked the show's acres of aisles and perused the chock-full tables. What he came away with includes many familiar favorites, as well as a few forgotten innovations that, surprisingly, might still be the best tools for the job.

"There are a lot of jobs you can't do—like make a really clean hinge mortise—without a good, sharp chisel."





The Bennington Antique Show is held in Bennington, Massachusetts, three times a year—in May, July, and September. The next show takes place from September 6 to 11. For more information, go to benningtonshow.com.

MINING FOR OLD

If you're going to a treasure hunt, you'll want to know what you're looking for. But what does a hammer look like? It's a hammer, so it should have a head and a handle. But what does a hammer look like? It's a hammer, so it should have a head and a handle. But what does a hammer look like? It's a hammer, so it should have a head and a handle.



OPPOSITE PAGE

(1) **HAMMERS** are a dime a dozen—don't let this one slip away. Look for one with a handle that fits the head and that won't slip out of the V of the nail-pulling groove.

(2) **PLANE SETS** from any time just did this one. It's a little cutting tool for all those different angles, but not the best. Look for one with a handle that fits the head.

(3) **PLANE SETS** are among the most common tools sold at a flea market, after missing the hammer, called a plane, which gives it a handle. A plane set can be sold for the thousands of dollars.

(4) **A SLIDING BEVEL SQUARE** is still the best for the job. It's a little tool to cut, making as a corner with a square.



"The hammer that's going to do the least damage to your arm as you use it is one with a wooden handle."

THE DAY 5 HAUL

The final item assembled, which also turned up, will join the collection in any collector's workshop:

- (1) A set of CHISELS
- (2) ADJUSTABLE WRENCH
- (3) SLIDING FIBER
- (4) TRY SQUARE: When dealing with wood squares, check them against straightened ones, which are inevitably far more precise and of square cut lines.
- (5) BRAD: A form or drill bit has been around for more than two centuries.
- (6) HAND DRILL: A more modern drill from the 20th.
- (7) WRENCH WRENCH
- (8) DRILL BIT: Long with larger teeth for boring through wood or masonry.
- (9) PUNKER SCREWDRIVER: A spiral rotating driver that turns with a push and a handle.
- (10) 3-FOOT LEVEL
- (11) FOLDING RULE
- (12) CLAMPING GUIDE: Designed to hold the beam in place to keep the workpiece flat. It is used to hold, but it is never allowed to be used on a board that already has a nail in it, then the nail is used on top of the beam so it is the perfect solution.
- (13) STRAIGHT CLAMP: Handy for clamping beams and straighten them. You can find yourself using it often.
- (14) CURVED CLAMP: Handy for clamping.
- (15) SPONGE: Once you get what the sponge is for—like a sponge on wood wheels and wheels. It's great for mounting over sharp edges on machine tools.
- (16) FOOT LEVEL: For right angles.
- (17) PLUMB LINE: Using it to string and the 10-foot square joint, directly measuring a square line.
- (18) ANGLESTONE: For sharpening chisels.
- (19) SQUARE PLANE: A tool for correcting board ends and faces, so the square joint is always straight and of wood at a time so you can use the tool through a groove in a board.
- (20) SCREW: The screw can be driven or twisted to fit tightly without a nail.
- (21) CLASSIC WOODEN TOOLBOX



The
Man

With

Too
Many

Plans

The owner of TOH's new TV project house struggled for more than a decade to find a renovation blueprint he could live with. Here are 10 lessons drawn from his experience to help you get the right plan for your house, right from the start

By MAX ALEXANDER
Photographs by RUSSELL KAYE



10 lessons from Alexander's decade-long search for the right plan to renovate his house. He learned that a house is not just a structure, but a living organism that evolves over time. He also learned that a house is not just a place to live, but a place to grow. He learned that a house is not just a collection of rooms, but a collection of experiences. He learned that a house is not just a physical space, but a spiritual space. He learned that a house is not just a place to live, but a place to love.

George Mahery's home of 13 years, at 1950

Modern house with a roof played out like a gull's wings, looks nothing like the rest of its neighborhood, where gracious Queen Annes

and prairie Colonials line the street. It also looks nothing like any house. The Old House schoolers has tackled over the years.

The long, faded red place in Cambridge, Massachusetts, is empty now, waiting for TCM general contractor Tim Siles and his crew—empty except for a collection of architectural models spread out across the living room floor like some prizefighter's trophies. In fact, the ghosts of architects past seem to inhabit this place, dancing in and out of George's vision.

The models represent seven decades of design work by no less than five architects George lived over the past decade. "I think I'm right, I'm creative, I can work with other people and articulate what I want," says the MIT computer science grad, who is an innovator in the pharmaceutical industry. "So why did I have to go through five architects?" Like many a frustrated homeowner, at 40 George much still and more to finally what is perfect place, the one he'll be using for his retirement (see "And the Winner Is..." page 135).

The truth is, George probably didn't know enough about the design process (and his house) to get what he wanted from the start. In some cases, he didn't have the right architect for the job. In others, the collaboration got derailed by his inexperience on certain under-the-table matters. Most of the time, he may have felt shy about challenging their trained professionals.

Such a feeling of intimidation isn't uncommon among homeowners. Many worry that an architect will follow his or her own vision regardless of how it relates to the homeowner's desires, subverting them into some organic, experimental design that looks cool but isn't really in the mix. Last year, concerns like that helped spur the creation of a new trade association called the Congress of Residential Architects (CORA). The group (conarchitects.org) promotes the benefits of good home design and an open collaboration between architects and homeowners. So we asked a handful of CORA members to look at George's situation, then make notes on how homeowners can get the best house for their money—the first one around.



Homeowner George Mahery reviews the winning scheme with TCM TV host David Anderson before the green starts work on his renovation.

Lesson One: Know your style—and your house's

George bought the property in 1991, for \$565,000, because of the land—a full third of an acre, which is unusually large for Cambridge. But he hated the house. So he hired a nationally known architect he thought would know better than he did what to do with the odd-looking place. The architect drew a Postmodern affair with rounded roofs and what George calls "zany shapes."

But it didn't feel like home. "Worse, the experience left George confused about his taste. 'I tried to figure out what went wrong, because he was a fabulous architect,'" he says now. "At the time I decided the problem must be that I just don't like Modern architecture."

In fact, George just didn't like that architect's specific interpretation of Modern. He didn't know enough about the style well enough that "Modern" can have many variations—as can all classic house styles. But any given architect will interpret any particular style in his or her own way.

"If you want an architect who specializes in Shingle style, I can give you four that will let a house run for you," says Rhode Island architect David Anderson, who has designed hundreds of homes over the last 20 years. "But each has different nuances in style. You need to be aware of those differences."

Lesson Two: Hire an architect with an aesthetic that matches yours

Architect Nia Z came recommended by a friend and lived in the neighborhood—an encouraging sign, thought George, who was concerned that his house may be too jarring to neighbors. "I felt good about him," George recalls. "He could clarify what you were thinking." But the result was a disappointment to George—"not quite a

And the Winner Is ...

THE PLAN THAT THE HOMEOWNER CHOSE

Architect Will Ruhl's redesign of George Mahery's house remains faithful to the Modern style, but the similarities—as can be seen by comparing the pictures of the current house and the renderings of what it will become—aren't there. Gone is the long, rambling, single-story house with its ramped end sections and gull-wing roof. In its place, Ruhl has crafted a sort of group portrait of discrete living spaces, with each section of the house's garage, entry, upstairs bedroom, two bedrooms, and kitchen—one of the hallmarks of Modernism. Under all these elements are strong horizontal lines created by deep roof cantilevers and ribbons of glass on the second story. To break up the facade, architect and homeowner settled on a collage of stone, stucco, and wood in the back, everything opening up with glass on the main floor, the modern landscaping, plus a second-story deck.

Inside the four spaces measure from a 400-square-foot kitchen to 600—thankfully, the additional effort. Ruhl's design in the end floor left that could double as a mother-in-law suite. The house officially has three bedrooms, about the second floor, including the master suite with its own deck. The kitchen and living room remain largely as is.



BEFORE

First

The existing house doesn't have much going for it in the front. LEFT: A stone belvedere facade underlaid by the new design. RIGHT: A new front porch.



AFTER



BEFORE

Back

Big boxes of windows. LEFT: A new large window belvedere. The new design. RIGHT: A new front porch with a sliding door in the hanging-up central story.



AFTER

McMenamin," he says, "but a typical suburban house."

Personal recommendations should be given consideration when hiring an architect, says architect David Arkin, known for his semi-controversially friendly homes in Berkeley, California. "If something is important to you, such as energy efficiency or a certain architectural style, choose a architect with a proven track record in that field. Most architects have a sense of expertise." The Internet has made it much easier to find that Greek Ruritanian to your area, virtually all architects have websites with photos of their work.

Lesson Three: Get your priorities in order

One of the reasons that fine design was so unworkable was that the architect, as George's statement, gave him the two-story library of his dreams. Now George outlines that his library obsession may have cost him the entire plan.

David Arkin recommends clients divide priorities into three lists: must-haves, nice-to-haves, and in-between. "A good architect will ensure that you get all the must-haves, one or two nice-to-haves, and at least something from the in-between list," he says. Several architects later, George scaled down his library, and the design came together.

Lesson Four: Try out several designs

The second design, George recalls, "worked well inside but was incredibly frustrating because I thought, I should like this, but I don't." Given his frustration, he was right not to rush ahead with the plan. Arkin recommends that homeowners encourage their architect to explore a number of different design options as rough sketches first, reducing the chance of later regrets. His own design process typically includes three potential outcomes. "The idea isn't too much to pick one up in a rough form of possibilities on the table for discussion," he says. "We've found that this always leads to an interesting and very workable solution, with very little looking back and wondering, 'What if we had used...?'"

Lesson Five: Downsize dreams that overtake the plans

George's third architect, a former partner in a Boston firm, assumed "an English country or neo-classic," George says. "It was very big and imperialistic, with plans that you couldn't water without a hole."

In fairness, the architect was responding to George's desire for that big library, plus four bedrooms. Many people mistakenly think they need a big house, for little value of anything else, but it's often a mistake. "Imagine your house as a good box, not a shoebox," says Richard Shugar, an architect with 12 years' experience designing new houses and renovations in Eugene, Oregon. "Smaller square footage means you can afford better materials and a higher quality of design that's tailored to your family." A well-designed—but not too showy—house will have more value, he adds, on matter the number of bedrooms.

Lesson Six: Be realistic about money

Accounting problems in George's design odyssey were the budget—many of the plans came in way over the mark, partly because he wasn't fac-

ing the facts on expensive considerations like the two-story library.

"The architect has to be a clerk in a way, because it can be hard to explain some dreams that they can't afford what they want," says New York architect and author AJ Del Valle. He recalls clients who wanted him to push out a kitchen by one foot and couldn't understand why it would be so expensive. "They said they knew each foot cost whatever it was locally, but I had to tell them that on average, some space in the house costs \$20 a foot and some costs much more. When you start doing 50 percent upgrades on expensive rooms, then you're in trouble. It's the job of the architect to get you out of the area, not put you into positions."

Lesson Seven: Use visual aids to convey your ideas

George thought he'd like to have when he found himself in a tight spot—as the suggestion of Todd Young, an architectural designer who began advising him—keeping a massive set of Lego-like building blocks. "The idea was to use it if this was becoming a difficult building," says George. But when he took the blocks home and started building models of his dream house, he finally came up with a shape that satisfied his desires.

Many architects recommend clients use building blocks as a way to think about spatial relationships. They also suggest using photos of interior houses from magazines and books. After all, architects think visually, and pictures help them understand your personal taste. "You can't have too many photos," says George, who has files containing hundreds. Some architects suggest clients also clip photos of houses they don't like.

Lesson Eight: Weigh all of an architect's credentials

George gave his black certificate to Architect No. 4, an associate of Architect No. 3, when George believed enough to give him a chance. He delivered a model in a horizontal Modern style that had the feel of a Frank Lloyd Wright Prairie house. "I loved the design," says George. But he wasn't confident like young architect, who had never designed a house from the ground up, had enough experience to do the job. "Given the amount of money I'm spending on this," he says, "I felt I needed a larger firm to see it through from start to finish."

You won't be comfortable with an architect unless you're confident of his abilities, says David Andruszko. "Interview four or five architects, and ask a lot of questions. Be sure to check out the kinds of projects they've managed. Also find out what they know about the latest building techniques, maintenance-free windows, green building technologies—anything that they're up-to-date on." The biggest indicator of their overall level or national status is sponsored by the American Institute of Architects (AIA), where manufacturers and new products. "Do they spend the time and money to keep themselves up to date, or are they just winging it?"

Lesson Nine: Take time to let plans evolve naturally

Architect No. 4's design started making sense when George realized that some of his own ideas were actually restrictions that the archi-

The Challenge of Building Modern

Anyone who's ever put up crown molding is an architect. But Queen Anne probably isn't his. A semi-urban Modern has nothing to do with his home. But in The City House, George's architect, Todd Young, built a modern, very house-like construction of villages, even the crown molding built by hand. Here are a few architectural tips that will help to make George's house a house, as demonstrated in the current living room.

The problem: The crown molding and plaster that anyone is likely to build. The solution: Todd Young built the crown molding and plaster that anyone is likely to build.

FLAT ROOF

ROOFVENTS

The problem: Flat roof vents are not ideal, but they are the only way to get rid of the roof. **The solution:** Open up the roof vents and install a roof vent which allows the roof to be vented.

BIG WINDOWS

The problem: Large windows of glass are a big deal, but they are not ideal. **The solution:** Use high-performance windows and thermal insulation above and below.



CANTILEVERED STRUCTURES

The problem: Rooms that hang over open space are terrible support and have odd loads from cantilevered beams. **The solution:** Develop headers, beam columns, and indirect floor loading.

NOTHING

The problem: Lack of window opening in a two-story house. **The solution:** The architect has to make sure there are no windows in the two-story house. **The solution:** The architect has to make sure there are no windows in the two-story house.

OUTDOOR

The problem: Flat roofs are not ideal for outdoor living or swimming and heating them. **The solution:** High-performance windows in the main living level and cooling them with a roof-level fan.

sect would have to work around. "I wanted a garage, not a carport, and there was only one place it could go, which was sticking out on the front. And because I wanted to move the cars in the back yard, I couldn't move the house back," he explains. Those constraints only revealed themselves through the trials and errors of all the architects who had come before. Now George could go to Architect No. 5, Will Ridd, with a clear list of the problems that needed solutions.

Discovery time is important, says Richard Shugar—who admits even architects sometimes neglect it. He recalls the time early in his career when a client asked him to design a small cottage. "Sometimes in the creative phase, ideas flow freely, and that was one of those times," he says. "I kept drawing and drawing. I thought it was good not exactly what they wanted. At the first meeting I showed it to them and it took them about a day to get over their shock, and I had developed floor plans and perspectives. So I learned from that experience."

Lesson Ten: Be true to yourself

This story does have a happy ending: George came away from the 10-year experience with a much better sense of what he wanted in a house—and a plan from Ridd that he could be excited about and that matched his budget. There's even a library in the final design, comfortably scaled down to size for him.

To get the house that's right for you in as many ways as possible, says Don Dickinson, an architect of 25 years based in Madison, Connecticut. "Think about who you are, and what you want to be. If, for example, you're uncomfortable in large gatherings, a big house isn't going to make you feel at ease. Homes reflect their occupants, they don't change them. If you can resist thinking of a house-building as a transactional process, you'll get a better design." ■

Specialized images of the TV project house under construction: www.davidmccormick.com

Log Barn Legacy

He rebuilt a salvaged house, barn one 48-foot log cabin time, then turned an old granary into a sunroom and another into a garage.

It took 30 years, but what's two decades when the family place will last generations.

By Meredith Lyman, homeowner Photographs by Nathan Kirkman



When it came time to rebuild his log home, ABOVE, the granary that once housed a herd of COWS, Lyman turned it into a sunroom. OPPOSITE, Lyman says, "I literally cannot live [anywhere] else. It's just a place where I can live."



AS I WATCHED LOUIE, THE LAST OF OUR HOLSTEINS, BEING loaded up the ramp onto the cattle truck, it finally sank in that this family farm was sold. I was 18—young enough to think building farms out of log holes in the belly of the big old trees, playing in the woods with my brothers, and exploring the dunes, old granary. All of that was now gone.

When I grew up, I didn't become a farmer, but my wife, Karen, and I wanted to raise our kids in the country. About 20 years ago, we began looking for an old farm-house to restore. We were willing to renovate ourselves, but we didn't have a lot of cash and the last thing we wanted was a money pit with more structural problems.

As we searched and "What am I, a farmer?" we began to notice that many old farmhouses in our area seemed to have a special quality. They were old, but they had been well cared for. And these thick, old growth logs? They were still solid, long after the trees had rooted away.

Now, when I was a teenager, I had actually rebuilt some small log cabins on a campground my father owned after he sold the farm, so I knew the joys of using these logs and joining them back together. Granted, rebuilding a house was often would be more complex than anything I had ever taken on, but Lyman and I were young, fearless, and, some might say, foolish.



the process before & after

It was the open porch and beam construction of a loggery that RIGHT that the homeowners envisioned would allow for the big windows that they wanted for the interior spaces. ABOVE.



After looking at more than a dozen farmhouses, we found a two-story log house owned by the estate of a deceased bachelor who had lived in just one room for much of his life. It was 1995, and the house had been in the same family since 1967. It had no running water, the ridiculous foundation was crumbling, and the siding was falling off. But those underlying logs were solid, and the price was right: \$1,000. Now we just needed to shove it right under the 2-acre farm of our old house a year or two.

BARN ONE

Before we could load her up, we had to take her apart. We rolled up our sleeves and started ripping off the exterior siding and then tore out the exterior walls. Not long into gutting places, we found the jangling of metal inside the wall—say, a stack of gold coins, but hundreds of beer-bottle caps left by some mischievous builders decades ago!

Thermal insulation, we soon realized, was the building's evil. After demolition, we discovered original doorways large enough for a horse wagon. The neighbor and our new home was a "house barn," built so that the workers could live in one half and their animals could live in the other.

The next step was to haul the timber and use it via a truck bed to the new site, and that's when reality set in. The logs were grey and covered with plaques from the gnaw of 100-plus years. The day we moved the last one, it was raining heavily and the logs started to sink into the ground as they took on water, seemingly sitting as we watched. Hooked over the muddy landscape and thought, "Wow, here we stand!"

By the next day, the rain had stopped and the ground had started to dry up. We stacked the logs on a new poured concrete foundation (using homemade rebar we stacked to our dad's old tractor), then blomed them when they were all set in place, and chiseled the joints.

For several months, we spent nearly every night, weekend, and vacation day framing and finishing, commencing 45 seasons each way from our existing home to our work-in-progress. We did have subcontractors for plumbing and electrical work, but even then we pulled wires for electricians and did both work for the table whenever we could in our own.

During the house grew as a class, 2,300-square-foot lot to work with. We decided to build secondary 2nd exterior walls so that we could keep the whole timber frame structure exposed on the exterior. We also constructed a second roof above the original so that we could insulate it without hiding the original timbers within.

When we moved in—in January 1998, eight months after we started—we had spent all the money we had. In fact, we lived with plywood subfloors as our "finished" floor for more than 12 years.

Interiors were also a labor of love, including a reinforced masonry wall to which heavy logs are set in mortise on the east-west. ABOVE LEFT and a pine staircase, LEFT, that leads up to the children's bedrooms, tucked in the barn's chapel.



what we did

Demolished and assembled a log home, moved it away and attached it as a sunroom, converted a conservatory into a three-car garage.

Remodeling cost: About \$200,000.

Time frame: Twenty years so far.

Where we lived: San Francisco Bay area.

Where we splurged: On windows. \$2,000.

What we like differently: Consistency of the construction materials.

Our biggest challenge: Shoring the massive greenwood ground supports.

How we unwind: Spent \$3,000 to move it to a property.

our floor plans

1. The ground floor of the house was moved into a garage, a kitchen and half bath, and a living room. The garage was attached to the south side of the house where it would be used as a workshop.

2. The house's original second floor was moved into the barn. We added three more bedrooms and two baths. I left the sunroom and built a library.





The first grocery the homeowners built had seen an outbuilding that came with the land and purchase. They converted it into a detached three-car garage with a children's playroom in the second level. ABOVE.

BUYING BARN CAN BE HABIT FORMING

After a few years in our new home, we started to worry about how exposed those legs were to extreme weathering. We decided to build a protective megaporch. That added the timber but made the interior really dark—especially during long Wisconsin winters.

Okay, then we thought a window in the living room would solve the problem. Using a chain saw, I cut a new rough opening (with a log house, there are no headers and jacks) and sawed out those double-hung windows. That helped, but the house still begged for more light. Years passed, our dogpenns grew, and so did our business. When we finally had the budget for a room that would give us the light we needed, we couldn't find a design. They were all too modest.

The next was the family thought of the idea, but we realized that our detached garage, which we had converted in 1997 from an old grocery that served our property, had an open, post-and-beam construction that allowed for huge wall openings. Those old grocers were well built because they had to support the weight of the grain. Look at a 150-year-old barn—the house might be crumbling, but the grocery is still standing. So we set out to find one to retain, and in 2001 we got lucky. Despite years of neglect, the company owner measurements of the 1904 grocery that we found just nine miles from home were still square, down to 1/8 inch, a testament to the original craftsmen.

Farmers are a superstitious folk—showing upon their doorstep and offering cash for rickety buildings, but when we convinced the grocery's owner we were serious, \$450 sealed the deal. Snapping the siding and roofing was easy, but after spending the better part of an afternoon trying to pound popcorn off the old stucco and stone, we realized we had a job on our hands.

We left the job and started to think of other options, but Mother Nature threw a curveball. The next week, tornado warnings went out, and we were afraid that without support the grocery's framework might collapse. Lynne and I, along with some friends, threw a dozen boards into our fire cracker, gathered a couple of hammers and a box of nails, and uped to the grocery. We hurriedly nailed diagonal boards on each side as lightning was striking the ground nearby. We finished just as the winds really started to blow.

Fortunately, the tornado never came, and the building stood firm. We decided that rather than completely demolish the grocery, we would hire a house mover to transport its frame to a new site and a crane to set it on a new foundation.

When that was done, we got back to work, and after eight, week-end, and vacation spent building all over again. But since we weren't doing the time pressure we had in the first project, we took our time and three years later our megaporch was finished, a whole new main house with an floor-to-ceiling stone fireplace, arched walls, and four-tier pine floors—finally—complete.

MAYBE JUST ONE MORE

When we first started moving logs in 1985, Lynne and I weren't really looking on a preservation project; we were simply looking to build a country home as a hedge. After 19 years, it's great to be at a point where we have a mixed 3,500-square-foot home. I'd like to think I'm excited, but I can't take my eye off the neighbor's barn just a stone's throw away. It would make a great workshop. (Only serious buyers 14)

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1 dismantle

After long hours log by log, bottom the general used pry bars to remove the 15th-century beam is wooden siding. The house has been subdivided over 100 years, so not even these old-and-planters will. Log work is rewarded with Megs. Making sure they would be put back in their original order.

How to Move a Log House

They were young, on a budget, and wanted that house—badly. Here's how a couple moved it to their new building site all by themselves.



2 transport

Using Boulder's old tractor built designed to hold the logs, one at a time, and place them onto trailer loaded with log skidders which carried them to the new house site. Once there, the logs had to be organized in the proper order of their dismantling.



3 reassemble

A contractor dug out a basement and poured the concrete foundation before the Lyons began re-creating the road structure of the log house. Sketched before photos, and the Megs Worker (unavailable) the assembly.



4 close it up

Once in place, the log house is dismantled, both on the inside and outside, and a cedar shake roof added behind all the log house. And the third wall of the log house is again a four-sided log wall, and a cedar shake roof added before the plumbing between logs.



5 house sweet home

While they didn't change the original log for use as a window placement or replace the Lyons did add four chimneys and a new roof and porch to protect the logs. Cedar siding covers the logs along the roof and wall and cedar shakes the roof. The primary house was added to the new log.



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What's new in the world of interior design?
 Just because it's new doesn't mean it's better. But if you're looking for a new way to decorate your home, there are a few things you should know. First, the world of interior design is changing. It's no longer just about the furniture and the walls. It's about the entire space, from the lighting to the color scheme. And second, the world of interior design is becoming more and more focused on the individual. It's about creating a space that reflects your personality and your lifestyle.

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PHOTOGRAPH BY
MICHAEL EVERTON



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It's also a good time to apply a fertilizer with a controlled content (that's the first number in the three-number sequence on fertilizer bags) and a high phosphorus content (it's the second number in the sequence). Then, several weeks before the ground freezes—tip: No winter fertilizer!—divide roughly the same fertiliser. Phosphorus stimulates root growth; the rest of the fertilizer ensures that there's food for the grasses to consume as early come spring.

Securing Loose Siding

I added aluminum siding to my house a while back, but now many of the metal caps that cover the outside corners are coming loose. Is there any way to glue them back on?

John Decker, Columbus, Ind.

Tom Silva replies: Looks like as if the corner pieces weren't pushed up right to the original siding when they were installed. If more than a third or so of the pieces have this problem, you should take them all off and reinstall them properly by nailing them to the sheathing with a couple of 1½-inch aluminum or stainless steel nails. You won't need any glue.

Remove the topmost piece first and work your way down: a small pry bar will probably be helpful. Then check the condition of your sheathing and framing. If they're soft, wet, or rotten—much more likely, explain why the pieces are coming off—they replace the damaged wood and cover the corner top to bottom with a self-adhering water-proofing membrane.

Put the corner pieces back on at the bottom of the wall and work up, pushing them in tight as you go.



Two caps on the corners of aluminum-sided houses should be installed with the backing board to shed water properly.

As: WHAT IS IT?

D Nozzle guide

It fits over the nozzle on a tube of adhesive and keeps the bead centered so the caulk you're dispensing along your hand—over the top edge of a joint.



Quieting Noisy Pipes

In the cold months, when we turn on the hot water in the bathroom, the pipes make a ticking noise. It's so loud we can hear it in the adjacent bedroom. The noise eventually stops if we keep the hot water running. During the summer it doesn't happen at all.

Robert Sipes, Tulsa, Okla.

Richard Trethewey replies: If you wouldn't hear the ticking if you only took cold showers and not just because your screens would drain it out.

Hot water running through a cold copper pipe causes the metal to expand and rub against any wood or material it's touching. When that happens, the pipe makes a ticking sound. This is likely to happen where the pipes go through the framing. The same thing happens sometimes in hydraulic heating systems. Once the pipe stops expanding, the ticking stops.

Installing plastic spacers or supporting the pipes or hangers will prevent the noise. Wrapping the pipes with pipe insulation will muffle the sound somewhat. But these steps are best taken before the pipes are buried in the walls.

If the ticking really drives you crazy, try turning down the temperature on your water heater or boiler just a bit. Otherwise, you have to carefully cut open your walls and add the above items.

Tips for Laying Stone

I've installed enough ceramic tile to feel fairly confident with the basic techniques of layout, cutting, and setting. But I've never worked with stone, and I'd like to give it a shot when we renovate our bathroom. Are stone installation techniques much different than those for ceramic tile?

Kathy Silverwood, Sudbury, Conn.

Joe Ferrante replies: They're similar in many respects, but if you don't pay attention to the differences you can really mess up a job.

For one thing, you can't scope and snap stone the way you can with ceramic tile; you'll definitely need to rent a wet saw. Also, there's going to be a greater variation in colors and thicknesses, so you have to work a lot by eye and feel. For instance, you won't be able to rely on Peter-Kit shaped plastic spacers to keep everything even unless you use "spacers" stone cut to a uniform thickness and size.

Stone is more porous than ceramic tile, and you have to be careful about what it touches. Some light-colored stone will absorb the gray color from ordinary thinset adhesive, so it's best to always use a white thinset with stone. Grout, too, can stain some stone. Before you grout, seal the surface with a penetrating seal, or sometimes called an impregnator. Sealing also makes grout cleanup easier.

Joe Ferrante is a long contractor in Massachusetts who has worked primarily with historic preservation.

Fixing Screw Pops In Drywall

I've read about and seen in drywall, but what do you do about screw pops? My house is five years old and I've had this problem on the walls and ceilings for four years. I've fixed a dozen or so by screwing each one back in and spackling over it, but I'm getting tired of the repair work.

Boyd Farrell, Grinnell, Iowa

Tom Silva replies: Some pops aren't nearly as common as nail pops, but they do happen. Sometimes they're caused by screws pulling out of the framing because they're too short or have few threads. Maybe they're too long and there's too much I hold the drywall tight to the framing.

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Ask This Old House

ing as it shrinks. Or maybe some screws missed the center of the studs and have worked loose or were never too deeply below the drywall surface.

At the point, there's not much you can do to cost continue making your repairs. Just be sure the new screws are the right type. And in light of corner braced 2x4s being long for 1/2 inch, check drywall 1/2 to 3/4 inch deep—and be placed in undamaged spots solely in the framing.

Fertilizing Fruit Trees

I have a variety of fruit trees, including apple, peach, cherry, plum and pear. What type of fertilizer should I give them?

—Jaguarhead, Saginaw, MI

Roger Cook replies: Most people don't know that fruit trees need different fertilizers than other types of trees. Most fruit are a deciduous with 4-14 inch of nitrogen. For example, a peach tree needs 1/2 inch of nitrogen to a fruit tree will encourage it to put out a tremendous flush of vegetative growth without flowering and without fruit.

Now nitrogen 1/2 to 2 1/2 inches better. Ideally the nitrogen component should be water-soluble, so it can be mixed with water and used. Water-soluble nitrogen breaks down slowly over a period of months. Compost or horse and chicken manure are great slow-release fertilizers. Water-soluble nitrogen breaks down all at once when it comes in contact with water and gets the tree a quick start.

Fertilize fruit trees in the fall or winter before they go into dormancy and don't add the nutrients. Check with a local nursery or a cooperative extension service for the best time to do this in your area.

Stopping Bay-Window Sag

What's a bay window installed about five years ago. Unfortunately it now sags about 1/2 inch and the double-hung windows on each side don't close properly. What do you suggest?

—Tim Beckwith, Safford, FL

Tim Sliney replies: When I hang bay windows, I use a stainless steel cable support system that is anchored to the wall framing at least 30 inches above the window sill. I connect them with a cable that you could install this "invisible" system to support your bay if you pull off most of the roof sheathing. Or you can support it on a couple of structural members or wood brackets.

Either way, you'll have to get the bay back

to where it belongs. I'd use two small hydraulic jacks, one under each corner of the bay. Support the jacks on 2x4 planks so they won't sink into the ground when you start to lift. Raise the window slowly and evenly until it's about 1/4 inch above level, then attach the cable supports or the brackets to the house framing. Once the brackets or cables are secure, lower the jacks until your windows should work again.

The bay will protect the cables from the weather. You need to provide the same protection for the brackets. Cover them with roofing felt, install a 1/2-inch medium-density fiberboard—my favorite weather product! Enclosing the brackets this way also allows you to thoroughly insulate the underside of the bay.

Lawn Bald-Spot Cure

We can't get grass to grow in the space between the house and the flower bed around our dear Japanese maple. Is this area just too narrow for grass, or has something else been causing the problem?

—Ed and Emily Price, Taylorville, IL



When deep shade and foot traffic conspire to kill the grass, lay a rhizome strip along the path or patio in the dead area.

Roger Cook replies: Grass does tend to grow under—let anyone who's worked out the points you're talking about can tell you. From looking at your photo, I'd say you have bigger problems with compacted soil than too much foot traffic and too much shade from your maple. Loosening the soil to a depth of 6 to 8 inches with a D-handle garden fork will eliminate the compaction temporarily. Plowing might allow more oxygen to reach the ground. But my recommendation

is to remove the maple, struggling areas of lawn to reseed them. Then replace the maple, period of the year—but not during the height of the tree's growth—and put in a deep layer of mulch to help the soil. The maple's shade-loving groundcover such as a piece of mulch.

What Comes First: Wall Painting or Floor Refinishing?

I'm planning to have the interior of my home painted and the existing hardwood floors refinished. Should we paint first and then finish the floors, or the other way around? Every contractor I've talked to has a different opinion.

—Joseph Brady, Ridgewood, CT

Tom Silva replies: You can do it either way. My painting contractor, Jim Clark, wants to be last so he doesn't have to repeat baseboards that have been splashed with stain or polyurethane or kicked by a sander. Besides, even the most careful flooring contractors might leave a fine dust everywhere, he says.

My flooring contractor, Pat Hunt, sees things a little differently. He prefers to be last because floor finishes take a while to fully cure so he doesn't want exposure, walking on them even when they're covered with protective tape. He also says it's pretty common for other contractors to damage or spill stuff on a finished floor. The way he figures it, it's much easier to touch up paint than a floor finish.

As the general contractor, I sometimes have the flooring finisher go last, and sometimes let him go first. It all depends on what client for the project schedule. I have that kind of flexibility because I know Clark and Hunt will put a lot of effort into protecting the other guy's work.

Saw for Tight Spaces

I'm looking for a tool to saw through the wood flooring under the kick space of my kitchen cabinets. I'd like to remove a layer of

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Ask This Old House

saw flooring without removing the cabinet to any suggestions?

—Walter Robinson, Pasadena, CA

Tom Silva replies: You can use a table saw to cut it. It's essentially a small circular saw with a 2 1/2-inch diameter blade mounted on an extended Arbor. Use carbide-tipped blades on wood floors and a dry cutting diamond blade on concrete tile or stone. You won't find this saw for sale at a home center, though. Check with a local tool rental yard or a company that supplies tools to the flooring trade.

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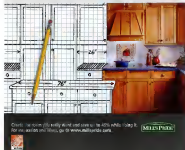
Has your fall cleaning left you with a huge pile of leaves? Don't bother with burning or bagging. Turbomaxx will compost your leaves or yard waste.

♂♂ Toss leaves into the bin, and let mold and earthworms, with help of an occasional bird, do their work. In about a year and a half, junk is time for sorting, you'll have fresh compost. —ADDI/RYAN/AMC

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Skill Building

Adjust Euro-Style Hinges

RELATED STORY p. 108
Make the Door 'Feel'

Did you know how to get your cabinet doors back in alignment?

When it comes to fine-tuning the doors on a kitchen cabinet, the Euro-style hinges are arguably definitely the most advantageous over old-fashioned ball or leaf hinges. Both require accurate drilling of screw holes into cutting of new lines. But if a ball-hinged door is misaligned, the door comes off; these hinges have built-in adjusters, and the screws have to be used. By contrast, a Euro hinge can easily be adjusted up and down, in and out, and side-to-side, all while the door is in place. All you need in most cases is a screwdriver.

The best Euro hinges have three adjustment screws embedded in the hinges mechanism hidden under a cover plate that just pops off. When turned each screw adjusts the door's position in one direction (by "feel," if you will). The illustration below shows the code for one popular hinge.

For a hinge with only one or two embedded screws, turn them to see which way they move the hinge body. To make any other adjustments, loosen the screws holding the hinge plate to the cabinet, move the hinge, work and drill new holes, then retighten the screws. —*JOHN HENDEL*

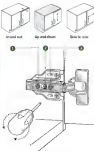


ILLUSTRATION BY JEFFREY M. HARRIS



How to Plant Grass Sprigs and Plugs

RELATED STORY p. 77
Seeding a Lawn

Seeding is not the only way to plant a new lawn. Here are two other methods you can do yourself.

"The key to a perfect lawn is having a grass that's perfectly adapted to your climate and soil."

—TIMOTHY TUNNEY, EXPERT AND AUTHOR OF *SEEDING THE PROJECT LAWN*

Most warm-season grasses that grow well in southern and western states produce very little seed, so it's more prudent to plant plugs—small pieces of sod—or sprigs, which are dormant roots. Centipede, St. Augustine and Bermuda grasses are commonly sold as sprigs. Zoysia is the most popular grass available in plug form. While these grass clones contain their own type of seed, or sometimes even seed, they produce top-notch turf. As with seed, the best time to plant plugs or sprigs is in fall or spring, so they have a chance to establish themselves before winter's cold or summer's heat return.

Sprigs. Prepare your soil as if you were going to seed it. Then scatter the sprigs on the ground. Push each one firmly underground and cover with soil and mulch. Any part of the grass that is not underground will dry out. During the first week, syringe the area with water about five times a day, depending on the temperature, and then taper your watering schedule until you're watering about twice a week; you must keep the soil uniformly moist to a depth of 2 to 3 inches to encourage root growth.

Caring for a New Lawn

Like any newborn, those fresh new seedlings sprouting in your lawn need to be coddled a while. Here's the regimen to follow until they become tough, established turf.

Water. Water every morning for 15 to 30 minutes. Two to three times a day, take up the top 1/2 inch of soil, deep-draw water until water soaks to evening, which encourages the roots to charge.

When grass is 3 1/2 inches tall. At about 2 to 3 weeks, change watering schedule to every other day (5 to 30 minutes at a time). From this point on, grass needs the equivalent of 1 inch of water a week.

Mow. Wait until the seedlings are 3 1/2 inches tall before the first mowing. Cut your mower with a sharp blade set to a height of 2 1/2 inches and a grass catcher bag to collect the clippings, which otherwise will smother the new seedlings.

Pick a time of day when the grass is dry—a mower blade damages wet grass more easily—and make sure your lawn is in the shade (if you don't pull out the seedlings).

Fertilizer. At that watering routine, two to three to four weeks after seeding the seeds, apply a dose of starter fertilizer (labeled 10-20-10) which stimulates root growth. —*JOHN HENDEL*



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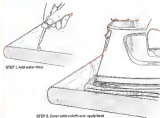


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Skill Building



STEP 1. Sand with fine-grit sandpaper.

STEP 2. Cover with colorfast wood putty.

Erasing Unsightly Dents in Wood

RELATED STORY: 10 Ways to Fix Your Car's Oil Leak

Don't settle for dented-in your wood floors, doors, or furniture. And find out how to restore them.

Who doesn't want dentations in painted wood to be easy to hide, you can just patch and paint over it. That sort of fix will leave a dented wood that has a clear finish, such as a floor, a door, or a workbench. But you may be able to make them disappear using a couple of old furniture refinishing tricks.

The underlying science is simple. A dent is nothing more than crushed wood fibers. Heat and moisture make wood swell. So targeted application of both these things to a dent should make the crushed fibers return to their original shape, or something close to it.

There are two ways to do dent wood. One involves sanding with a sander, you have to be within reach of an outlet. The other uses heat and should only be done when it's safe to light a match.

Caution! Do this treatment only work on bare wood. Before you apply the heat you have to do the finish.

Caution! If the dent is on a wall, the wood fibers are not as broken as the one sanding, patching, and painting of wood or a full replacement of the old system. Unless you want to get up on a chair, sanding and apply putty and paint.

Steam it out. Set the steam as high. Place water in the dent with an ironing board (if it is on a horizontal surface) or a bucket with a watercolor brush. Cover the area with a dish towel and apply the heat of the iron to the middle of the wet spot on the towel. Lift the towel once as the steam dissipates and observe what sort of dent with bright light and a low angle. It may take a couple of steamings before the dent is gone. A thorough sanding of the entire surface will not just the area with the dent, but the surrounding area to make most dents disappear.

Burn it out. Put denatured alcohol on the affected area and immediately set it alight. It is impossible to avoid lighter will keep fingers out of the heat. The flame is only visible and there is no smoke. But you will see the alcohol soak briefly before it vanishes. As with steam, a couple of applications and a sanding may be necessary to get rid of severe deep dents. —THOMAS SAREK

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FOR MORE INFORMATION ON OUR DIRECTORY PAGE 108



Walls From Logs

INSULATED STORY ■ 134
"Log from Logary"

Top add this water with long technique
Multi post-built log long-lasting and
expensive to build

Concord masonry is a simple method of building rustic walls out of cheap, readily available materials—logs and mortar. The technique is also remarkably durable. Many of the houses constructed this way are still standing almost 100 years later, even in harsh northern climates. Maintenance is minimal, about the same as what is needed for a kitchen.

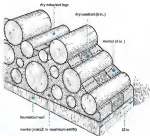
Insulated masonry walls are at least a foot thick. A layer of stone mortar bed, 4 inches for the exterior bed, and for the finished insulation, which has an R-value of 20 to 30 per inch—about the same as bone fill fiber glass. (Sandstone is also added to the mortar.) It's used to lay down, though. There's the plenty of stacked on and off you're all the wood you need.

Get the cover. The process starts a year before the actual building, when the trees are felled—preferably in the spring or early summer—debarked, sliced into 1-foot lengths and allowed to dry. A good wall yields roughly 100 square feet of wall. Concord building expert Bob Day of West Chazy, NY, recommends softwoods because they are stable, but any kind of wood will work, as long as it's dried bark-free. You'll need a variety of log diameters, so cut up the branches, too. Split pieces come in handy as corner and along edges.

Mix your dough. Using 1/2 cup mortar mix, 1/2 cup dry ingredients, then the wet sand, or Add water little at a time until the mix is uniformly damp and as stiff as cookie dough.

3 per sq ft
3 per sq ft
3 per sq ft
3 per sq ft

Anatomy of a concord sandwich



Lay the wall. On the foundation, spread a layer of mortar over both the inner and outer edges. Make each layer about 2 inches thick, 4 inches wide, and even out the top. Then pour the dry insulation between them. Lay the logs across all three layers so their ends extend about 1/2 inch past the mortar. Keep the spaces between the logs uniform—less than 2 inches wide—when you place the logs to touch. (This layer includes and looks like a 1/2 inch between the logs with the next layer of mortar and repeat the steps—insulation, wood, mortar—like a brick layer. You can make a wall up to 12 inches high at one time. For taller walls, allow the mortar to set for 24 hours before continuing.

Finish. About 45 minutes after you settle the logs, pack the mortar smooth around the log ends. The process, called pointing, is usually done with a 3/4-inch wide, 1/2-inch wide, 1/2-inch wide butter knife with the finished end to a 3/4-inch wide. Over heavy masonry can be saved by good pointing. Day says.

Let it breathe. When the wood in a finished wall gets wet, it dries out quickly through the end grain, never holding moisture in or otherwise never rotting. Day says. Pointing or sealing the ends will actually reduce the wood's—and the wall's—breathability. —NATHAN DAYTON



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Norm's Notebook



Keep an Eye on the Cup

It's easy to tell if a board is straight—just sight down its length. But a lot of people don't check to see if it's cupped—checked across its width—before they buy it. This is especially important with boards 5 or more inches wide because if you try to force one flat with a few extra nails it will often split lengthwise.

To check a board for cupping, lay a square or string edge across its width. Or a ball, a gap of $\frac{1}{8}$ inch or more on the concave side splits trouble, unless you plan to make barrels.

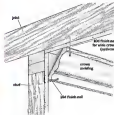
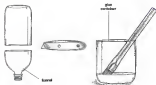
Sometimes cupping is caused when one side of a board—the convex side—picks up moisture and swells more than the opposite side. In that case it may be possible to reduce the cup or reverse it completely simply by letting the board dry out evenly.

New Uses for Plastic Bottles

The usefulness of plastic bottles doesn't end when they're empty. Once when I had to pour oil into my lawn mower and didn't have a funnel handy I just traded my recycling bin and cut the top off a plastic water bottle.

I've also cut off the bottoms of water bottles to serve as disposable glue containers to hold a small amount of paint for touch-ups or to mix up epoxy. If you want to do something, make sure the bottle has a smooth bottom—avoid those big soft-drink bottles, which have bumps on the bottom that make a thorough mixing next to impossible.

There's another nice thing about bottle bottoms: You can just pinch the rim to form a spout for pouring out liquids. Anybody have other uses for plastic bottles?



Working Solo With Crown

Installing long lengths of crown molding without a helper always presents a problem: How do you hold one end up while fitting the other end?

My solution, a couple of 3x3 finish nails. Drive one into a stud just below where the molding's lower edge will be and a couple of feet from its end. If the piece is usually long—say 12 or 12 feet—you may need a couple of these nails spaced a few feet apart to prevent sag. And if the piece is really wide, tap a second nail into a joist just above the top edge will be. This nail'll keep the molding from bowing out of position.

After the crown is hung and the helper nails are taken out, their holes usually get covered up by the caulk filling the joint between wall and molding. But if not, just hit them with a bit of spackle.

Check Out Vintage Projects from Previous Seasons

What's on TV Now

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

HGTV

WATERTOWN

The show kicked off its 20th anniversary with the renovation of a sprawling 1,880-Queen Anne-style Victorian in Watertown, Massachusetts.

CHARLESTOWN

This Old House worked on the expansion and renovation of an 1890 Second Empire townhouse on Bulfinch Hill Street in the historic Boston neighborhood of Charlestown.

WEST PALM BEACH

This Old House turned a sunny Florida home where they transform a Mediterranean Revival-style bungalow into a delightful tropical compound.

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The restoration of a 1937 single-story Victorian is featured in this project, which focused the removal of asbestos siding and the overhaul of the kitchen.

MINNESOTA BUNGALOW

The renovation and extension of a 1930s Levitt-style bungalow is the featured project.

LOCAL BROADCAST STATIONS

LUXEMBOURG

Wired architect Graham Gund designed a second floor addition and a great room for this radical transformation of a typical 1960s home (instead of inventing the past, Gund inserted the present, and the result was a house designed with modernism).

This Old House CLASSICS



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pg. 19-28

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LANDSCAPING

Rocky River, Spring's Ahead
pg. 33-34

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The entire estate unfolded on an otherwise peaceful swath of Lancaster County, Pennsylvania, farmland that Zinsensons, who were Sweds, acquired in the early 1700s. In the late 1700s, he sold off a parcel of that land to David Carpenter (a fellow Swed), who later built this large Swedish house on what is now known as the Franciscan Carmelite Monastery.

Though the local school district was considering demolishing the structure to create driving access to its new athletic fields, it is now working with the Historic Preservation Trust of Lancaster County to find a preservation-minded buyer to acquire the house and its one-acre lot. A state grant of \$100,000 will help the new owner pay for infrastructure improvements, such as updating its water, sewage, and electrical lines. A portion of that money will also help defray the cost of improvements to the house's exterior, which is protected by a historic preservation local ordinance. —*Jeffrey H. Walker, PI*



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