

1 family 1 handyman

BUILD IT. FIX IT. LIVE IT!®

BUY SELL
OR
stay?

**EXPERT DIY ADVICE
EVERY HOMEOWNER NEEDS**

**18
INSTANT
FIXES**

1-HOUR PROJECT

**BONUS
BEDROOM
STORAGE**

**TOUGH
CLEANING
JOBS MADE
EASY!**

PLUS: BEST PAINT COLORS | ELECTRICAL BOX BASICS | RADON TESTING

JUNE 2019

BEHR



DRESSED TO
IMPRESS

 MQ1-19

A COLOR FOR ANY INSPIRATION

Bring your color to life in one coat* with BEHR MARQUEE®.

*LIMITATIONS APPLY. FOR MORE INFORMATION, VISIT BEHR.COM

Exclusively at





Buy. Sell. Stay?

If you'd asked me awhile back how many times the typical American moves into a new home in their life, there's no way I would have come up with 11.4, the estimate I recently came across. That's nearly once every seven years! If I'd anticipated that when I was young, I would have sunk my retirement funds into a moving company!

Over the past few months, my editors have dug into the processes not only of buying and selling—but also of staying. As real estate markets across the country continue to evolve, there are pockets where it might make more sense to stay put rather than pack up in favor of vaulted ceilings and a big backyard for Rover to roam.

On the other hand, nothing quite compares to the feeling of moving into a new (to you) home. The excitement that comes with more living space, new neighbors, the possibilities of projects to come. It's likely this dose of adrenaline that fuels our frequent desire to be in a new place—or, if you're anything like me—the fact that you're ready for a fresh “to-do” list.

This issue is packed with tips, tricks and projects that will make the process of buying and selling easier (check out the tips from a professional home stager on p. 30). We've also included a stockpile of great advice to bring back the honeymoon phase of the house where you'd like to stay put.

Since 1951, Family Handyman has been helping homeowners make their homes better, whether they're buying, selling or staying. Based on the mail I see daily, we're on the right track.

I hope you enjoy this issue, wherever you are on your house journey.

— Gary Wentz, Editor-in-Chief

P.S. I'd love to hear the one piece of advice you wish every new homeowner knew. Shoot me an email at feedback@familyhandyman.com, and I'll share my favorites.



Contents

JUNE 2019

family
handyman

EXPERT
DIY ADVICE
SINCE 1951

FEATURES

30

Instant Impact

18 easy, low-cost upgrades to take your house to the next level.

36

Extreme Cleaning

Whether you're buying, selling or staying, here are tips to make your place shine.

43

Home Inspection Tips

Expert advice for home buyers on asbestos, mold, cracks, and so much more.

48

Under-Bed Drawer

Seasonal clothes, gear, favorite sweats—who couldn't use more bedroom storage?

52

Modern Planter

It's beautiful as well as practical—and you can build it in an afternoon.

58

Electrical Box Basics

We'll show you how to pick the best junction box and buy the right size for the job.

COVER PHOTO: C WOODS PHOTOGRAPHY/SHUTTERSTOCK



Even the earth needs a trusty barber.

When only a perfect cut will do, you need a zero-turn mower you can count on. One that can take on large lawns and thick grass efficiently, reliably and comfortably. Every time. The Kubota ZD and ZG Series. Built to keep your lawn looking good. Real good.



KubotaUSA.com

© Kubota Tractor Corporation 2019. This material is for descriptive purposes only. Kubota disclaims all representations and warranties, express or implied, or any liability from the use of this material. For complete warranty, safety and product information, consult your local Kubota dealer. For the complete disclaimer, go to [KubotaUSA.com/disclaimers](https://www.kubotausa.com/disclaimers) and see the posted disclaimer.



Kubota®

Shape your world.



9



DEPARTMENTS

9 Stuff We Love

Ratcheting pruners for clean cuts, a dead-center stud finder, and no-cut toilet bolts.

14 Handy Hints®

A convenient watering jug, a garden straightedge, and tips for handling a hosta situation.

20 Home Smarts

Sealing an asphalt driveway, painting your home to sell, DIY testing for radon, and more.

63 Best Pro Tips

Roof tear-offs are fun! Said no one ever. Here's how to tackle this job safely and efficiently.

74 Work Wheels

Submersible LED trailer lights, transmission fluid tips, and dump trailers for monster loads.

76 Reader Info

Want to know how to subscribe, renew, send us a hint, and more? Check out this page.

80 Great Goofs®

Ten feet of trim in a 9-foot car, needless demolition, and the water dispenser that wouldn't.



MORE **family handyman**

facebook.com/thefamilyhandyman

pinterest.com/family_handyman

youtube.com/thefamilyhandyman

instagram.com/familyhandyman



BECOME A FAMILY HANDYMAN **INSIDER**

Get INSIDER Access to:

- ✓ 60+ Project Plans
- ✓ 24/7 Online Classes
- ✓ Monthly E-Newsletter

JOIN TODAY: FHINSIDER.COM

NEW! THE ULTIMATE DIY SUBSCRIPTION PACKAGE

We are happy to introduce Family Handyman INSIDER, the ultimate DIY package to help you accomplish your home improvement goals. Get access to more than 60 downloadable project plans and 45-plus quick classes, with more added each month. You'll also receive *Family Handyman* magazine with digital access, the Exclusive Insider e-newsletter, and access to the Ask the Experts Insider Inbox. **Visit FHINSIDER.COM to start your 14-day FREE trial today.**



INSIDER SNEAK PEEK



PROJECT PLAN: SCREENED PORCH

Beat the bugs and spend more time outdoors this summer with this screened-in porch. Its exposed rafters and open soffit look great on many house styles. Each project plan at Family Handyman INSIDER includes detailed instructions, how-to photos, materials lists, cutting lists, and construction guide.



QUICK CLASS: TILE A KITCHEN BACKSPLASH

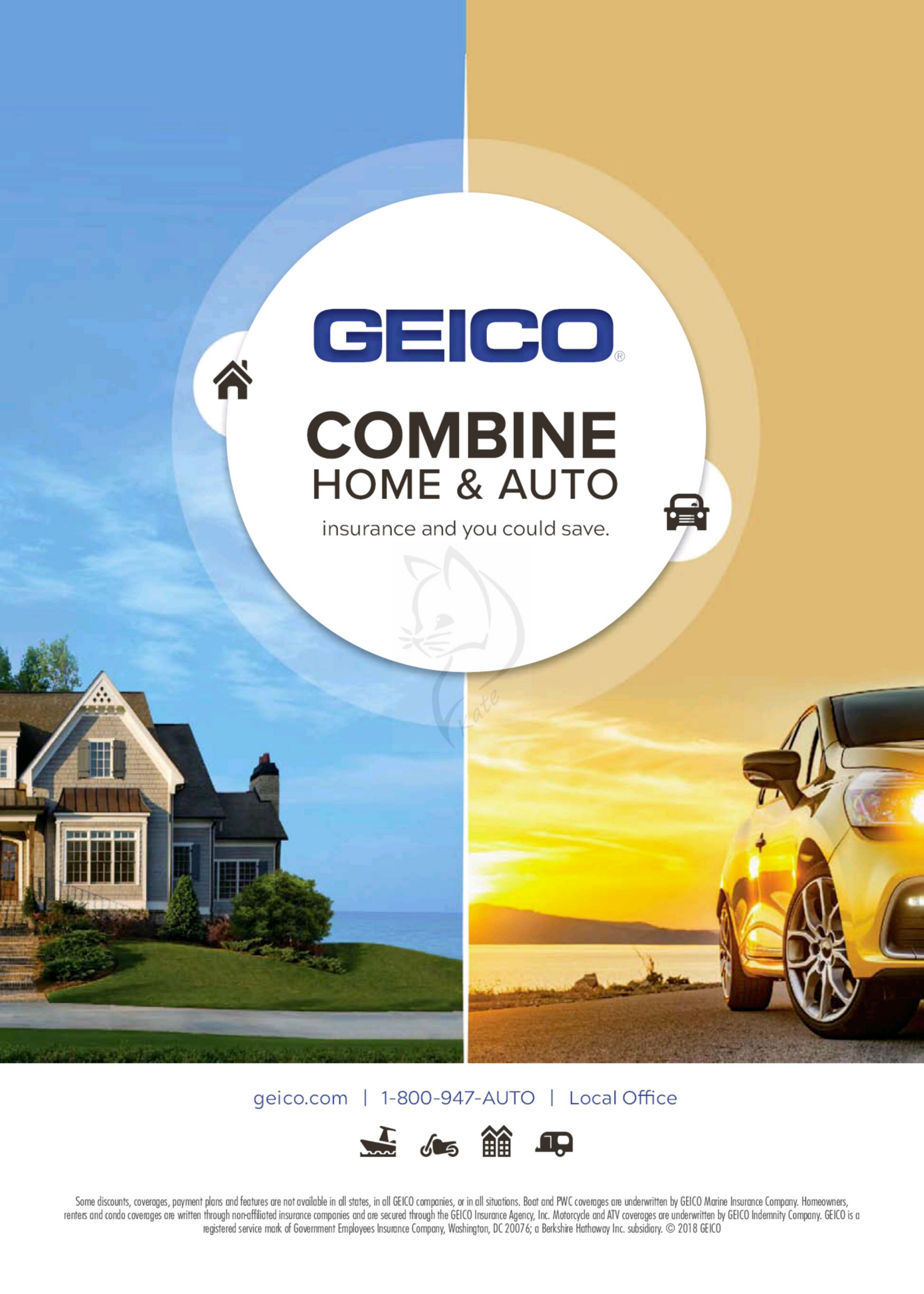
A tile backsplash is beautiful, easy to clean and inexpensive. We'll show you step-by-step instructions on how to install a subway tile backsplash, how to work around outlets, and more. Each quick class includes detailed written information, instructions, and tips from experts.

family handyman
INSIDER

TAKE ADVANTAGE OF THE 14-DAY FREE TRIAL

Your trial-period access to all the quick classes and project plans will begin as soon as you complete the checkout process. Visit us at the address below to sign up today!

FHINSIDER.COM



GEICO[®]



COMBINE HOME & AUTO

insurance and you could save.



[geico.com](https://www.geico.com) | 1-800-947-AUTO | Local Office



Some discounts, coverages, payment plans and features are not available in all states, in all GEICO companies, or in all situations. Boat and PWC coverages are underwritten by GEICO Marine Insurance Company. Homeowners, renters and condo coverages are written through non-affiliated insurance companies and are secured through the GEICO Insurance Agency, Inc. Motorcycle and ATV coverages are underwritten by GEICO Indemnity Company. GEICO is a registered service mark of Government Employees Insurance Company, Washington, DC 20076; a Berkshire Hathaway Inc. subsidiary. © 2018 GEICO

Stuff We Love

Our favorite DIY tools, materials + gear. By Mike Berner

Pay less, get more!

Twelve-volt tools have become extremely powerful of late and are all you need for most jobs. Skil's PWRCore 12 brushless 1/2-in. drill is a weekend warrior's dream. It has all the characteristics of an expensive drill: a 1/2-in. chuck, two speed settings, torque adjustment and a heavy-duty feel.

Some other great features of this drill include a

hybrid chuck, which lets you quickly insert a hex shank bit without having to tighten the chuck's jaws. The batteries have a USB port, which allows you to plug in a charging cord—and with all the devices we own, that's pretty sweet! But the best part is the price: This drill kit costs about half as much as other 1/2-in. 12-volt drivers. The driver, charger and 2-AH battery are \$70 online.

STUFF WE LOVE

EASY-ON-THE-HANDS GARDEN PRUNERS

Trimming flowers, trees and shrubs is a workout with conventional pruning shears. Even in your prime, your cutting hand can ache in no time, and if you have arthritis or a weak grip, you might think you have to hang up your gardening gloves for good. But ratcheting pruners use leverage to make cuts much easier—you can cut through a branch as thick as 1 in. in three or four easy squeezes.

Expect to pay at least \$20 for a pair of ratcheting shears. This top-of-the-line pair from The Gardener's Friends (\$40 online) features a replaceable blade and a built-in blade cleaner.



Dead-center stud finder

The ability to find the studs in a wall is an essential DIY skill. But using a stud finder can give you mixed results, leaving you with a lot of marks on the wall and little confidence as to where to set your nail.

Craftsman's new stud finder, on the other hand, auto-calibrates as you move across a wall and tells you when it's found a stud and when it gets to the center of it. It even has a hole you can use to mark the center of the stud, completely removing the guesswork. And tilting it at an angle won't skew the results. You can get this model at Lowe's for about \$18.



ONE CORD TO CHARGE THEM ALL

With all the electronic devices commanding our attention, keeping track of them and their various chargers is an organizational feat. Mini USB, micro USB, USB-C, Lightning port and on and on and on. A single cable with multiple connectors can take the place of all those individual cords. USB multi charging cables are widely available, locally and online, for \$10 or less.



FIX THE FUEL NOT THE ENGINE

When you want lawn stripes, you want them now. Don't waste time yanking the pull cord, use STA-BIL 360° Protection every time you fill your gas can. This ensures every piece of equipment you fill with that gas can is already treated with superior corrosion control, water removal, and fuel system cleaners. If you want to be the envy of your neighborhood, start with STA-BIL.

sta-bil.com



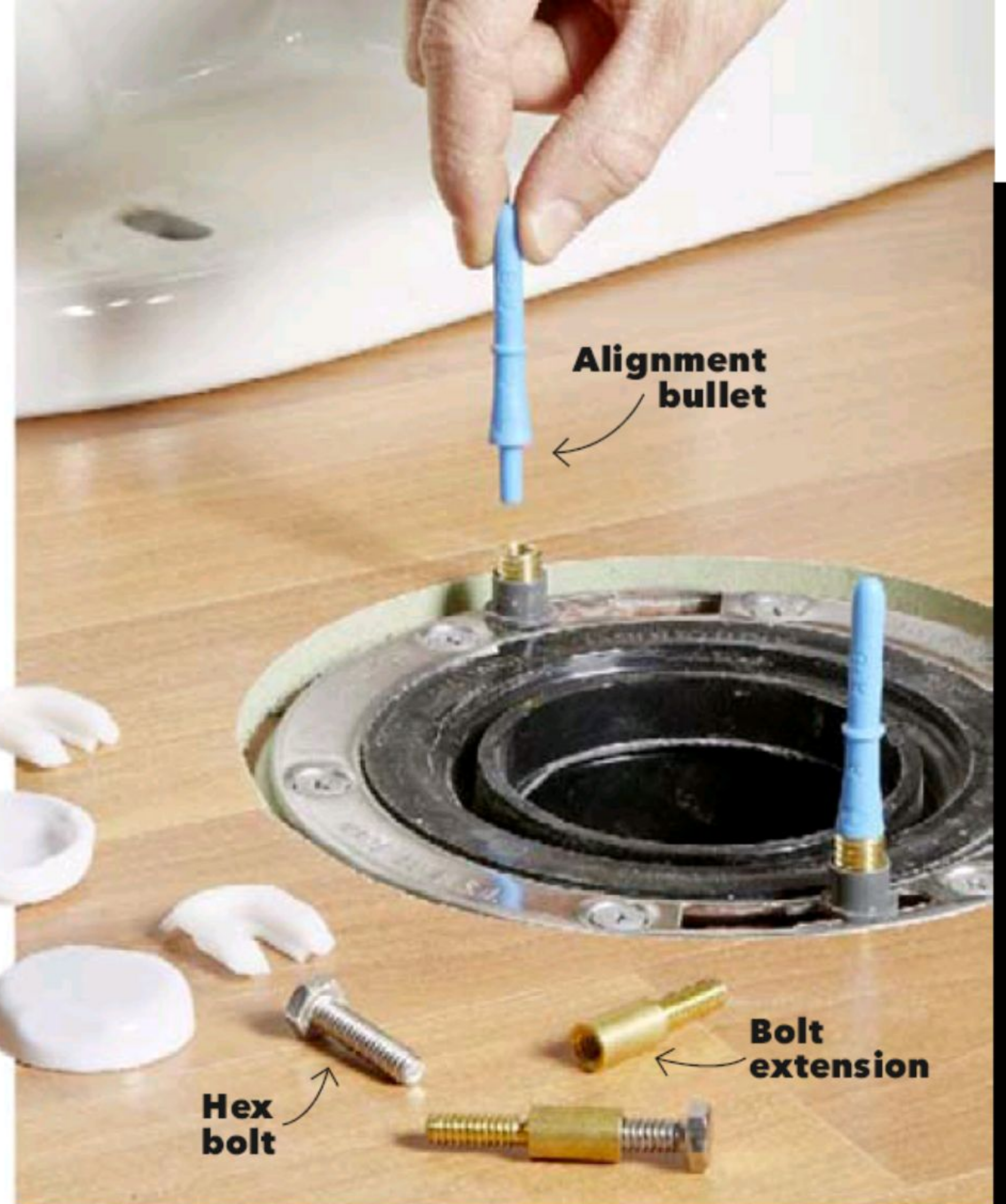
**FILL THE CAN.
TREAT THE FUEL.**

STUFF WE LOVE

A SURE-THING SHUTOFF VALVE

As if it's not bad enough to have plumbing problems in an older home, when you go to fix them, your shutoff valves will likely fail too. Those older, stop-type valves that need to be turned four revolutions may not completely stop the water, or they may just break off, leaving you with a crazy mess.

Replace them with quarter-turn ball valves (\$10), which are ultra-reliable and cost just \$1 more. In many cases, you can install them with push-to-connect fittings for copper or PEX—no soldering required.



No-cut toilet bolts

Standard toilet bolts flop around as you're setting the toilet in and require cutting after you tighten them. You can eliminate these headaches with Zero Cut Bolts. This adjustable bolt system allows you to change the length of the bolt using a double-threaded bolt extension. The alignment bullets help you place your toilet over the flange.

In most cases, you'll just need the hex bolt to secure the toilet, but if you need the extra length, just add the bolt extension, cap it off and you're done. These adjustable bolts let you install your toilet without hassles and cost about \$10 at home centers and online.

RUST ERASERS

What sets Sandflex blocks apart from other abrasive blocks is that there's grit all the way through, making them more like an eraser than a sanding block. They can be carved to fit any profile, so they're a great option for sanding molding. They're ideal for removing rust and polishing

shop tool surfaces, hand and garden tools, even stainless steel sinks. You'll find them in coarse, medium and fine grits online or in woodworking stores for about \$12 for a set of three, or \$4 apiece.





LifeProof™ Porcelain Floor and Wall Tile



At The Home Depot, trade professionals find all the high-quality products they need to get the job done right. And if they're members of Pro Xtra, they also save time and money, thanks to exclusive member benefits like volume pricing, special offers, purchase tracking and more.

Make sure you're loading up on all the benefits Pro Xtra provides. Join today.

[HomeDepot.com/ProXtra](https://www.homedepot.com/ProXtra)

Handy Hints®

Clever solutions from our readers

SHARE
YOUR
HANDY HINT
WITH US!

submissions@
familyhandyman.com

Watering Jug

When my trusty old metal watering can rusted through, I decided to reuse and recycle instead of buying a new one. I rinsed out a milk jug and drilled a few holes in the cap. It's a good size, lighter weight and easy to carry.

MATT BOLEY



Message board door

We recently installed a new entry door with glass panes. As a bonus, the glass is a great message center. We use a dry-erase marker to leave notes and reminders.

WENDY L. HAAS



PENCIL TRICK FOR SANDING

When you're sanding an edge flush to the adjacent surface, first draw a squiggly pencil line across the joint. Use the marks as a guide to help you sand flat and avoid sanding through the plywood's veneer.

TIMOTHY MANKA



HOLD YOUR HOSTAS!

Our hostas were always spreading and taking over entire flower beds. So I divided them with a spade and removed the excess plants, roots and all. Then I stuck 12-in. lengths of 8-in.-diameter duct around each plant. Works like a charm!

TOM DVORAK



GARDEN STRAIGHTEDGE

If you need to pull up sod for a new garden or flower bed, one good way to cut straight lines is to use an edger and a 2x6.

MARCIA WILLIS



MAKE YOUR OWN HEATING PAD

Next time you have a sore neck or back, don't reach for an electric heating pad. Instead, fill a sock with uncooked rice, tie the end and microwave it for two or three minutes. It works better than a heating pad because it conforms to your body. You can even add cinnamon or lavender to make it smell nice!

EMMA WONG



FIDDLE STICKS

When you're using a belt sander, you need to make sure the piece you're sanding stays put. You can't just clamp down the board—the clamps will block the belt sander from reaching the edges. The trick is to screw boards, sometimes called "fiddles," to a corner of your workbench. As you sand, the spinning motion will push the workpiece against the fiddles, holding it in place.

TRAVIS LARSON



✓Yes



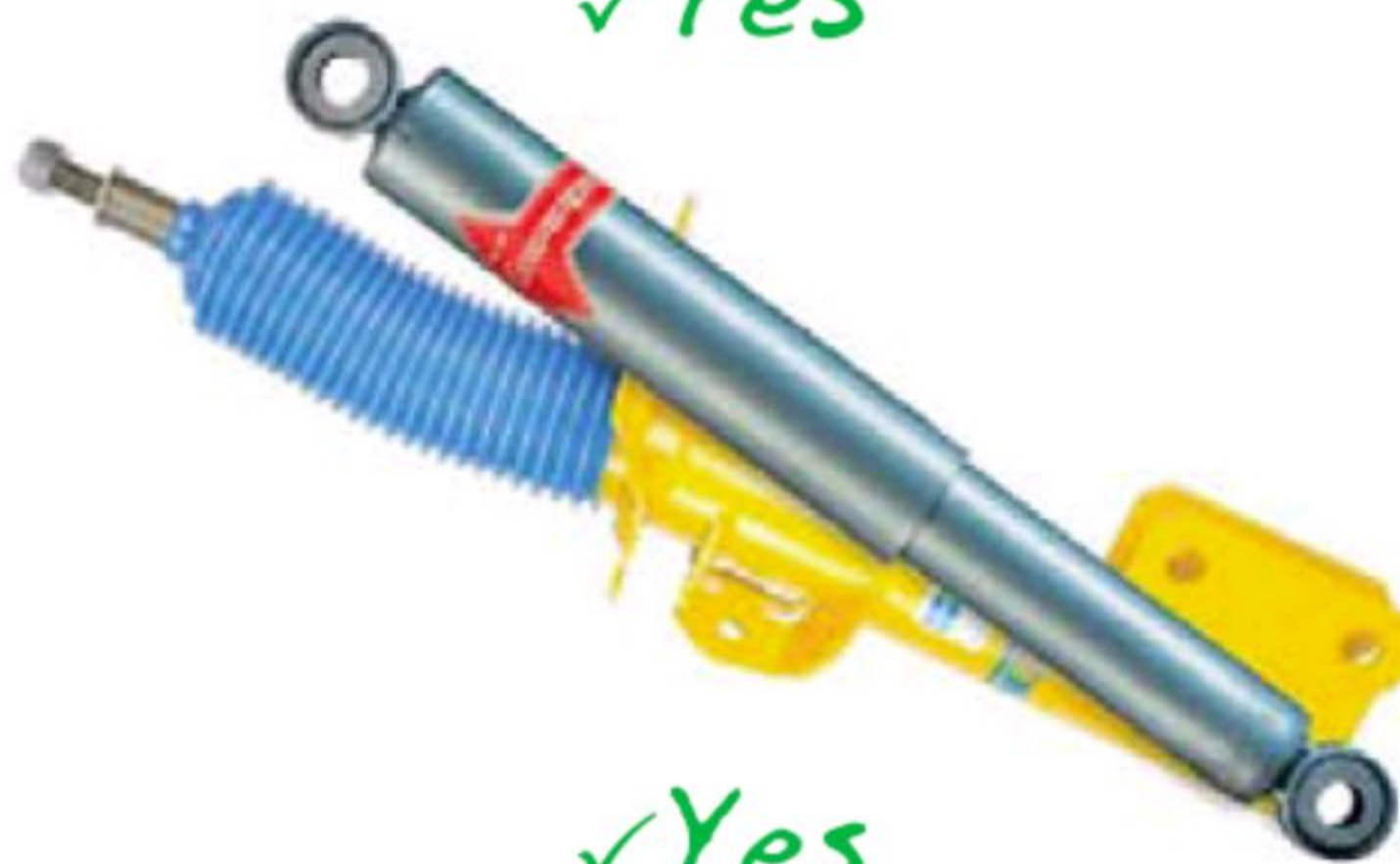
✓Yes



xNo



✓Yes



✓Yes



✓Yes

✓ Reliably Low Prices
 ✓ Easy To Use Website
 ✓ Huge Selection
 ✓ Fast Shipping
www.rockauto.com



MARK E INDUSTRIES

GOOF PROOF[®] SHOWERS



GOOF PROOF LINEAR DRAIN
6 Length Combinations from 27" - 60"
 designed for use with all waterproofing methods



Roll On



Vinyl Liner



Sheet Membrane

Prod. ID GPLD/26/60 Description: 6 length combinations ranging from 27" to 60" Tileable insert top (metal grates not available) with female receivers to attach Quick Pitch Float Sticks directly to the drain. Can be used with any waterproofing method including Roll on, Vinyl, and Sheet Membrane. Install with or without a curb to create a barrier free shower.

Check our website for videos and more information: www.goofproofshowers.com

Mark E Industries, Inc. Toll Free: 1-866-771-9470 • info@markeindustries.com



DIY FLOOR MATS

Want to keep your car's original mats free of road salt and mud? Cut carpet scraps to fit on the floor. We found these carpet samples for less than \$2 each at Home Depot. When the carpet scraps get dirty, you can take them out and hose them off. Caution: For the driver's side, be sure to punch holes in the corners of the carpet and lash it to the seat rails. This prevents it from sliding forward and interfering with the pedals.

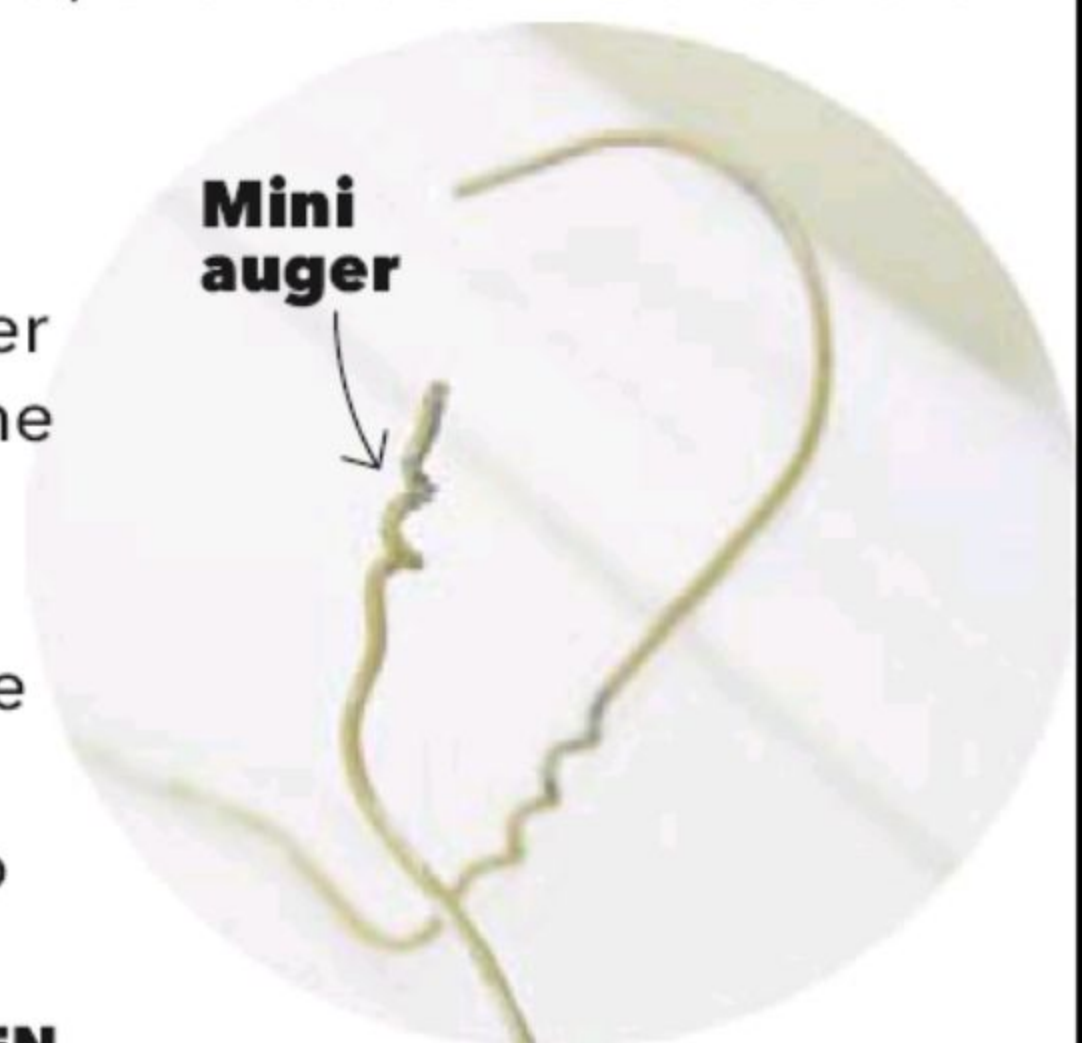
ELIZABETH FLAHERTY



COAT HANGER DRAIN SNAKE

A wire coat hanger makes an excellent drain snake for pulling out hair clogs. First, untwist the wire under the hook. This leaves the hook at one end and a miniature "auger" at the other end. Push the auger end down the drain to the clog. Bend the free end 90 degrees, forming a handle. Crank the handle so the auger bores into the clog, allowing you to pull it out.

BRAD HOLDEN



Handy Broom Cleaner

Every time you sweep, clumps of dust and hair collect at the ends of the broom bristles. To get rid of them neatly, hot-glue a wide-tooth comb to the top of the dustpan. Just run the bristles through it to remove the debris.

JAREN LEMANCZIK

BURN SAFELY

with the
Stainless Steel
**Portable
BurnCage™**

PERFECT FOR:

- Sensitive financial documents
- All burnable household waste*
- Old leaves and branches

STAINLESS STEEL CONSTRUCTION is lightweight, durable, and portable (it folds for easy storage).

PERFORATED LID and sidewalls maximize airflow and trap embers.

1600° TEMPERATURES mean more thorough burning with less ash.



No more
UNSAFE and
UNSIGHTLY
rusty barrel!

19F83X © 2019



* Always check local ordinances before burning.

Go Online or Call for **FREE** Information Kit,
Pricing, and Factory Direct Offer!

BurnCage.com
TOLL FREE **800-731-0414**



Now Available
in 3 Sizes!

Installs easily

Each 5-ft section comes with 3 brackets
& 6 screws. Do entire home in 3
or 4 hours.

Prevents Erosion

Runoff is changed to a 3 foot wide band
of soft rain-sized droplets.

Self-Cleans

Unique louver design allows leaves and
debris to blow or wash away. Self-cleaning
system protects you from climbing ladders.

Maintenance-Free

All-aluminum Rainhandler louvers make
messy, leaking gutters history.

Protects Property

Eliminates clogged, overflowing gutters &
downspouts. No ground erosion, No more
destructive ice dams.

Guarantees

Money-back satisfaction guaranteed
for one full year, 25-year warranty.

For **FREE** information call or fax
Ph: 800-942-3004, Fax: 800-606-2028

SPECIAL OFFER! 30% OFF

Mention Code **FH0619**

when you call or enter online at checkout

www.rainhandler.com

OFFER EXPIRES **06/30/2019**

RAINHANDLER
USE RAINHANDLER
GET RID OF YOUR GUTTERS



Spring
into savings!

with
Cacheé®



Threads directly
into the spout,
hidden from view.



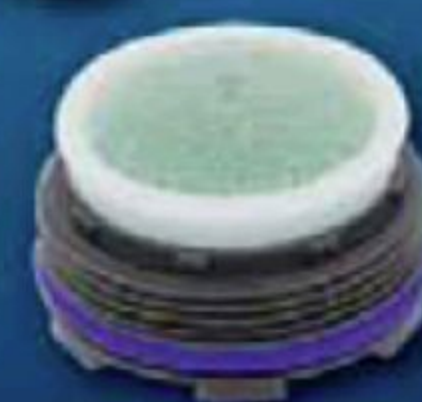
Easy installation
into select faucets.

Hidden aerator keeps
the beauty of your faucet.

Available in 4 different sizes.



1.8 GPM



1.5 GPM



1.2 GPM



In stores and online
www.homedepot.com

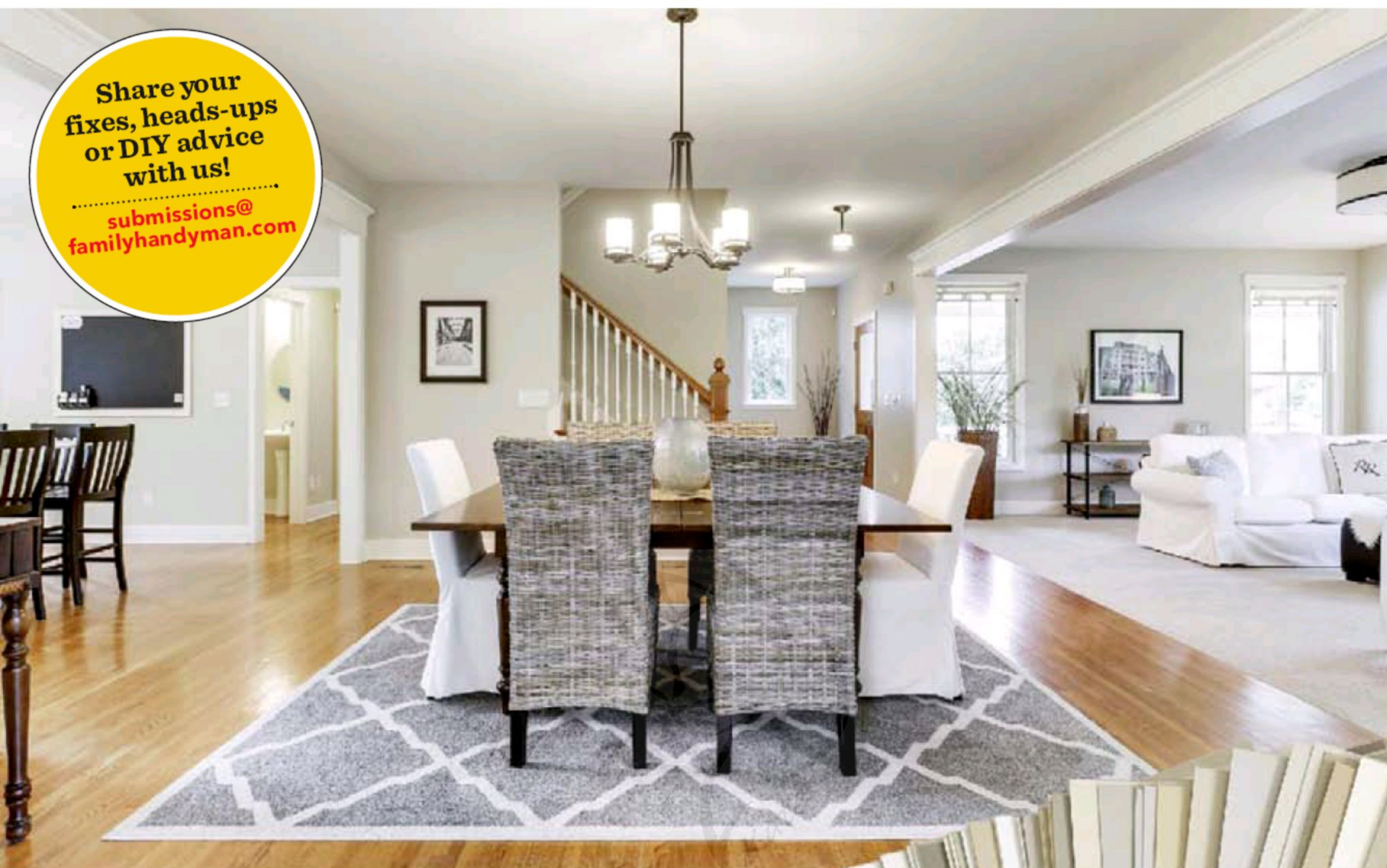
NEOPERL®

flow, stop and go®

www.neoperl.com/consumer
For more information,
email us at
info@neoperl.com

Share your
fixes, heads-ups
or DIY advice
with us!

submissions@
familyhandyman.com



Paint Your Home to Sell

A fresh coat of paint is hands down the best way to spend your time and money to get the biggest payback when you sell your home. It's far less expensive than remodeling, and it's something you can do yourself. But choosing the right colors is the key.

Experts say you should paint all the rooms a neutral color. But what exactly does that mean? "Neutral" depends on what other colors are present in the room. All paint colors have undertones that may not really come out until they are in a room where other elements such as woodwork and furniture bring them out.

In my home staging kit, I carry 11 x 14-in. samples of "neutral" colors to see which one appears truly neutral in any given room.

I have 75 samples, but there are three that I come back to most often: For a room with white trim, I use Sherwin-Williams "Agreeable Gray," shown at right. For a room with dark woodwork or dark wood elements, I use Sherwin-Williams "Accessible Beige," shown above. In a room with honey oak, I use Benjamin Moore "Manchester Tan." Any paint store can match these colors using other paint brands.

MELANIE ZAEILICH
STAGER AND STYLIST



MEET THE EXPERT
Melanie Zaelich is a
certified home
stager and stylist,
and the owner of
Happy Place
Interiors
(happyplace
interiors.com).



BEFORE: Dark walls

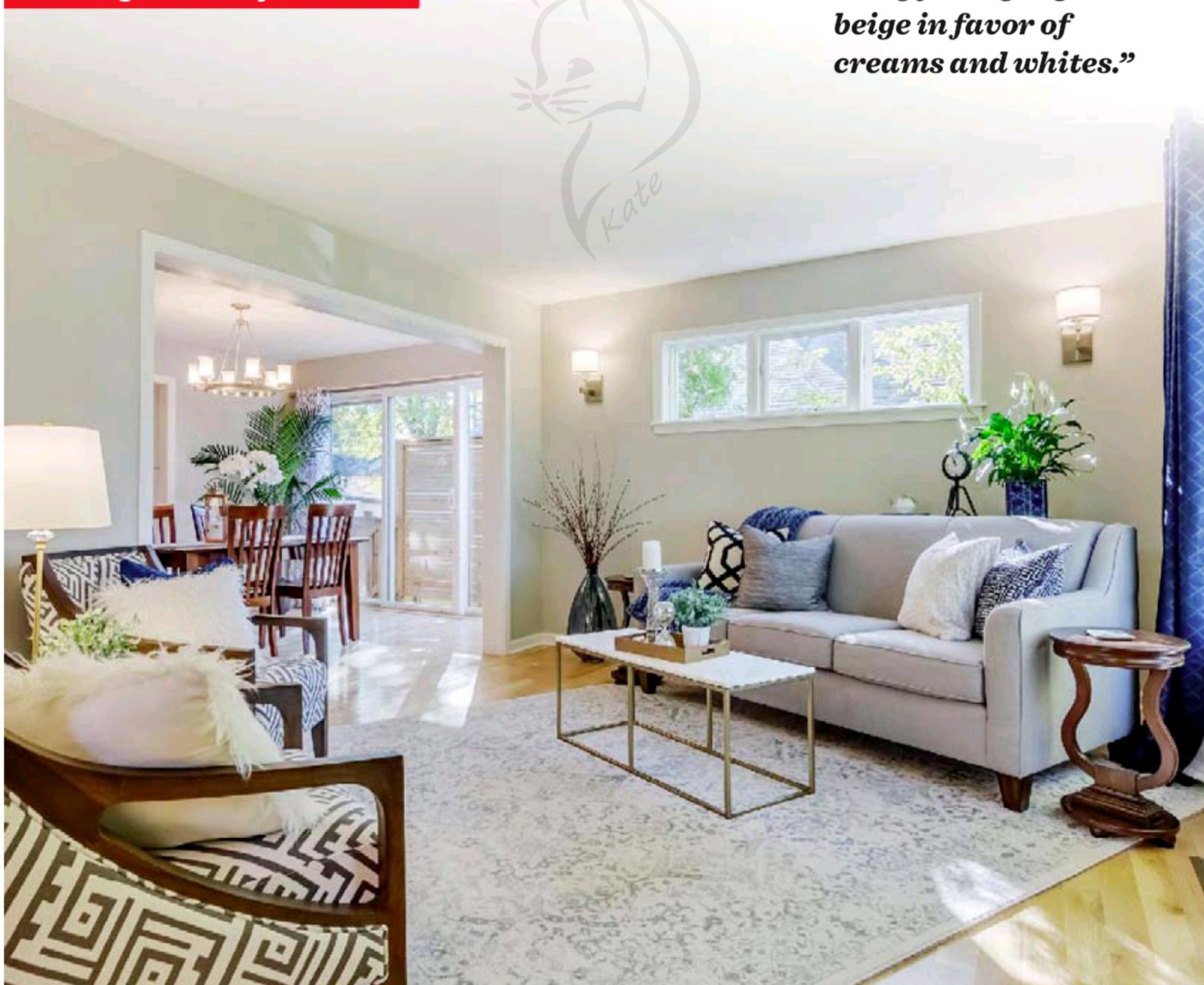


Tip:
Give your front door some color. Brick red is the most common, followed by navy blue.



“In the U.S., trends start on the coasts and work their way to the middle. Right now, in coastal cities, I’m seeing a trend moving away from gray and beige in favor of creams and whites.”

AFTER: “Agreeable Gray” wall color





SEAL AN ASPHALT DRIVEWAY

The driveway is often where you take your first step when checking out a property. This project is a bigger investment in time and money, but a week-end of work and \$200 to \$400 worth of material could land you an offer. Even if you're not selling, a coat of sealer will extend the life of your driveway. For detailed instructions, go to familyhandyman.com and search for "asphalt driveway."

TUNE UP OR REPLACE YOUR STORM DOOR

Before replacing a storm door that's not working quite right, see if either of these fixes helps.

■ **The damper.** Don't let the storm door slam shut and catch your heel or force you back to pull the door closed. Adjusting the pressure of the pneumatic closer is a simple turn of a screw at the end of the closer. It might take a few tries to get the door to ease into the latch just right.

■ **The handle.** If the handle isn't working properly or is an eyesore, buy a replacement and install it yourself. There are several handle configurations, so be sure to get one that's compatible with your door. You may have to drill new holes in the door; just follow the instructions included in the package.

■ **Replace.** If the door is beyond repair, you'll be glad to know that replacing it isn't difficult. For an easy-to-install door, you may spend \$200 to \$300, but you can go from your old door to the new door in an hour with minimal tools. For detailed instructions, search for "storm door" at familyhandyman.com.



What Should My Real Estate Agent Do for Me?

Whether you're buying or selling a house, remember that the real estate agent you hire is there to negotiate for you, says Antoine Thompson, national executive director of the National Association of Real Estate Brokers. When challenges arise, "you want to have a good advocate working on your behalf."

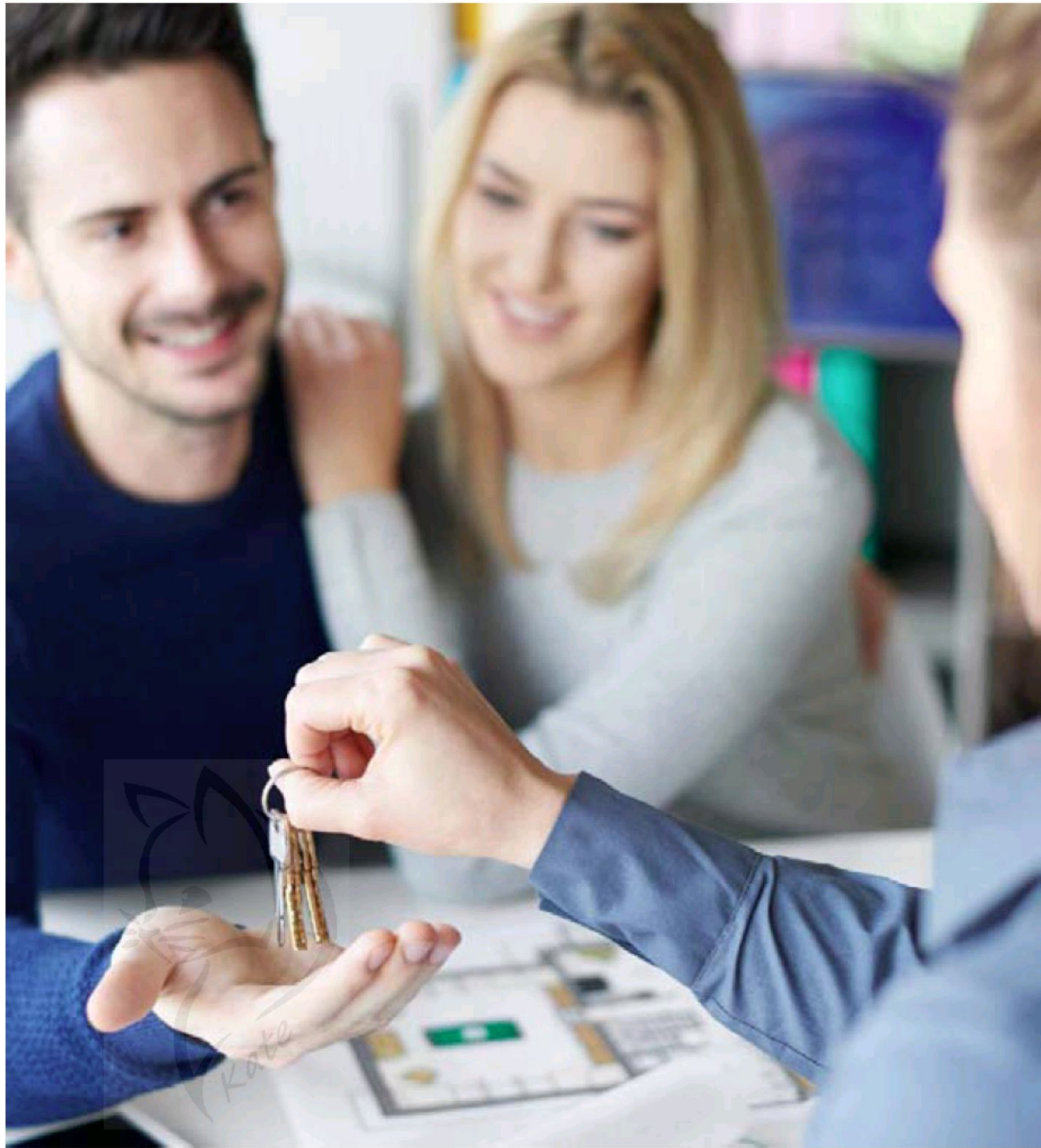
Here are some services you should expect:

When you sell

■ **Setting a fair price, and boosting value.** Your agent should bring a deep understanding of the local market, including current economic conditions and new developments that could affect values, to help you set a reasonable price, Thompson says. The agent should also have a keen eye for modest improvements (say, a new coat of paint in a popular color) that could significantly improve your home's appeal to buyers, he adds.

■ **A marketing strategy.** There should be a clear plan in place for publicizing your home, from professional photography and staging (setting up your house for showing) to getting the word out via social media and multiple websites, says Vicky Scarnuley, a licensed real estate agent in Trumbull, Connecticut. "They should help you evaluate offers and negotiate the best price," and help arrange ancillary services such as attorneys, title services and even moving companies.

■ **An open house.** Open houses take time and money to arrange, and not all agents offer them, especially for mid- to lower-priced homes. Even so, "I encourage sellers to ask their agents to do open houses," Thompson says.



"That gets traffic into the property, which reduces the amount of time it might be on the market."

When you buy

■ **A price advocate.** Your real estate agent should help you understand current market conditions for your area and the type of home you're interested in, and whether specific properties that catch your eye are priced fairly, Scarnuley says.

■ **Help with inspections.** Your agent should recommend qualified inspectors to thoroughly examine any home you're thinking of buying. "They should attend every inspection and be with the buyer every step of the way," Scarnuley says.

■ **Negotiating fixes.** If the inspection reveals flaws, particularly safety or health risks such as

structural problems, mold, septic, or asbestos issues, or water damage, a buyer's agent "should have the client's best interest in mind," Scarnuley notes. That should include negotiating with the seller to ensure problems are fixed before you move in.

Shop around

Real estate is a relationship business, so interview potential agents. In addition to their experience and knowledge, consider whether you enjoy spending time with them. "You'll be working together through what can be a lengthy and stressful process," Scarnuley says. "If the personalities aren't a good match, you should be able to find a better fit with someone else."

BY CHARLIE SLACK
CONTRIBUTING EDITOR

DIY radon testing & remediation

Radon is a colorless, odorless radioactive gas that's produced by decaying uranium. Radon is present in nearly all soils, and very low levels of radon gas are found in the air we breathe every day. Long-term exposure to high levels of radon trapped in your home can cause lung cancer.

How does radon gas enter a home?

Radon gas moves from the soil into a home. Although small amounts of radon can seep directly through pores in concrete, the major entry points are cracks in basement floors, sump baskets and the perimeter of slabs. Any house, of any age, can have elevated radon levels. It really depends on the way your specific house interacts with the surrounding soil. Your neighbor's radon level may differ significantly from yours.

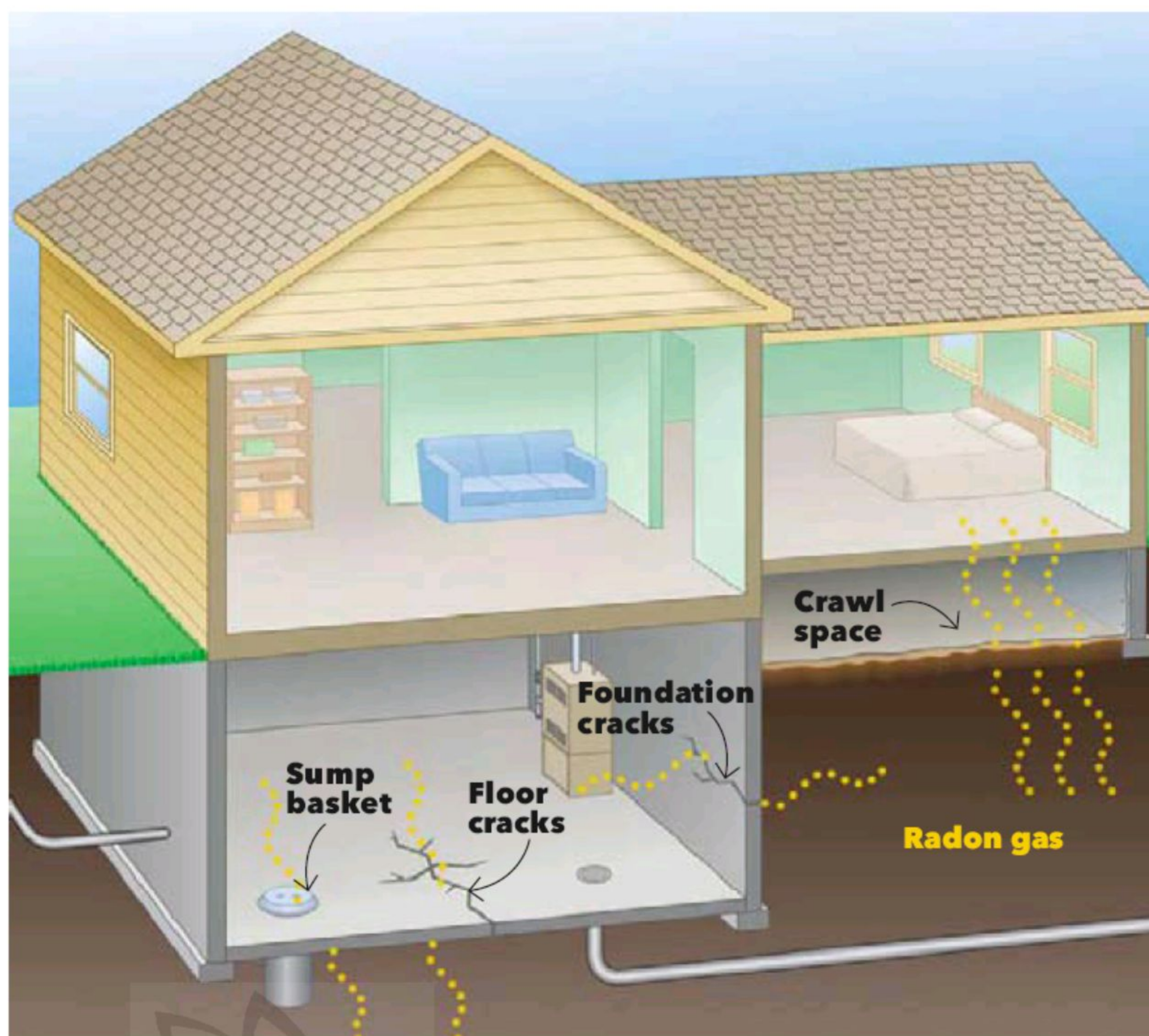
How do I test for radon?

■ Start with a short-term test for a quick assessment to see if further testing is warranted. Most are activated charcoal-based and measure radon levels for two to seven days. Mail the tests to a lab for the results. Short-term tests are available at home centers, hardware stores and online retailers for \$10 to \$40. If your reading is

above 4 picocuries per liter (pCi/L), do a second test.

■ If your short-term tests are high or borderline, try a long-term test kit. Long-term tests measure levels for 90 days to one year. Most are

based on alpha particle tracking. This is a more accurate indicator of average annual levels, which can vary significantly from day to day and month to month based on factors such as a drop in air pressure, gusty winds, soil moisture and



snow cover, which traps radon gases. Long-term radon tests are available through state radon agencies and online retailers.

■ If you live in an area with high radon levels, or just because of the fluctuating nature of radon levels, consider a continuous electric monitor, such as the Safety Siren Pro Series digital meter. These monitors plug into a standard outlet and can be used for both short- and long-term testing to give you a running average. They use an ionization chamber and sample the air continuously. Continuous monitors are available at home centers and online, and typically cost \$150 to \$200.

When to take action

The EPA (Environmental Protection Agency) recommends doing a second test if an initial short-term test registers 4 (pCi/L) or higher. A long-term test gives the most accurate information, but a short-term test is acceptable if you need the results quickly, such as for a real estate transaction, or if your first levels registered 8 pCi/L or higher. If a second test registers above 4 pCi/L, consider taking steps to reduce radon levels in your home.

How to reduce radon levels

Here are a few easy steps you can take that may reduce radon levels:

- Caulk foundation cracks, construction joints and other openings with polyurethane caulk.
- Install an airtight cover on your sump pump (choose a cover that allows access to your sump).
- Cover soil in crawl spaces with polyethylene plastic sheeting tightly attached to the walls. Use sheeting with a minimum thickness of 6 mil (available at home centers).
- Seal concrete. Note that the EPA has found concrete sealers to be a temporary solution at best.

These solutions are DIY friendly, and if your level is only slightly high, they might solve the problem. If not, they'll make further steps more cost effective and efficient. Once you've tackled these, retest. If levels are still high, consider installing a radon mitigation system. You can install one yourself or hire a pro.

VAL RIEDMAN

CERTIFIED RADON MITIGATION TECH

For more information, go to familyhandyman.com and search for "radon."





INTRODUCING OUR ALL-NEW **DIY** QUICK CLASS SUBSCRIPTION

Get access to our complete library of DIY University quick classes—including two new projects per month! Get the skills to replace or fix a broken toilet, build a workshop, add elegant kitchen storage, and so much more.



START FREE

No risk. Unlock access to expert DIY and home improvement classes today.



CREATED BY THE EXPERTS

Get 64 years of DIY experience from experts and instructors at Family Handyman.



24/7 ACCESS

Access your classes anytime, anywhere—with a computer, tablet or smartphone.

Expert Advice, Unlimited Quick Classes, Start Your 14-Day **FREE** trial now! >>

DIYUniversity.com

Smart Locks

Have you ever had the uneasy feeling you didn't lock the door when you left for work? Adding a smart lock gives a sense of security and enables other automations.

As with all smart devices, smart locks speak a variety of protocols (Wi-Fi, Bluetooth, Z-Wave and Zigbee). Knowing how you intend to interact with the smart lock—close range or remotely—will help you choose the right one. Z-Wave, Zigbee and Bluetooth are all close-range protocols, and Wi-Fi is for remote accessibility.

Close-range use

For close range, Bluetooth is the way to go. It works when your phone is within range of your lock, usually about 30 ft. Don't want to fumble with your groceries and keys in the rain? You can unlock the door before you get out of the car.

A number pad is an inexpensive close-range option. You can operate your lock with your smartphone or the number pad, and set temporary key codes for guests or a dog walker when you're away.

Remote accessibility

Most smart locks—even those with number pads and Bluetooth capability—have remote access capability. But you'll need a Wi-Fi signal, your smartphone, an app and possibly a gateway/bridge, which is a device on your home network that allows communication with a smart device that's not on the home network. You can lock the door, get notified when family get home, or even unlock the door for a package delivery—from anywhere.

Zigbee- and Z-Wave-compatible locks require a smart hub because smartphones don't speak these protocols natively. Samsung SmartThings and Wink are the front-runners in the smart home space and are compatible with many smart locks. Zigbee and Z-Wave allow easy communication between multiple devices by creating a mesh network. With Zigbee,



all the devices need to be within 60 ft. of each other. With Z-Wave, the range increases to about 300 ft.

Lock types

Locks come in two main configurations: dead bolt replacements and dead bolt retrofits. Dead bolt retrofits attach to your existing dead bolt and automate its movement.

Automation possibilities

Adding a smart lock to your setup not only provides added security but also unlocks some cool options if you integrate it with other smart devices. You can:

- Automatically have your lights turn on when the door is unlocked.
- Automatically lock your door when you leave or unlock as you approach.
- Trigger a certain playlist to play on your smart speaker whenever you arrive home.
- Turn on your A/C when you arrive home for the day.
- Log every lock/unlock action to a Google spreadsheet.
- Activate a security camera when you leave for the day.
- Lock your door using Alexa or Google Home.

CASSIDY NELEMANS
CONTRIBUTING EDITOR

SOME LOCK OPTIONS



AUGUST SMART LOCK PRO:
Works with August Connect Wi-Fi Bridge



NEST x YALE LOCK:
Works with Nest Connect



SCHLAGE SENSE SMART LOCK:
Works with Schlage Sense Wi-Fi adapter

LIVE LIFE WITHOUT PAIN

Plantar Fasciitis • Arthritis • Joint Pain • Heel Spurs • Back & Knee Pain



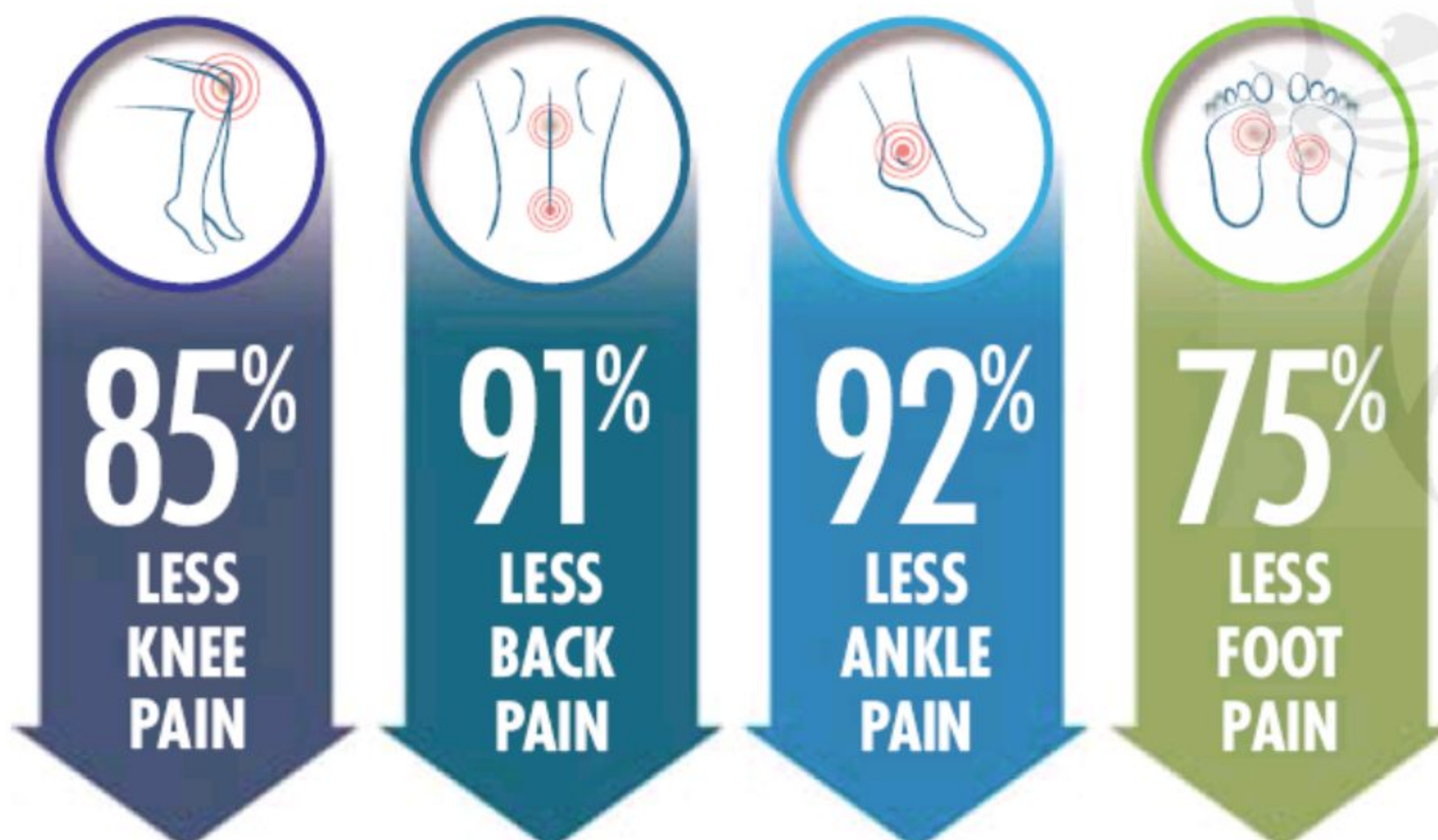
PATENTED VERSOSHOCK® SOLE
SHOCK ABSORPTION SYSTEM

“I’ve had lower back pain for years. Walking in these shoes was life changing for me. I feel like I’m walking on air.”

– Bill F.

Enjoy the benefits of exercise
with proven pain relief.

- ✓ Ultimate Comfort
- ✓ Renewed Energy
- ✓ Maximum Protection
- ✓ Improve Posture



*Results of a double-blind study conducted by Olive View UCLA Medical Center.

G-DEFY MIGHTY WALK \$150

**X-WIDE
WIDTH
AVAILABLE**

Men Sizes 7.5-15 M/W/XW

- Gray TB9024MGS
- Blue/Black TB9024MLU
- Black TB9024MBL

Women Sizes 6-11 M/W/XW

- Gray TB9024FGS
- Salmon/Gray TB9024FGP
- Purple/Black TB9024FLP



**\$30 OFF
YOUR ORDER**

Promo Code PH2FLL2

www.gravitydefyer.com

Expires September 30, 2019

Free Exchanges • Free Returns
100% Satisfaction Guaranteed

Call 1(800) 429-0039

Gravity Defyer Corp.
10643 Glenoaks Blvd. Pacoima, CA 91331



VersoShock® U.S Patent #US8,555,526 B2. May be eligible for Medicare reimbursement. This product is not intended to treat, cure or prevent any disease. \$30 off applies to orders of \$100 or more for a limited time. Cannot be combined with other offers. 9% CA sales tax applies to orders in California. Shoes must be returned within 30 days in like-new condition for full refund or exchange. Credit card authorization required. See website for complete details.

Mobile Storage Containers

Ever wonder about those containers you see outside people's homes? If you need a place to put stuff temporarily, these storage containers are the perfect solution. Whether you're moving, decluttering or preparing to renovate, mobile storage containers offer the ultimate in convenience and flexibility. PODS, Pack Rat, Smartbox, U-Pack and U-Haul are a few companies that provide them. All you need is a level, paved surface for the container and maybe some professional or volunteer help to fill it.

Get the best deal

With so many storage options to choose from, pricing is competitive. To compare bids, complete the form at each company's website. You'll need the zip codes where the container will be going (both empty and full), your anticipated dates of delivery, and the size and number of containers you want. Promo codes may be provided. If not, ask your real estate agent or contractor. You'll save money by using your own packing supplies, including blankets, boxes and bubble wrap, and by packing efficiently. All the companies offer videos on how to pack their containers. Booking a container in the



winter for a project you're doing in the summer can save you as much as 30 percent.

Reserve containers early

Most storage companies allow you to book containers without any down payment or deposit, so shop for a container as soon as you know you'll need one. "It doesn't matter how many containers you order," a salesman at PODS told me. "It's how many containers you receive." Plus, you can change the delivery dates without an additional charge.

How it works

Before taking delivery, make sure you have all the permits required by your city, apartment complex or homeowner's association. After the container is delivered, you'll typically have three to 30 days to fill it before the company comes for it. Or you can leave it on-site if that's what your project calls for. If you opt for off-site storage of your

container, most companies will allow you to access your container with 24 hours' notice. You can store your containers as long as needed or, if you're moving, have them delivered to your new home. If you store more than one container, keep a list of the container numbers and what each one holds.

Is my stuff safe?

In most cases, the container's contents are covered by your renter's or homeowner's insurance. Once the container leaves your property, however, the coverage drops, typically to 10 percent of the policy's full value. You can also buy coverage from the storage companies.

MATTHEW KNOPP
CONTRIBUTING EDITOR

REASONS TO USE MOBILE STORAGE CONTAINERS

- Preparing your house for sale or rent
- Decluttering your house or garage
- Renovations
- Sorting out an estate
- Storage of home office materials or equipment
- Emergency repairs

OTHER OPTIONS

If you're moving the contents of a small apartment, it might be cheaper to use FedEx, UPS or Amtrak instead of a temporary storage container. While you'll sacrifice some convenience, you could save hundreds of dollars. It depends on the weight of the shipment and the distance it will travel.

MAJOR SUPPLIERS

1-800-Pack-Rat:
1800packrat.com
PODS: pods.com
Smartbox:
smartboxmovingandstorage.com
U-Pack Moving: upack.com
U-Haul (U-Box): uhaul.com

HARBOR FREIGHT

QUALITY TOOLS AT RIDICULOUSLY LOW PRICES

1,000+ Stores Nationwide
HarborFreight.com

SUPER COUPON

OVER 5,000 5 STAR REVIEWS

FREE WITH ANY PURCHASE

SUPER BRIGHT LED /SMD WORK LIGHT/FLASHLIGHT

- Super-Strong, Ultra-Lightweight Composite Plastic
- Magnetic Base & 360° Swivel Hook for Hands-Free Operation
- 3-AAA Batteries (Included)
- 144 Lumens

ALL IN A SINGLE SUPER POWERFUL LIGHT

COMPARE TO PERFORMANCE TOOL MODEL: W2364 **\$13.52**

MODEL: W2364

55476170

Limit 1 coupon per customer per day. Save 20% on any 1 item purchased. *Cannot be used with other discount, coupon or any of the following items or brands: Inside Track Club membership, Extended Service Plan, gift card, open box item, 3 day Packing List Sale item, compressors, floor jacks, sales, saw mills, storage cabinets, chisels or bits, trailers, breadmaker/hackbox, welders, Admiral, Ames, Bauer, Cobra, Corwin, Dayton, Diamondback, Earthquake, Fischer, Hercules, Inca, Jaxxon, Lyncx, Pexon, Predator, Tailor, Viking, Vortex, Zedco. Not valid on prior purchases. Non-transferable. Original coupon must be presented. Valid through 9/21/19.

SUPER COUPON

20% OFF ANY SINGLE ITEM*

55469309

Limit 1 coupon per customer per day. Save 20% on any 1 item purchased. *Cannot be used with other discount, coupon or any of the following items or brands: Inside Track Club membership, Extended Service Plan, gift card, open box item, 3 day Packing List Sale item, compressors, floor jacks, sales, saw mills, storage cabinets, chisels or bits, trailers, breadmaker/hackbox, welders, Admiral, Ames, Bauer, Cobra, Corwin, Dayton, Diamondback, Earthquake, Fischer, Hercules, Inca, Jaxxon, Lyncx, Pexon, Predator, Tailor, Viking, Vortex, Zedco. Not valid on prior purchases. Non-transferable. Original coupon must be presented. Valid through 9/21/19.

GOOD

CHICAGO ELECTRIC POWER TOOLS

SUPER COUPON

12" DUAL-BEVEL SLIDING COMPOUND MITER SAW

Customer Rating

ITEM 69684/61776/61970/61999 shown

3-1/2" VERTICAL CROWN MOLDING CAPACITY

2-5/8" TALL SLIDING FENCES

LASER GUIDE LIGHT

\$139.99 ~~\$199.99~~

SAVE \$89

COMPARE TO RYOBI MODEL: RYB1777

13180076

Limit 1 - Coupon valid through 9/21/19

BETTER

ADMIRAL

SUPER COUPON

12" DUAL-BEVEL SLIDING COMPOUND MITER SAW

Customer Rating

ITEM 64686

6-1/2" VERTICAL CROWN MOLDING CAPACITY

4-1/2" TALL SLIDING FENCES

LASER GUIDE LIGHT & LED WORK LIGHT

\$179 ~~\$199.99~~

SAVE \$90

COMPARE TO RYOBI MODEL: RYB1777

13200215

Limit 1 - Coupon valid through 9/21/19

BEST

HERCULES

SUPER COUPON

PROFESSIONAL 12" DUAL-BEVEL SLIDING COMPOUND MITER SAW

Customer Rating

ITEM 63978

7-1/2" VERTICAL CROWN MOLDING CAPACITY

4-3/4" TALL SLIDING FENCES

LED PRECISION SHADOW GUIDE LIGHT

\$299 ~~\$349.99~~

SAVE \$300

COMPARE TO DEWALT MODEL: DW730

13201223

Limit 1 - Coupon valid through 9/21/19

HARDY

SUPER COUPON

POWDER-FREE NITRILE GLOVES

PACK OF 100

- 5 mil thickness

12¢ PER PAIR

NOW \$5.99 ~~\$7.99~~

SAVE 59%

COMPARE TO VENOM MODEL: VEM4145 **\$14.97**

ITEM 97581, 97582, 37050, 37051, 37052, 64417, 64418, 61363, 68497, 61360, 61359, 68498, 68496 shown

55516540

Limit 4 - Coupon valid through 9/21/19

WINDSOR DESIGN

SUPER COUPON

60" HARDWOOD WORKBENCH WITH 4 DRAWERS

Customer Rating

Tools sold separately.

NOW \$119.99 ~~\$149.99~~

COMPARE TO GRIZZLY MODEL: H723 **\$399.95**

SAVE \$279

ITEM 63395/93454/69054/62603 shown

55518858

Limit 1 - Coupon valid through 9/21/19

drillmaster

SUPER COUPON

1500 WATT DUAL TEMPERATURE HEAT GUN (572°/1112°)

Customer Rating

COMPARE TO BLACK+DECKER MODEL: HG1300 **\$28.06**

NOW \$8.99 ~~\$14.99~~

SAVE 67%

ITEM 35776/62340/62546/63104/96289 shown

55521593

Limit 4 - Coupon valid through 9/21/19

Bauer

SUPER COUPON

15 AMP, 12-1/2" PORTABLE THICKNESS PLANER

Customer Rating

NOW \$259.99 ~~\$319.99~~

SAVE \$189

COMPARE TO DEWALT MODEL: DW734 **\$449**

ITEM 63445

57288418

Limit 1 - Coupon valid through 9/21/19

CENTRAL PNEUMATIC

SUPER COUPON

3/8" x 50 FT. RETRACTABLE AIR HOSE REEL

Customer Rating

NOW \$59.99 ~~\$79.99~~

COMPARE TO KOBALT MODEL: SGY-AIR184 **\$99**

SAVE \$39

ITEM 69265/62344/64685/93897 shown

55523542

Limit 2 - Coupon valid through 9/21/19

PREDATOR

SUPER COUPON

2000 WATT SUPER QUIET INVERTER GENERATOR

• 12 hour run time

NOW \$449.99 ~~\$559.99~~

COMPARE TO HONDA MODEL: EU2200I **\$1,009**

ITEM 62523

57286841

Limit 1 - Coupon valid through 9/21/19

CENTRAL PNEUMATIC

SUPER COUPON

3 GALLON, 100 PSI OIL-FREE AIR COMPRESSORS

A. HOT DOG
ITEM 69269/97080 shown

B. PANCAKE
ITEM 61615/60637/95275 shown

Customer Rating

Air delivery: 0.6 CFM @ 90 PSI

YOUR CHOICE \$39.99 ~~\$57.99~~

COMPARE TO PORTER-CABLE MODEL: PCFP02003 **\$98.62**

SAVE 59%

ITEM 62523

13333100

Limit 3 - Coupon valid through 9/21/19

HaulMaster

SUPER COUPON

18" x 12" MOVER'S DOLLY

- 1000 lb. capacity

Customer Rating

NOW \$7.99 ~~\$10.99~~

COMPARE TO BUFFALO TOOLS MODEL: HDFDOLLY **\$22.99**

SAVE 65%

ITEM 60497/61899/63095/63096/63097/63098 shown

57302978

Limit 5 - Coupon valid through 9/21/19

CENTRAL MACHINERY

SUPER COUPON

350 LB. CAPACITY FOLDABLE SAWHORSE

NOW \$8.99 ~~\$12.99~~

COMPARE TO STANLEY MODEL: STST11200 **\$17.99**

SAVE 50%

ITEM 61979/60710/69446 shown

57303495

Limit 4 - Coupon valid through 9/21/19

PITTSBURGH

SUPER COUPON

24" CLAMP AND CUT EDGE GUIDE

LIFETIME WARRANTY

NOW \$1.99 ~~\$13.99~~

COMPARE TO BORA MODEL: 543030K **\$70.28**

SAVE 88%

ITEM 66126

57304730

Limit 4 - Coupon valid through 9/21/19

CENTRAL PNEUMATIC

SUPER COUPON

20 OZ. GRAVITY FEED AIR SPRAY GUN

• 1.4mm tip included

Customer Rating

NOW \$9.99 ~~\$16.99~~

COMPARE TO KOBALT MODEL: SGY-AIR88TZ **\$49.99**

SAVE 80%

ITEM 67181/62300/47016 shown

57305102

Limit 3 - Coupon valid through 9/21/19

PITTSBURGH

SUPER COUPON

RAPID PUMP® 3 TON STEEL HEAVY DUTY LOW PROFILE FLOOR JACK

- Weighs 73 lbs.

Customer Rating

NOW \$79.99 ~~\$109.99~~

COMPARE TO TEQ CORRECT MODEL: T330018Z **\$179.99**

SAVE \$100

ITEM 64264/64266/64879/64881/61282/68049/62326/61253 shown

57312726

Limit 1 - Coupon valid through 9/21/19

U.S. GENERAL

SUPER COUPON

30", 4 DRAWER TECH CART

- 12,600 cu. in. of storage
- 580 lb. capacity
- Heavy duty gas struts hold lid open at 90 degrees

Customer Rating

NOW \$119.99 ~~\$169.99~~

COMPARE TO SNAP-ON MODEL: KRBC10TBC **\$880**

SAVE 76%

Side tray sold separately. ITEM 64818/64096 shown

57325106

Limit 1 - Coupon valid through 9/21/19

SUPER COUPON

200 LUMENS LED SUPER BRIGHT FLIP LIGHT

- Wireless, tool-free and easy installation

Customer Rating

NOW \$2.99 ~~\$4.49~~

COMPARE TO PREMIER MODEL: SW-SWITCH-12/24 **\$4.99**

SAVE 40%

ITEM 64189/64723/63922 shown

57329434

Limit 1 - Coupon valid through 9/21/19

HaulMaster

SUPER COUPON

BIGFOOT HAND TRUCK

- 700 lb. capacity

Customer Rating

NOW \$39.99 ~~\$57.99~~

COMPARE TO ROUGHNECK MODEL: 40546 **\$99.99**

SAVE \$60

ITEM 37520/62974/62900 shown

57334475

Limit 3 - Coupon valid through 9/21/19

HaulMaster

SUPER COUPON

72" x 80" MOVING BLANKET

Customer Rating

NOW \$5.99 ~~\$9.99~~

COMPARE TO BLUE HAWK MODEL: 77280 **\$19.99**

SAVE 70%

ITEM 69505/62418/66537 shown

57337486

Limit 3 - Coupon valid through 9/21/19

*Original coupon only. No use on prior purchases after 30 days from original purchase or without original receipt. Valid through 9/21/19.

At Harbor Freight Tools, the "Compare to" price means that the specified comparison, which is an item with the same or similar function, was advertised for sale at or above the "Compare to" price by another national retailer in the U.S. within the past 90 days. Prices advertised by others may vary by location. No other meaning of "Compare to" should be implied. For more information, go to HarborFreight.com or see store associate.

instant IMPACT

BY MIKE BERNER

We recently sat down with home-staging expert Melanie Zaelich of Happy Place Interiors. She flooded us with great tips for home sellers—we could hardly write them down fast enough. Then it struck us: This would be great advice for everyone. We all want our homes to “show” better, whether we’re selling a house, moving into a new home or apartment, or staying in place for years.

Get rid of rugs—maybe

If you’re staying in your home, you probably want the softness and silencing effect of area rugs. But if you’re selling, remove them. They chop up the room in photographs and hide your nice flooring. Melanie tells her clients, “You’re selling the floor, not the rug.” There is an exception to this rule: In a large, open layout, rugs help to define the space. For example, a rug can make a seating area distinct from an adjoining dining area.

PHOTO CREDIT: BELINDA FONTES/OFFSET.COM

EASY UPGRADES— whether you're buying, selling or staying put

Upgrade light fixtures

In many homes, it's the most powerful, effective thing you can do: Replace dated lights with more stylish fixtures, especially in "public" rooms like the living room and kitchen. It doesn't have to be expensive, since home centers carry up-to-date fixtures starting at about \$50. (The fixture above is \$89 at judylighting.com.) Nor is it difficult, even if you have no experience with electrical work. To see how, search for "light fixture" at familyhandyman.com.



Replace a doorbell button

If the first thing buyers notice as they approach a house is a stuck, broken or ugly doorbell button, it will affect their impression as they check out the rest of the house. Replacement is easy; there are just two low-voltage wires to connect. To solve other doorbell problems, go to familyhandyman.com and search for "doorbell."



Instant backsplash

An attractive kitchen backsplash can transform a kitchen. Melanie recommends a peel-and-stick backsplash as an easy DIY solution. You just peel off the backing from the sheet of tile and stick it to the wall. The tiles are available in all types of materials from natural stone to gel tile and cost \$3 a sheet and up.

Make sure lights match in color and brightness from room to room. The bulbs in recessed lights should be the same, and the bulbs in fixtures should all match as well. Melanie suggests using GE Crystal Clear incandescent bulbs. She thinks they show off the interior best.



Trim trees that block views or light

Natural light is something everyone craves, especially during the shorter days of the year. To let in as much light as possible, trim trees or shrubs that are creating shade. If the branches are within arm's reach, use a lopper or reciprocating saw with a pruning blade. Use a pole saw if the sun-blocking limb is higher than that.



Restore grout

If the grout lines in your tile are dingy and dark from grime, you can easily get the grout to look like new again with a grout restorer. Some are kits that come with two solutions—a tile-and-grout cleaner and a color sealer. Other products consist of just a colorant. Either way, clean the grout and wipe it dry, apply the colorant according to the manufacturer, then wipe off the excess. Products range from less than \$15 to \$30 and can be found at home centers.

During showings, potential home buyers first notice things at eye level, then they look up, and lastly, they check near the floor. Keep that in mind when choosing the projects you want to prioritize.

Replace outlets and switches

Switches, outlets and cover plates get dirty, damaged and discolored, giving your home a worn look. New ones give your home a remodeled feel. Replacing them is usually easy and inexpensive (\$2 to \$3 each).



Block the view, not the light

People like bright, sunlit spaces. So if you want to block the view of your neighbor's backyard junk collection, go with translucent window film rather than opaque window coverings. Window film is also ideal for bathroom privacy.

Replace cabinet hardware

Changing out old cabinet hardware for an updated style can drastically change the way the entire room looks. Updating the cabinet knobs and pulls will cost as little as \$2 to \$5 apiece, and each can be done in a matter of minutes. If the shape of the knob is up to date, but the color or shade isn't, give it a few coats of spray paint.





Make spray paint your friend

All homeowners should get familiar with laying a nice coat of spray paint over all kinds of faded, rusty or outdated things around your home. The key to a good spray-paint job is a good cleaning with a degreaser followed by several very light coats of paint, starting with a primer. Spray-paint appliance handles, HVAC registers, bath fan covers and light fixtures to give them new life. If the material you're painting is plastic, use a paint formulated for plastic.



Fix doors

If you've lived in your home for a while, you've learned to tolerate your sticking, stubborn doors. But to other people, they're a frustration and a turn-off. The good news is that you can solve most problems in less than an hour. Familyhandyman.com has how-to help for any type of door trouble. Search for "door repair."

The front entry is first priority. Buyers typically know within 10 seconds whether or not they're interested.



Adjust cabinet doors

Make sure those cabinet doors are aligned properly. It will make a huge difference and it's really easy. On euro hinges, there are two screws you can tighten and loosen to align the doors and make sure gaps between them are consistent.



Cover up claw marks

Claw marks from pets need to be fixed. If the door is painted, it's easy to fill the gouges with wood filler or patching compound and repaint. On a stained door, try gel stain. Lightly sand the area and then, using a dry brush, start with a light stain and darken it to match the old finish. Keep the brush on the drier side by wiping excess stain off on a clean rag. When you're done, feather from the newly stained area with a clear spray finish into the surrounding area.



Replace torn screens

This is an easy DIY project that involves a special screen roller and just a few basic tools. You start by removing the old spline, the stringy rubber piece that holds the screen in the groove, then you'll be able to take off the old screen. Place the new screen over the frame and use the screen roller to press in a new spline. After cutting away the excess screen, you'll have it back in the opening in half an hour.



Mask ceiling stains

If you have a water-stained ceiling, a stain-blocking primer is mandatory to prevent the stain from bleeding through a fresh coat of paint. KILZ Upshot and Zinsser Covers Up are both stain-blocking primers, and both have nozzles that shoot upward. These primers attempt to match aged ceilings, so you may be able to get away without repainting the ceiling. You can pick up a can at any home center for about \$7.

FIX IT BEFORE YOU LIST IT!
This includes torn window and storm door screens, doorbells and bifold and sliding doors inside the house.



Hide wall damage

If you've got dings or dents around your outlet, or made a mistake cutting tile or dry-wall around an outlet or switch, install a jumbo cover plate to hide those gaps or dents. In fact, consider replacing all your old, yellowed or dirty cover plates: they cost less than \$1 apiece.



Adiós, Good-Bye Cracks

Our favorite solution to cracks in plaster and drywall was Good-Bye Cracks, an elastic spray-on coating that flexes along with wall movement. After filling the gaps with patching compound, you spray on two coats, then repaint. However, it has been discontinued and will soon be gone for good. A 4-oz. can is \$4. Stock up while you can!

Cover doorknob dings

Doorknobs are some of the main culprits when it comes to doing damage to your walls. If the accident has already happened, you can prevent further damage and cover up the dent with a bumper. And if your wall is still in good condition, you can keep it that way. You can find door bumpers online or at home centers for about \$5.





More sizes[†], softer fabric^{*}, long-lasting comfort.



© Registered Trademark of Kimberly-Clark Worldwide, Inc. © KCWW



A better fit for your body.**

Depend® FIT-FLEX® Underwear gives you Trusted Protection in more sizes and an improved design for all around comfort.* Plus, it fits better than the leading bargain brand.**

GET A FREE SAMPLE AT [DEPEND.COM](https://depend.com)

[†] vs. leading bargain brand

^{*} vs. previous FIT-FLEX® Underwear.

^{**} vs. the leading bargain brand sizes small/medium.

Purchase by 6/30/19. Redeem within 30 days of purchase. Restrictions apply. See depend.com/yourbestfitguarantee for details.

Extreme Cleaning

A home improvement with a huge payoff

BY BRAD HOLDEN

You probably don't think of cleaning as home improvement, but a thorough cleaning really is a powerful way to improve your home. Things that look old, worn and in need of replacement sometimes just need a good scrubbing! Some of us at *Family Handyman* have learned that lesson recently.



PHOTO: NATALI_MIS/SHUTTERSTOCK

If you're buying



The house my wife and I bought was pretty dirty, which triggered some buyer's remorse. So we spent a long, hard day cleaning. It was worth it. The grime left by the previous owners is gone, and the place feels like ours.

MIKE BERNER
ASSOCIATE EDITOR



If you're selling



To show our house in the best light possible, we cleaned everything and every corner. Dirt is unattractive, and somebody else's dirt is especially so. You'll get more and better offers if potential buyers see your house as "move-in ready."

MARCIA ROEPKE
ART DIRECTOR



If you're staying



A long weekend of cleaning cut my list of remodeling chores in half. The grout, the kitchen sink and fixtures, the entryway walls—they didn't need a redo. A deep cleaning made them look like new. Well, almost.

GARY WENTZ
EDITOR-IN-CHIEF



DECLUTTER FIRST

Cleaning your house is far easier once you remove clutter, and that's something most of us need to do anyway. If you're selling, don't just put everything in the garage. That's a turnoff for potential buyers. Move your stuff off site.



DONATE IT. Donating your goods is a nice way to get rid of usable items without the hassles of selling them. Perfect if you have a lot of stuff and limited time.



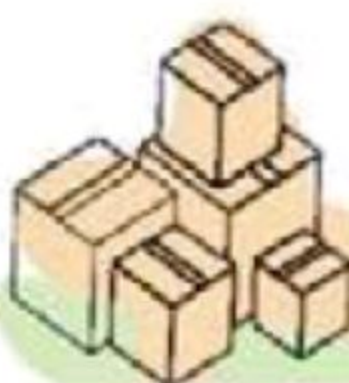
SELL IT. If you have time and you'd like to make a little extra cash, sell unwanted things online. Keep in mind that you'll have to check messages and be available for people coming over to buy your stuff. It can be a big hassle.



PUT IT ON THE CURB. Setting free stuff on the curb is probably the quickest and easiest way to get rid of it. People will take anything that's free! The drawback is that if you itemize deductions on your tax returns, you won't get a receipt to count it as a charitable donation. You can also list free items on Craigslist.com.



TRASH IT. If you have a lot of junk, throwing it all in a dumpster or Bagster bag is an easy and gratifying experience. A small dumpster (about 10 cu. yds.) typically costs about \$300.



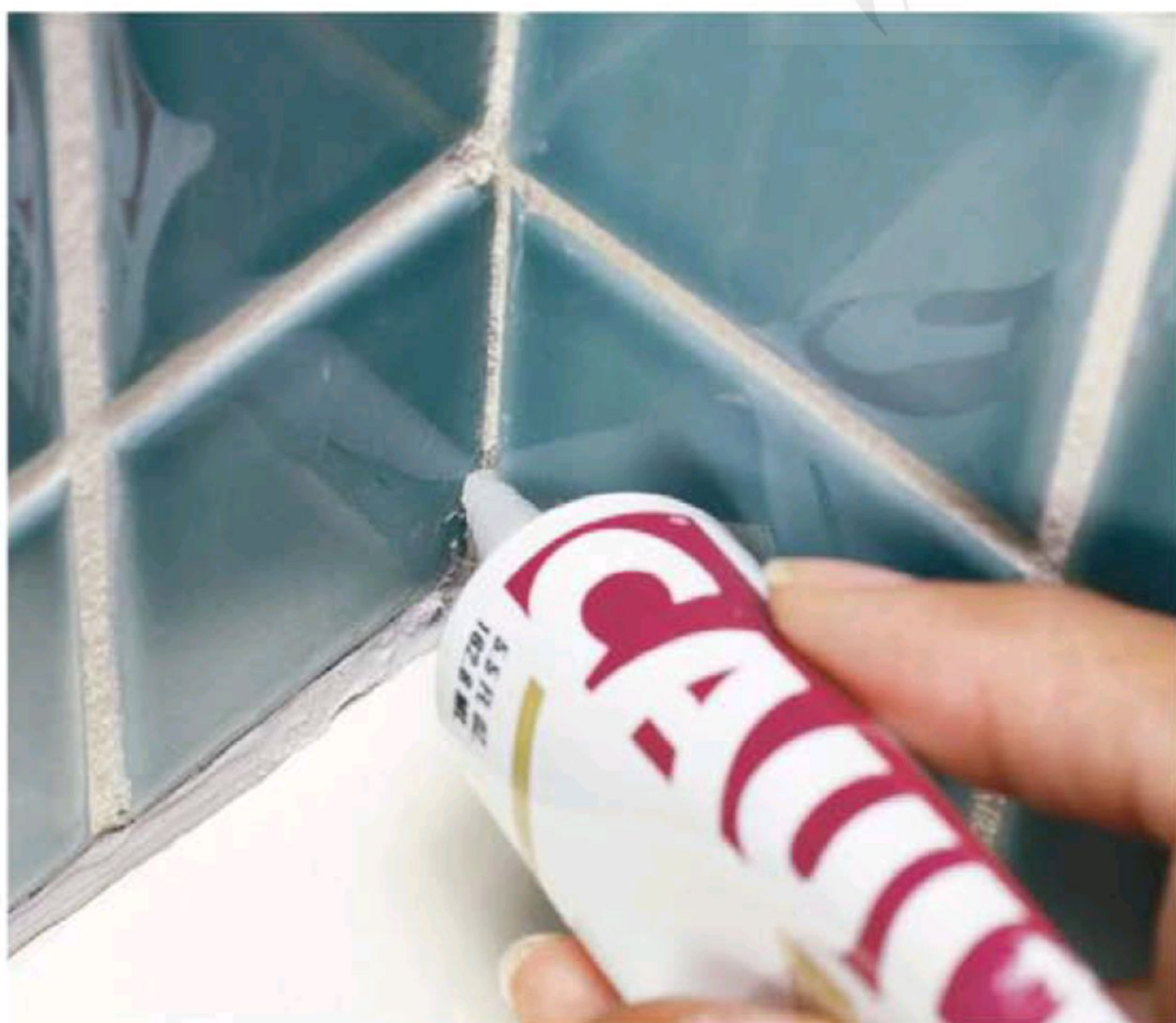
STORE IT. For the items you're keeping but not using for staging, mobile storage containers are the way to go. Have one dropped at your house, fill it up, and then the company will haul it off to a temporary storage facility or your new home. The cost varies depending on the container size and the distance of the move. A long-distance move runs about \$800.

FOCUS ON THE BATHROOM

Cleaning the bathroom might take you more time than the rest of the house combined. But it's essential, especially if you're selling. If there's one room potential buyers are extra picky about, it's the bathroom. It should be spotless.



GLASS SHOWER DOORS: Built-up soap scum seems impossible to remove. Pick up polishing compound at a home center or an auto parts store and use it with an auto buffer to polish off the offending scum. If you don't own a buffer, you can buy one for as little as \$20 or borrow one from a gearhead friend. If possible, take the doors out to the garage to avoid messing up the bathroom.



CAULKING: Trying to clean caulk often isn't worth the effort. If it's covered with mold or mildew, just cut it out and recaulk.



EXHAUST FAN: Turn on the fan and blast out the dust with "canned air." The fan will blow the dust outside. This works on the return air grilles of your central heating/cooling system too. Run the system so the return airflow will carry the dust to the filter. You'll find canned air at home centers, usually in the electrical supplies aisle.



RUST STAINS: To clean rust from toilets and other porcelain surfaces, add three parts water to one part rust remover (Acid Magic is one brand we like). Use a sprayer, brush or foam pad to apply the mixture to the rust stains, then watch them dissolve. Rinse with clear water. You can also use it full strength for stubborn stains. Avoid getting the acid on metal parts because they can discolor. Acid Magic is available online and at hardware stores.



FAUCETS AND FIXTURES: Scrub faucets and fixtures with a calcium, lime and rust remover, such as CLR, and an old toothbrush.



TILE GROUT: Try a bleach pen to transform your grout from grungy to great. This method is tedious, but the payoff is crisp, clean grout lines. Use the pen to "draw" bleach across the grout lines. The pen allows you to target the grout without getting bleach all over the tile. Wait 10 minutes and then rinse.



TILE: Magic Eraser sponges (or other brands) make short work of cleaning tile. Just dampen the sponge and rub it on the offending mess. In most cases, the mess will come right off. These sponges are especially useful for removing ground-in dirt from porous floor tile and cleaning those pesky nonslip strips in the bottom of your tub.

TOP RIGHT PHOTO: SHUTTERSTOCK/DANIEL JEDZURA

DIG INTO THE DETAILS

Some cleaning jobs get overlooked, either because we're so used to these areas not being clean, or because we just don't like doing them. Pay attention to the following:

- | | | |
|-------------------------------|-------------------------------|----------------------|
| ■ Ceiling fan blades | ■ Furnace exterior | ■ Walls and ceilings |
| ■ Light fixtures | ■ Water heater exterior | ■ Curtains |
| ■ Baseboards/trim/door frames | ■ Exposed pipes and ductwork | ■ Under appliances |
| ■ Handrails | ■ Washer and dryer | ■ Trash cans |
| ■ Furniture feet | ■ Inside cabinets and drawers | ■ Doorknobs |
| ■ Fingerprints | | ■ Dishwasher |
| | | ■ Throw pillows |

Windows

Your windows present the view as well as let in natural light. You can hire a window cleaning service, but if you'd like to do it yourself, go to familyhandyman.com and search for "how to clean windows."

Carpet

If the carpet is reasonably clean, don't go beyond vacuuming it. Carpet is the last thing buyers look at and doesn't give a big return on investment. If there's hardwood underneath, consider removing the carpet.

Get a cleaning service

You can hire a pro to do a deep cleaning. At about \$500 for a 1,400-sq.-ft. home, it's definitely worth considering. Check off a solid week-end's worth of drudgery by writing a check!

Don't clean; replace

Some things just aren't worth the effort to clean. You'll save time and money and get better results by simply replacing the following items with new:

- Shower curtains
- Switch plates
- Mini blinds
- Showerheads



Equipment that works as hard as you do.

30 YEARS | LIMITED EDITION DR® Field & Brush Mower

Introducing our 30th Anniversary PRO-26 DR® Field & Brush Mower. Legendary performance you can depend on.

- 14.5 HP Briggs & Stratton OHV engine
- Power Steering gives you fingertip control
- Gear-driven transmission (3 forward speeds and 1 reverse)
- 26" pivoting deck for uneven terrain
- Kryptek® camo pattern

USA ENGINEERED and BUILT*

*Assembled in the USA using domestic and foreign parts.



Limited supply for 2019!

DRfieldbrush.com

19F82B © 2019

Grind Away ANY Size Stump FAST!



The DR® STUMP GRINDER uses carbide-tipped cutting teeth (taking 360 "bites" per second) to reduce any stump to a pile of woodchips. Grinds stumps below ground level so they are gone forever!

FASTER, SAFER AND EASIER than digging, burning, or using chemicals.

NEW, MORE POWERFUL and lower-priced models.

NOW TOWABLE with your riding mower or ATV.



Self-Propelled Model Available!

DRstumpgrinder.com

19F82D © 2019

RENEW Your Driveway... ...with the amazing DR® POWER GRADER!



SAVES YOU MONEY—loosens and redistributes existing material, saving you from purchasing new gravel or stone.

EASY TO USE—tows behind your ATV or riding mower, filling in potholes and ruts.

PRECISE CONTROL of grading depth is adjustable from your driver's seat.

AMAZINGLY DURABLE carbide teeth last 10X longer than steel on ordinary box scrapers.



ALSO GREAT FOR HORSE RINGS, BALL FIELDS, AND PARKING AREAS!

DRpowergrader.com

19F82E © 2019

Yard Cleanup is EASY with a DR® CHIPPER SHREDDER!

CHIP big branches up to 5" in diameter.

SHRED yard & garden waste up to 1.5" thick.

POWERFUL ENGINES spin massive flywheels and shredding hammers to reduce everything FAST.

Check out the full DR® lineup including towable models!



Yard & Garden Waste

Branches



DRchipper.com

The Ultimate Offroad Trailer!

HAULS up to 2000 lbs.!



440 lb.
LIFTING
CAPACITY

Power
loading!

The
**DR® VERSA-
TRAILER™** is the
ONLY trailer for offroad vehicles that—

- Has a swinging boom for loading/unloading rocks, logs, etc. with a back-saving winch.
- Empties cleanly every time, thanks to steep, boom-assisted dump angle.
- Converts to a stake bed trailer (in less than 5 minutes!) for hauling long loads.
- Features a galvanized bed and frame that tows easily behind ATVs, compact tractors, lawn tractors, or any vehicle with a ball hitch.

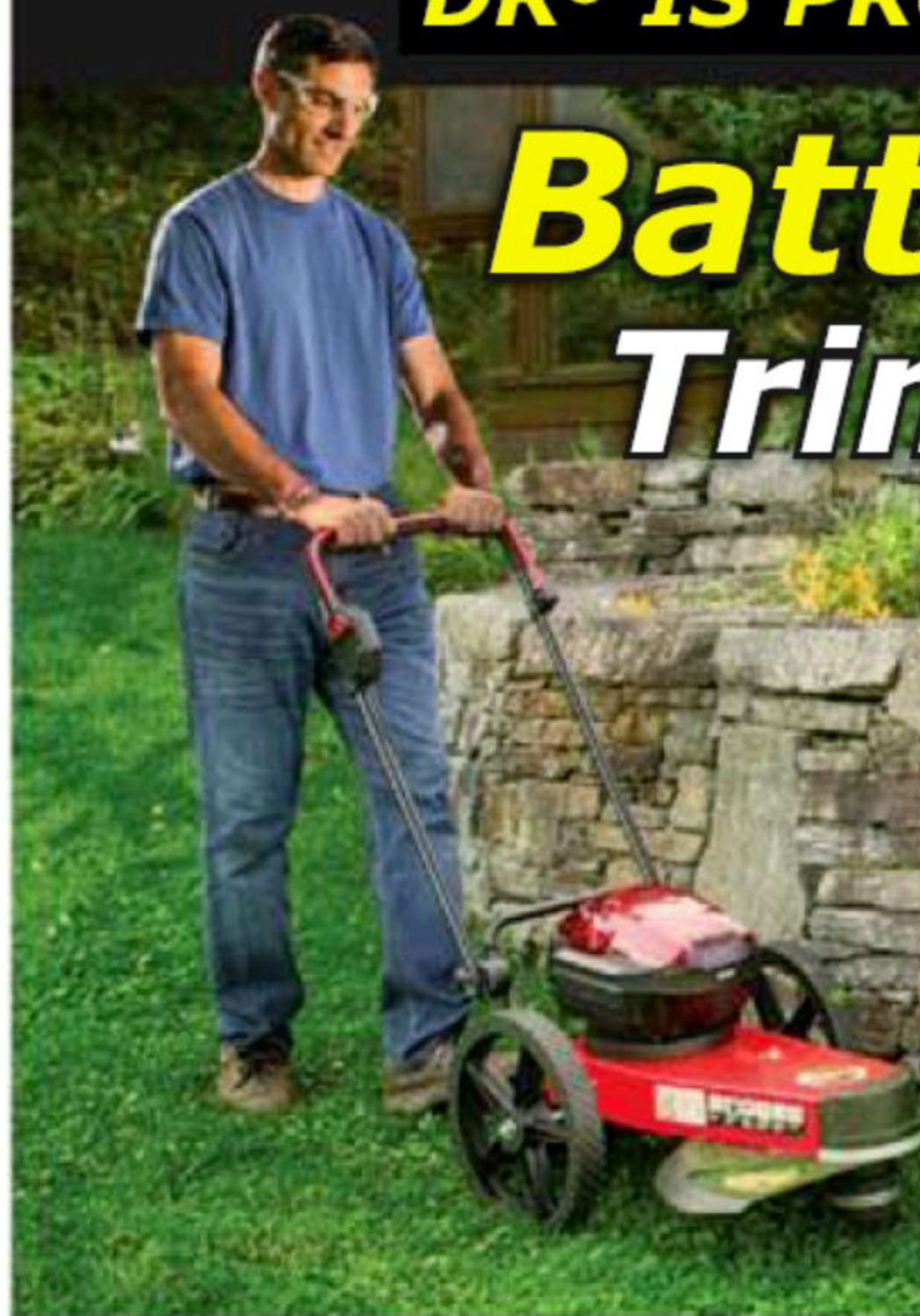
DRversatrailer.com

19F82C © 2019

19F82F © 2019

DR® IS PROUD TO INTRODUCE THE WORLD'S FIRST...

Battery-Powered Trimmer Mower!



ALL-NEW
PULSE 62V
Model!



ALL THE POWER OF GAS in a 62V fuel cell that lets you TRIM and MOW for up to 40 minutes on a single charge.

ENGINEERED FOR YOUR EASE—push-button electric start, ergonomic handlebars with vibration-dampening grips, PLUS the easiest and fastest cord changing system available!

NO GAS, OIL, OR PULL-STARTING thanks to its long-life Lithium-Ion battery.

See the **FULL LINE** of DR® Trimmer Mowers—including Gas-Powered, Tow-Behind, and PTO models.

**62 VOLT
LITHIUM-ION
POWER!**

Uses the same battery that powers our 62V Lawn Mowers and Yard Tools.



DRtrimmers.com

19F82A © 2019

**FREE
SHIPPING**

**6 MONTH
TRIAL**

**EASY
FINANCING**

SOME LIMITATIONS APPLY. GO ONLINE OR CALL FOR DETAILS.

Go Online or Call for FREE Info Kit!

Includes product specifications and factory-direct offers.

TOLL FREE **800-731-0414**

ADVANCED HEARING AID TECHNOLOGY

For Less Than \$200

*"I was amazed! Sounds I hadn't heard
in years came back to me!"*

— Don W., Sherman, TX

How can a hearing aid that costs less than \$200 be every bit as good as one that sells for \$2,400 or more?

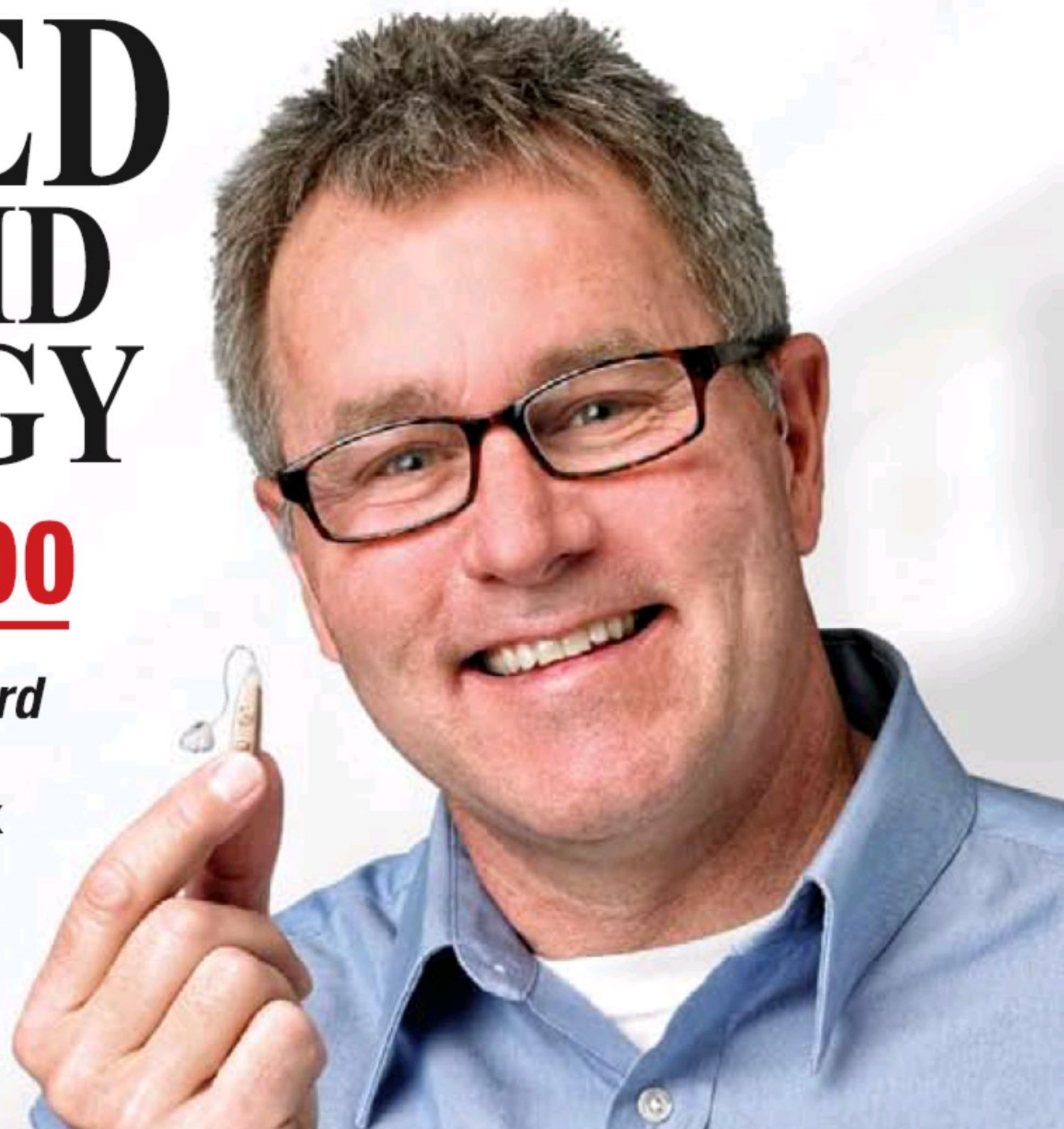
The answer: Although tremendous strides have been made in Advanced Hearing Aid Technology, those cost reductions have not been passed on to you. Until now...

MDHearingAid® uses the same kind of Advanced Hearing Aid Technology incorporated into hearing aids that cost thousands more at a small fraction of the price.

Over 350,000 satisfied **MDHearingAid** customers agree: High-quality, FDA-registered hearing aids don't have to cost a fortune. The fact is, you don't need to spend thousands for a hearing aid. **MDHearingAid** is a medical-grade hearing aid offering sophistication and high performance, and works right out of the box with no time-consuming "adjustment" appointments. You can contact a licensed hearing specialist conveniently online or by phone — even after your purchase at no cost. No other company provides such extensive support. Now that you know...why pay more?

MDHearingAid® >>>

DOCTOR DESIGNED | AUDIOLOGIST TESTED | FDA REGISTERED



Can a Hearing Aid Delay or Prevent Alzheimer's and Dementia?

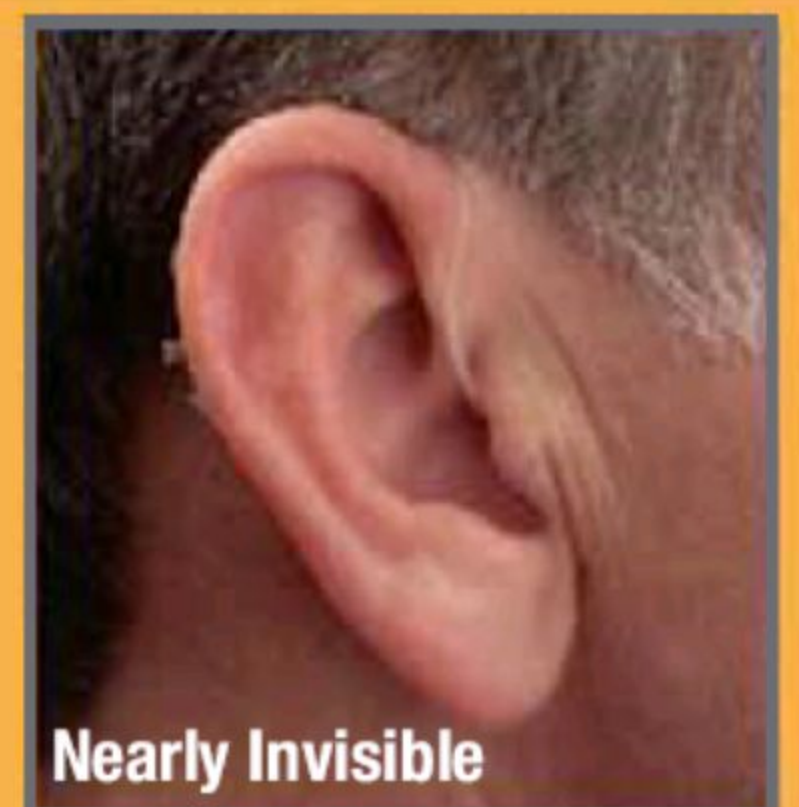
A study by the National Institute on Aging suggests older individuals with hearing loss are significantly more likely to develop Alzheimer's and dementia over time than those who retain their hearing. They suggest that an intervention — such as a hearing aid — could delay or prevent this by improving hearing!

TAKE ADVANTAGE OF OUR 45-DAY RISK-FREE TRIAL!

Hearing is believing and we invite you to try this nearly invisible hearing aid with no annoying whistling or background noise for yourself. If you are not completely satisfied with your MDHearingAid, return it within 45 days for a **FULL REFUND**.

For the Lowest Price Call
1-800-773-6118

www.GetMDHearingAid200.com



Nearly Invisible

**BUY A PAIR
AND SAVE!**

**BATTERIES
INCLUDED!**
READY TO USE RIGHT
OUT OF THE BOX!

Use Code **JJ41**
and get **FREE** Batteries for 1 Year
Plus FREE Shipping

Proudly assembled in America!



Get the most from your

HOME INSPECTION

Expert advice for home buyers

You've chosen a home, made an offer and had it accepted. You're ready to charge ahead and tempted to hire the first (or cheapest) home inspector you find so you can check that item off your list. But slow down. With a little extra time and knowledge, your home inspection can be much more than just a standard requirement in the buying process.



SEEKING AN INSPECTOR? READ A SAMPLE REPORT

When hiring an inspector, ask for recommendations from people you trust and read online reviews. But also go to the inspector's website and read a sample report. If there isn't one, I'd look further. A good report contains these elements:



MEET THE EXPERT
Reuben Saltzman is the owner of Structure Tech Home Inspections. His blog is a gold mine of information, stories and opinions. Check it out at StructureTech1.com.

- Photos should accompany the items discussed in the report.
- The report should be written in plain English, understandable to anyone. You shouldn't need a degree in building science to understand it.
- The report should cover three aspects of each potential problem: what the issue is, why it's an issue and what should be done.
- Every report includes disclaimers. Like everyone else, inspectors don't want to be sued. But a good report keeps them to a minimum.

- Many reports are filled with recommendations for further testing or inspections. When I see that, I get the feeling the inspector aims to avoid lawsuits more than to provide great service.
- Look for statements that mention an issue but also say it isn't a significant problem. Anyone can identify an issue and recommend further action. But it takes deep experience and knowledge to say an issue isn't worth worrying about. That's often the sign of a great inspector.

BIG PROBLEMS MIGHT MEAN RENEGOTIATION

If the inspection uncovers dangerous or expensive problems—like aluminum wiring, a cracked heat exchanger or structural flaws—it's reasonable to rethink the agreement. There are four options:

■ **Lower the price:** This is often a fair way to compensate the buyer. But even though the home loan will decrease along with the sale

price, the buyer will have to pay for those repairs. And that's often burdensome on top of the ordinary costs of buying a home.

■ **Ask the seller to make the repairs:** This also can be fair—if the seller can afford to pay. But the buyer should keep this in mind: The seller will want the work done quickly and cheaply and may not be

too concerned about the quality of the job.

■ **Cancel the sale:** This is usually the worst option. Both parties have invested time and money to reach an agreement. Killing that agreement is a huge step backward for everyone.

■ **Do nothing:** Since all the other options raise new complications, this is often the best response to problems—as long as those problems don't pose an immediate health threat.



A SERIOUS, EXPENSIVE ISSUE

Aluminum wiring can be a fire hazard, and making it safe can cost thousands. If your inspector finds it, renegotiation is justified.



A "KNOWN CONDITION"

This railing is unsafe and doesn't meet building codes. But since it's an obvious problem and one that you saw before the inspection, it's not a good reason to renegotiate the sale of the house.

THE REPORT IS NOT A NEGOTIATING WEAPON

Buyers sometimes use the inspection report as an excuse to renegotiate the price of the house. Unless the problems are dangerous or major, this is a bad idea. Defects like peeling paint, sidewalk cracks or wall damage are considered "known conditions." In other words, they were already obvious when you first toured the house. Asking for compensation after the agreement will poison your relationship with the seller and real estate agents.

The same goes for old construction that doesn't meet newer building codes. If old stair balusters, for example, are spaced farther apart than current code allows, the report will note it. But that doesn't mean the seller should pay for correction.

SELLING? DON'T RISK AN INCOMPLETE INSPECTION

If you're selling, you'll want me to complete my job. If I label it an "incomplete inspection," that may delay or even sink the sale. Good preparation is mostly about providing easy access. Keep in mind that it isn't the inspector's job to move barricades of boxes or stacks of paint cans.

■ **Make sure I can get to and open the main electrical panel and any subpanels.**

■ **Clear a path around the furnace and water heater.**

■ **If you have a detached garage, leave keys or an opener so I can get in. I don't know how to pick locks.**

■ **If you have crawl spaces, make sure the doors to them are accessible.**

■ **Secure any pets that might escape through open doors—or worse, attack me. I'm not a burglar!**

■ **If the house has been unoccupied, make sure the water, gas and electricity are turned on.**



A CAMERA ON A CABLE

A sewer inspection camera and a trained eye can spot cracks before they cost you big bucks.

GET A SEWER INSPECTION

For about \$200, I can hire my sewer guru to run a camera through the waste pipe that runs from the house to the city sewer system. I used to recommend this for old homes only. But after seeing dozens of fractures in newer lines—and repairs that cost thousands—I know better.

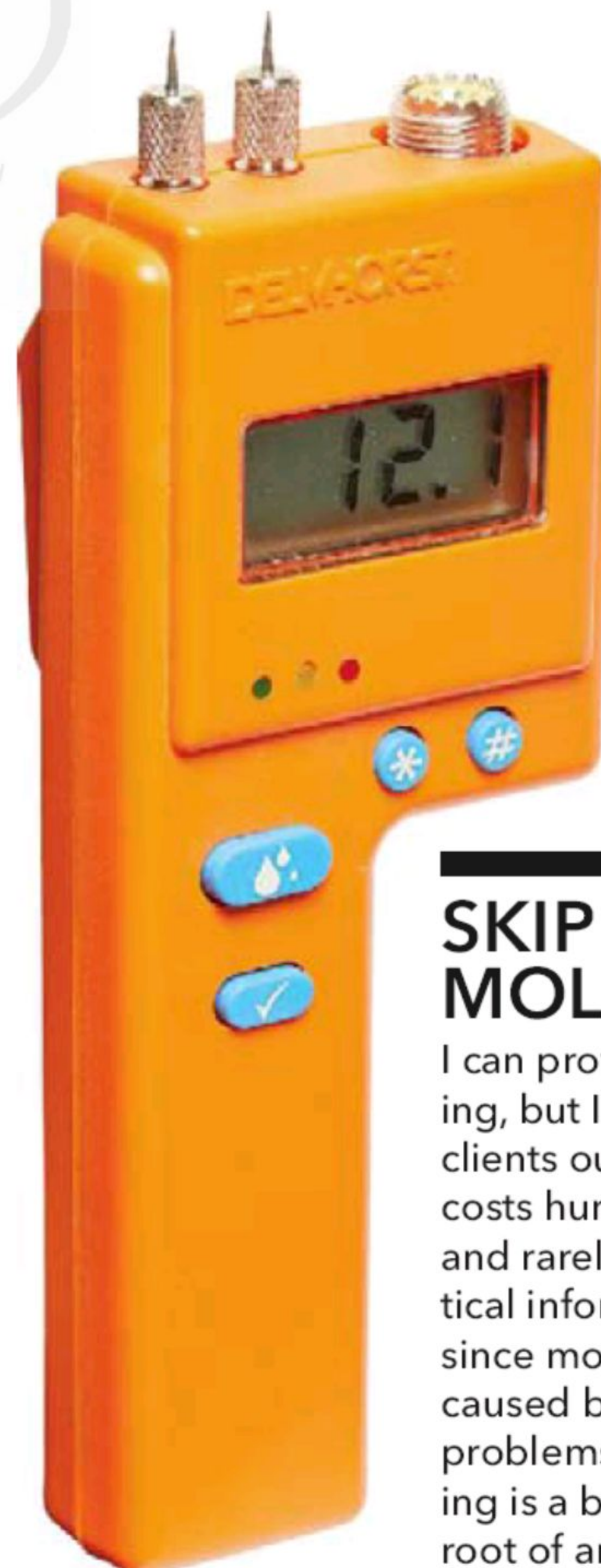


VERMICULITE MIGHT CONTAIN ASBESTOS

Vermiculite itself isn't a problem. But some of it contains asbestos, which is definitely a health risk.

ASBESTOS: SOMETIMES HAZARDOUS, SOMETIMES NOT

Asbestos does terrible damage to lungs, but only if it's inhaled. Asbestos in siding that's sealed under a good coat of paint, for example, can't get airborne and inhaled, so it's nothing to panic about. On the other hand, asbestos in vermiculite insulation can easily drift into a home through tiny air leaks in ceilings and walls; that's a serious risk. Most inspectors recognize materials that may contain asbestos and will note them on the report. But keep in mind that asbestos sampling and lab testing are not a standard part of a home inspection. Also keep this in mind: Asbestos was used to make more than 3,000 kinds of building materials. If a home was built before 1980, there's a good chance it contains asbestos somewhere.



HIGH-TECH HELP

A moisture meter is one of the tools that inspectors use to track down the water problems that feed mold.

SKIP THE MOLD TEST

I can provide mold testing, but I usually talk my clients out of it. Testing costs hundreds of dollars and rarely provides practical information. And since mold issues are caused by moisture problems, moisture testing is a better path to the root of any problems.

WEATHER IS
UNPREDICTABLE

**DRYLOK® IS
GUARANTEED**

Our legendary waterproofers are guaranteed to stop water on exterior and interior surfaces.



10
YEAR
WARRANTY



RESISTS 98 MPH
WIND-DRIVEN RAIN



15
YEAR
WARRANTY



RESISTS 140 MPH
WIND-DRIVEN RAIN



7

YEAR WARRANTY

UGL UNITED GILSONITE LABORATORIES

Visit UGL.COM for inspirational photos, how-to videos and brochures

**CRACKS ARE
NORMAL**

Keep in mind that the majority of foundation cracks will never become a structural problem. They might let in some groundwater, but that's usually an easy fix.

FOUNDATION CRACKS? DON'T FREAK OUT

When the walls that support an entire building are cracked, it seems pretty scary. But here's the deal: All foundations have some cracks, and most will never become a problem, even in a hundred years. A good inspector will make note of cracks but will rarely recommend further inspection by an engineer.



**PLUGGED
PLUMBING
VENT**

Plumbers sometimes forget to remove the plug in rooftop vents. Some owners of new homes live with the results for years—slow, gurgling, stinky drains.

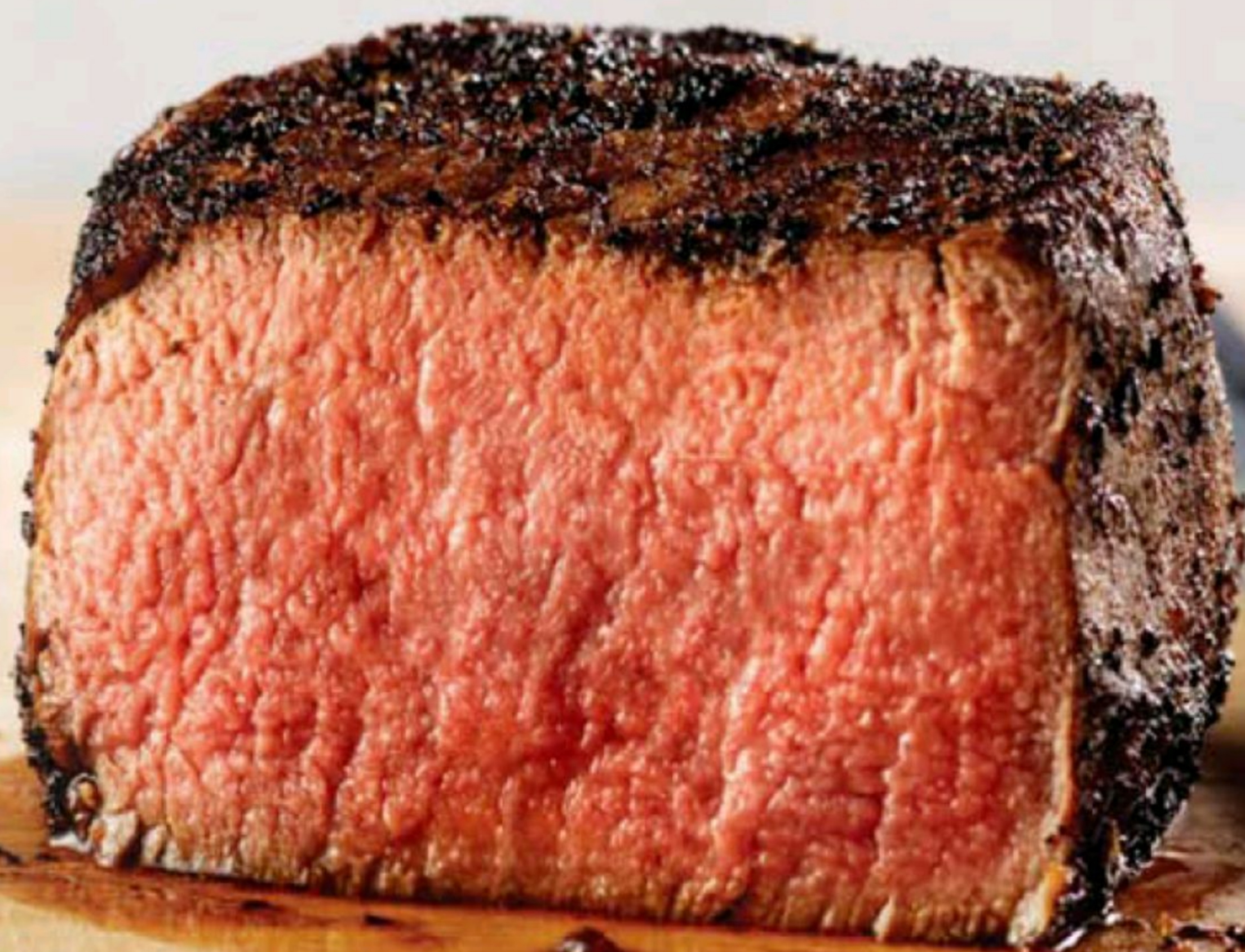
NEW HOMES NEED INSPECTIONS TOO

During construction, a house gets several inspections by city building inspectors. So it's reasonable to assume that a new house won't have problems. But you shouldn't assume that. I've seen hundreds of serious problems in new homes over the past few years—homes built by big, reputable builders.



"Our family has been focused on world-class steak for over 100 years..."

Great Grilling
GUARANTEED."



Todd & Bruce Simon

Todd Simon & Bruce Simon, 5th Generation Family Owners, Running the Business Today



— DON'T FORGET —
FATHER'S DAY
— JUNE 16 —

**+ 4 FREE
BURGERS
TODAY!**

**SAVE 77%
GET 32 ITEMS!**

~~\$213.91*~~ separately 48269NGY

COMBO PRICE

\$49⁹⁹

The Happy Family Feast

2 (5 oz.) Filet Mignons
2 (5 oz.) Top Sirloins
2 (4 oz.) Boneless Pork Chops
4 (3 oz.) Kielbasa Sausages
4 (4 oz.) Omaha Steaks Burgers
4 (3.5 oz.) Chicken Fried Steaks
All-Beef Meatballs (12 oz. pkg.)
4 (2.8 oz.) Potatoes au Gratin
4 (4 oz.) Caramel Apple Tartlets
Signature Seasoning Packet



100% premium aged Omaha Steaks beef

ORDER NOW! 1.800.811.7832 ask for 48269NGY | www.OmahaSteaks.com/enjoy03



Omaha Steaks, America's Original Butcher, is **STILL A FAMILY BUSINESS**

We're the FIFTH generation of Omaha Steaks family owners, and we're proud to deliver true quality and safety in these world-class steaks to YOUR family. Order with confidence today!

*Savings shown over aggregated single item base price. Limit 2 Happy Family Feast packages. Your 4 free burgers will be sent to each shipping address that includes (48269). Standard S&H will be added per address. Flat rate shipping and reward cards and codes cannot be used with this offer. Not valid with other offers. Expires 8/31/19. All purchases acknowledge acceptance of Omaha Steaks, Inc. Terms of Use and Privacy Policy. Visit omahasteaks.com/terms-of-useOSI and omahasteaks.com/info/privacy-policy or call 1-800-228-9872 for a copy. Photos are exemplary of product advertised.

©2019 OCG | Omaha Steaks, Inc. SRC0700



under-bed DRAWER

Easy to build—
even easier to fill!

BY MATT BOLEY



WHAT IT TAKES

TIME	COST	SKILL LEVEL
1 hour	\$50	Beginner

TOOLS Miter saw, drill,
clamps, brad nail gun

This project is really just a box on rollers. What makes it unique is that it glides on appliance rollers instead of casters. They're low profile and super strong, and they roll smoothly over carpet and hard flooring. Appliance rollers cost about \$20 per pair at home centers and online. The project cost depends on the wood you choose. Before building, measure the height beneath your bed frame and alter our dimensions to suit.



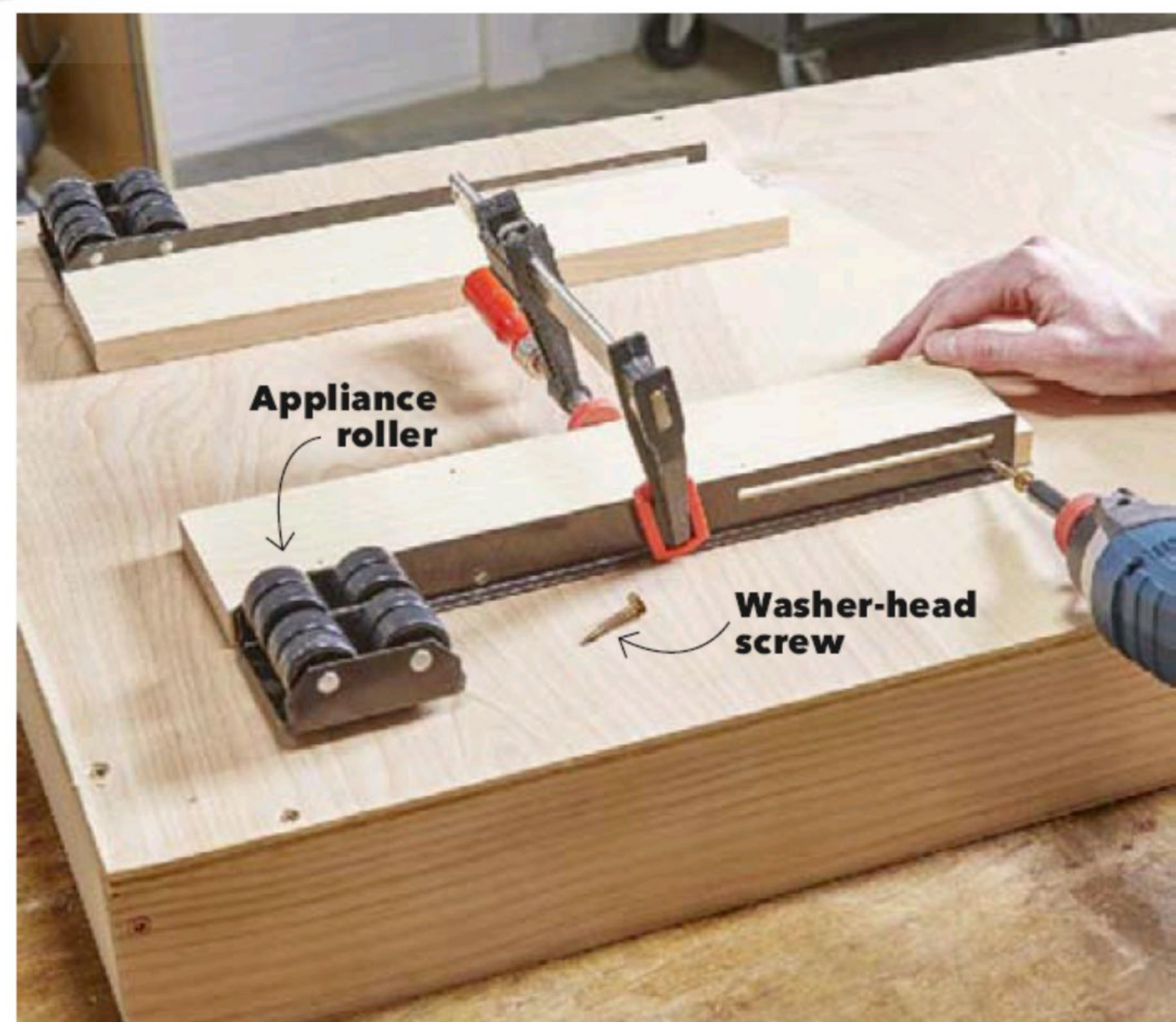
1 BUILD THE BOX

Drill countersink holes and fasten the sides (B) to the ends (C) with wood glue and 2-in. screws. Attach the base (A) using the same method.



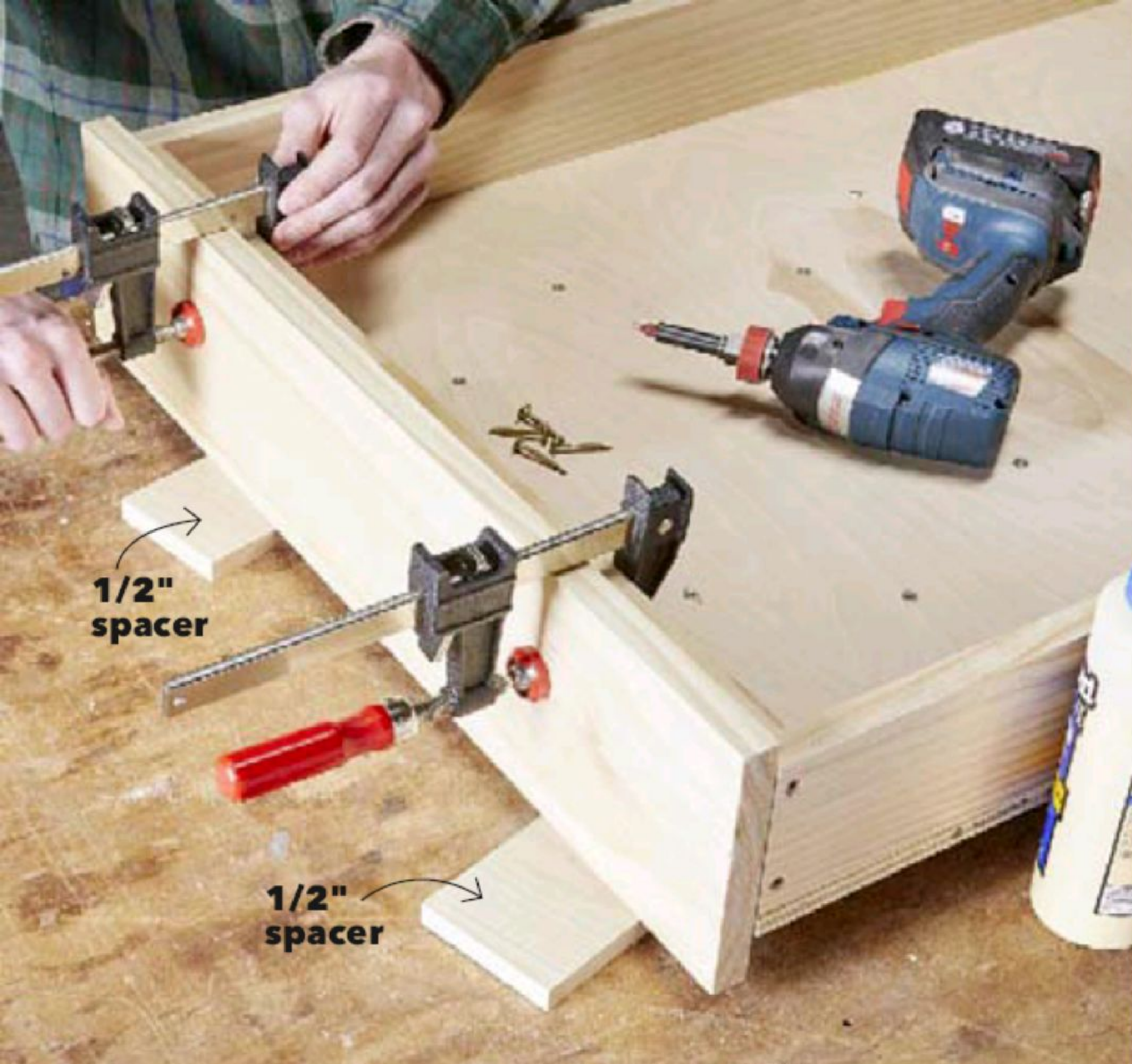
2 LOCATE AND FASTEN THE CLEATS

Mark the cleat (D) locations, 2 in. in from the front/back and 5 in. from each side. Set the cleats in position and trace them. Drill four clearance holes in each cleat outline. Glue the cleats and tack them in position with 1-in. nails. Flip the box over, countersink the clearance holes and then drill pilot holes in the cleats (D). Fasten the cleats with 1-in. screws.



3 ATTACH THE ROLLERS

Separate the halves of the appliance rollers. Drill two clearance holes in each half of the rollers with a sacrificial board underneath. Clamp the rollers to the cleats (D) and fasten with 1-1/4-in. washer-head screws.



4 ATTACH THE DRAWER FRONT

Drill six screw clearance holes through one box end. Clamp the drawer front (E) to the box end with a 1/2-in. spacer underneath. Drill pilot holes in the drawer front, and then attach it with 1-1/4-in. washer-head screws.

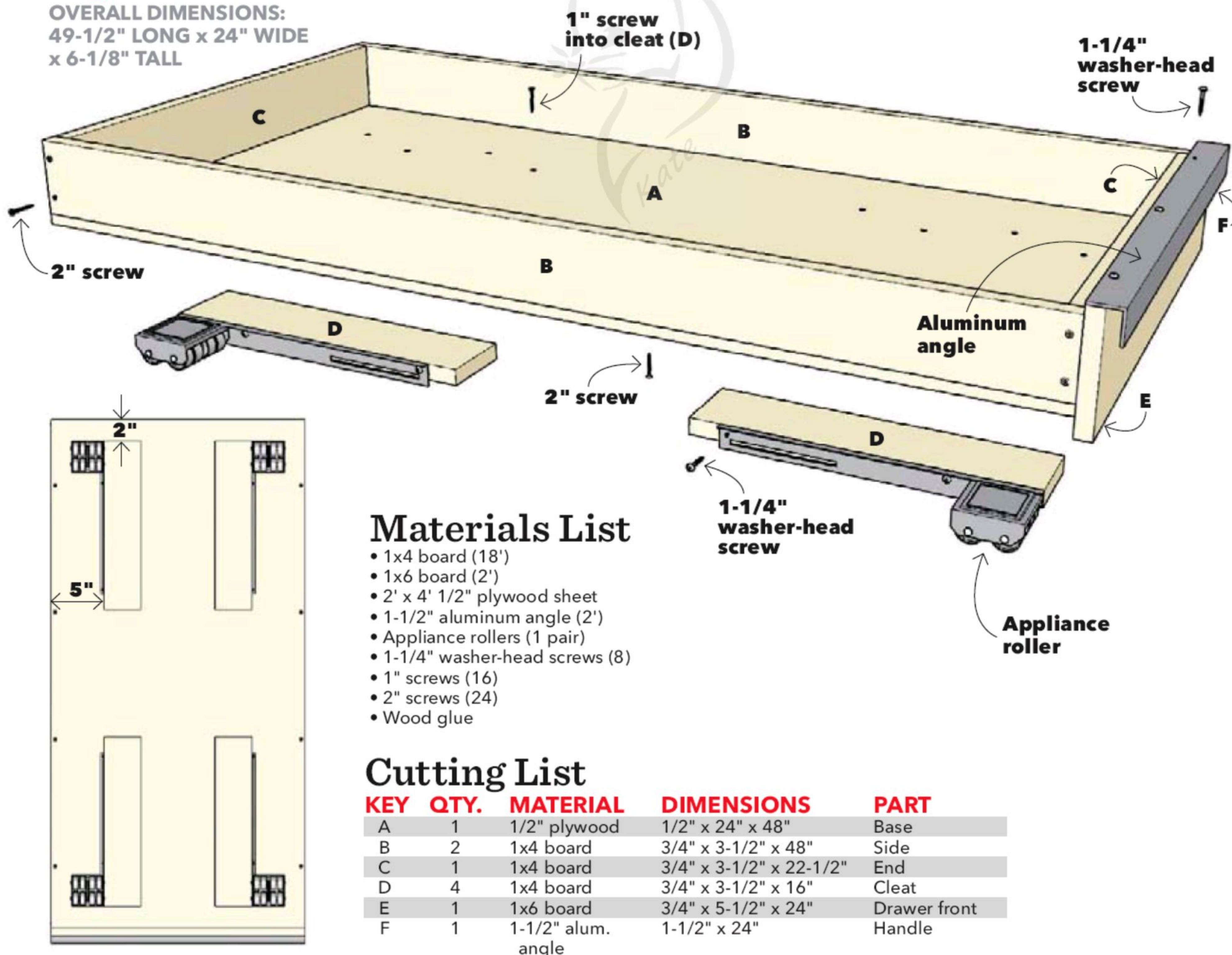


5 INSTALL THE HANDLE

Drill three evenly spaced clearance holes in the handle (F), and then clamp it to the top edge of the drawer front. Drill pilot holes in the drawer front and fasten with 1-1/4-in. washer-head screws.

Figure A Under-Bed Drawer

OVERALL DIMENSIONS:
49-1/2" LONG x 24" WIDE
x 6-1/8" TALL



Materials List

- 1x4 board (18')
- 1x6 board (2')
- 2' x 4' 1/2" plywood sheet
- 1-1/2" aluminum angle (2')
- Appliance rollers (1 pair)
- 1-1/4" washer-head screws (8)
- 1" screws (16)
- 2" screws (24)
- Wood glue

Cutting List

KEY	QTY.	MATERIAL	DIMENSIONS	PART
A	1	1/2" plywood	1/2" x 24" x 48"	Base
B	2	1x4 board	3/4" x 3-1/2" x 48"	Side
C	1	1x4 board	3/4" x 3-1/2" x 22-1/2"	End
D	4	1x4 board	3/4" x 3-1/2" x 16"	Cleat
E	1	1x6 board	3/4" x 5-1/2" x 24"	Drawer front
F	1	1-1/2" alum. angle	1-1/2" x 24"	Handle

Survival of the Sharpest

When it's you against nature, there's only one tool you need: the tempered steel Stag Hunter from Stauer—now **ONLY \$49!**

That first crack of thunder sounded like a bomb just fell on Ramshorn Peak. Black clouds rolled in and the wind shook the trees. I had ventured off the trail on my own, gambled with the weather and now I was trapped in the forest. Miles from camp. Surrounded by wilderness and watching eyes. I knew that if I was going to make it through the night I needed to find shelter and build a fire... fast. As the first raindrops fell, I reached for my **Stag Hunter Knife**.

Forget about smartphones and GPS, because when it comes to taking on Mother Nature, there's only one tool you really need. Our stunning **Stag Hunter** is the ultimate sidekick for surviving and thriving in the great outdoors. Priced at \$149, the **Stag Hunter** can be yours today for an unbelievable **\$49!** Call now and we'll include a bonus leather sheath!

A legend in steel. The talented knifemakers of Trophy Stag Cutlery have done it again by crafting a fixed-blade beauty that's sharp in every sense of the word. The **Stag Hunter** sports an impressive 5 1/3" tempered German stainless steel blade with a genuine deer stag horn and stained Pakkawood™ handle, brass hand guard and polished pommel. You get the best in 21st-century construction with a classic look inspired by legendary American pioneers.

Your satisfaction is 100% guaranteed.

Feel the knife in your hands, wear it on your hip, inspect the craftsmanship. If you're not completely impressed, send it back within 30 days for a complete refund of the item price. But we believe that once you wrap your fingers around the **Stag Hunter's** handle, you'll be ready to carve your own niche into the wild frontier.



"This knife is beautiful!"
— J., La Crescent, MN



"The feel of this knife is unbelievable... this an incredibly fine instrument."
— H., Arvada, CO

Stag Hunter Knife ~~\$149~~*

Offer Code Price Only **\$49** + S&P

1-800-333-2045

Your Insider Offer Code: SHK274-05

You must use the insider offer code to get our special price.

Stauer® 14101 Southcross Drive W., Ste 155, Dept. SHK274-05
Burnsville, Minnesota 55337 www.stauer.com

*Discount is only for customers who use the offer code versus the listed original Stauer.com price.

• 5 1/3" fixed German stainless steel blade (9 3/4" total length) • Stag horn and Pakkawood™ handle • Includes leather sheath

Stauer... Afford the Extraordinary.®



BONUS! Call today and you'll also receive this genuine leather sheath!



Not shown actual size.



Rating of A+





A planter like this is super simple to build. And it'll last a long, long time because there's no soil-to-wood contact—and therefore no rot. Instead, the soil is contained in a plastic planter inside the wooden planter. The only part that touches the ground is never-rust aluminum. You'll find everything you need for this project at a home center.

WHAT IT TAKES

TIME	COST	SKILL LEVEL
3 hours*	\$80 to \$130**	Beginner

TOOLS Miter saw, circular saw, clamps, caulking gun, drill

*Plus drying time for the finish

**Depending on size and deck material

A wooden planter box made of horizontal slats, filled with several snake plants (Sansevieria). The planter is set against a brick wall and sits on a bed of grey gravel. A stone patio is visible in the foreground.

MODERN PLANTER

BUILD IT ANY SIZE YOU LIKE—IN ONE AFTERNOON | BY TRAVIS LARSON



Choose your plastic planters first

The plastic planters (called "liners" from here on) determine the shape and size of the planter boxes, so shop for those first. Choose ones with sturdy plastic lips that can support the weight of the plants and soil. Your planter shapes can range from square to long, narrow rectangles; it all depends on the liner sizes and how you decide to configure them. You can adjust the height of your planters simply by using more or fewer rings of decking boards (**Photo 4**). But if you make your planters shorter, be sure the liners will clear the ground when they're in place.

Buying the materials

We built our planters from 5/4x6 cedar decking (1 in. thick and 5-1/2 in. wide), the standard dimensions for decking. If you plan to stain your planters, you can save 30 to 40 bucks by substituting treated decking boards. If your planters will rest on a composite deck, you may want to choose matching or contrasting composite decking.

To help you determine the quantity and length of the boards you'll need, do a bit of figuring with your liners upside down on the workbench (**Photos 1** and **2**). At the same time, figure out how many treated 1x4s to get for the inner structure (**Figure A**). You'll need at least two 8-ft. lengths for the corners and more for the liner ledger boards (**Photo 6**). You'll also need a short length of treated 2x4 for the diagonal bracing (**Photo 8**).

The corners are cloaked with 1-1/16-in. aluminum angle. Buy 3-ft. lengths if you're building only one planter. If you want to build more, buy 4-ft. lengths and make the feet 2 in. high rather than 3 in. That way you can get feet for two planters from this rather expensive material. We used 3-in. lengths of aluminum square tubing to support the weight of the planter. But you'll only use about a foot of a 3-ft. length (\$10). If you want to save a few bucks, you can substitute 1x1 treated wood blocks that you cut yourself.

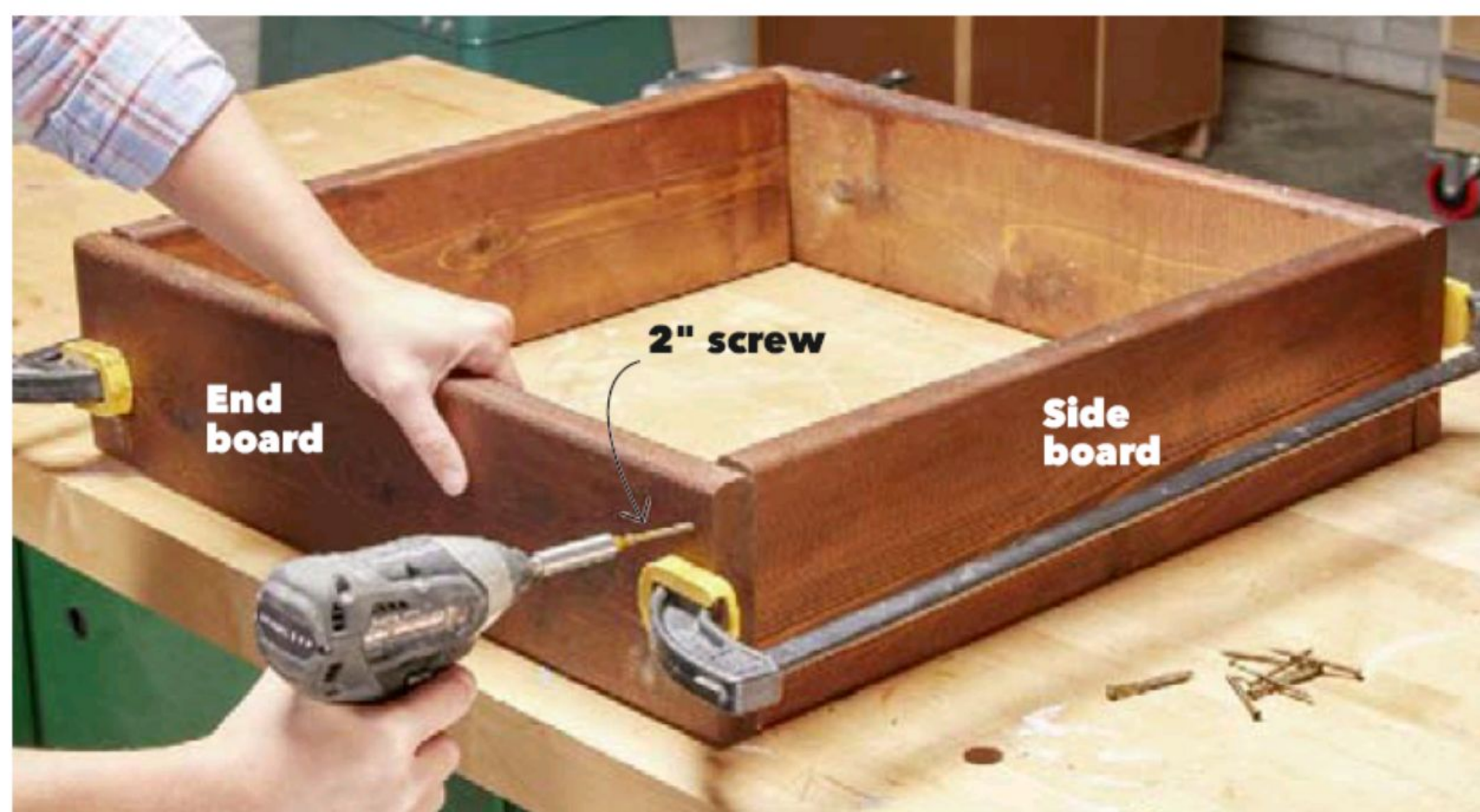
1 FIGURE OUT THE LENGTH OF YOUR SIDE BOARDS

Lay out the liners, decking boards and a 1/4-in. shim to establish the length of the side boards.



2 ESTABLISH THE LENGTH OF THE END BOARDS

Measure a liner plus a 1/4-in. shim to determine the length of the end boards (**Photo 3**). Cut eight boards of each length and apply finish to all four sides and the ends.



3 ASSEMBLE THE PLANTER RINGS

Clamp and screw together each ring of deck boards with two 2-in. exterior screws. Choose the best-looking board sides to face outward.

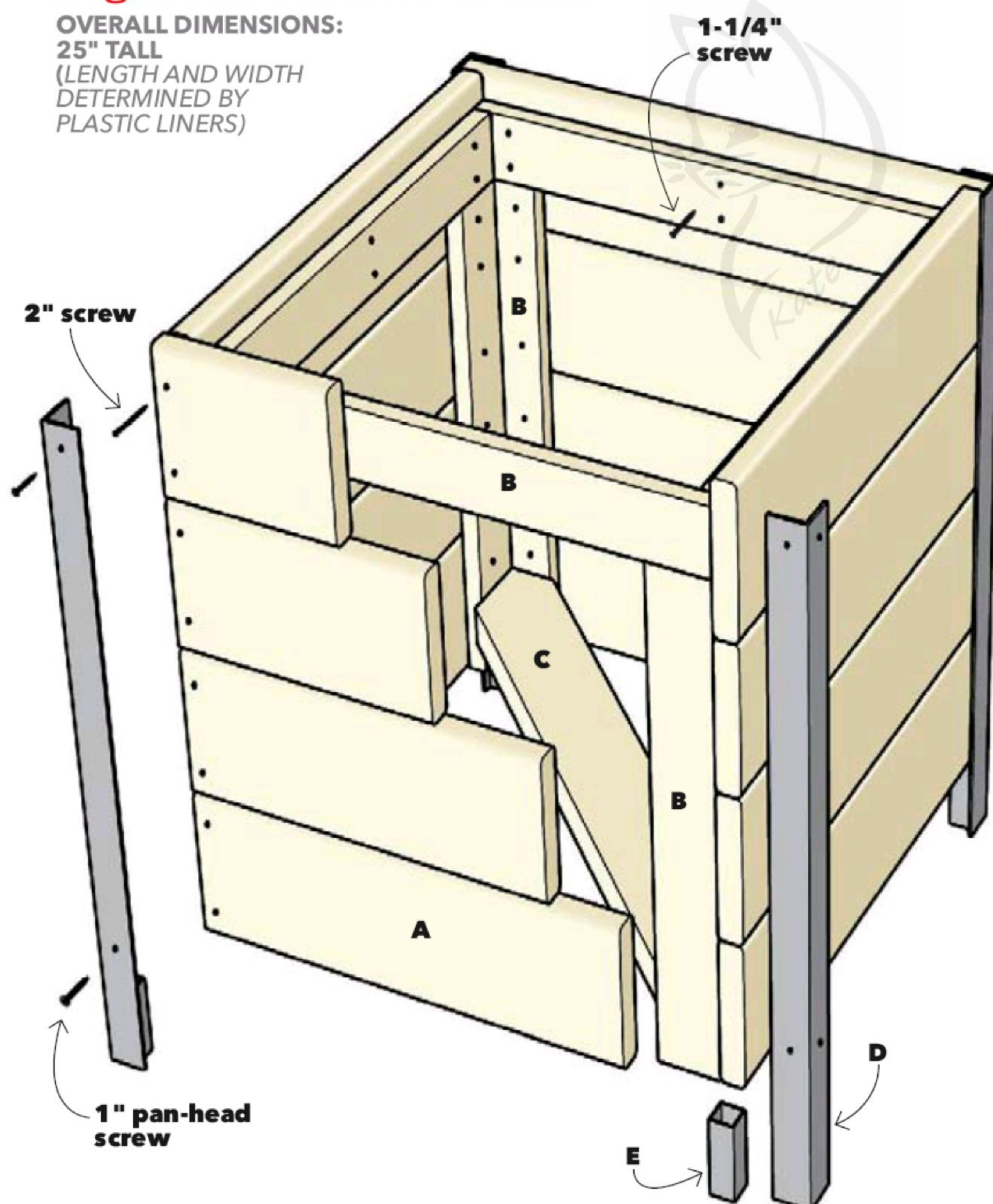


4 STACK THE RINGS

Clamp the rings together and tap the corners into alignment with a hammer.

Figure A Planter details

OVERALL DIMENSIONS:
25" TALL
(LENGTH AND WIDTH
DETERMINED BY
PLASTIC LINERS)



MATERIALS LIST

- Plastic planter(s) to line the planter box
- (A) 5/4x6 deck boards
- (B) 1x4 treated boards for liner ledger and corner blocks
- (C) 2x4 diagonal brace
- (D) Four 3-ft. lengths of 1-1/16-in. aluminum angle for corner trim legs
- (E) One 3-ft. length of 1-in. square aluminum tubing for support blocks
- One tube of silicone caulk sealant
- 1-1/4-in. exterior screws (small box)
- 2-in. exterior screws (small box)
- 1-in. pan-head screws
- 1 qt. of finish



Assembling the planters

Measure and cut the deck boards to length (**Photos 1** and **2**). It doesn't matter which two sides you choose to overlap the ends. Apply a finish if you choose (see below) and assemble each ring with 2-in. exterior screws (**Photo 3**). After you build the first ring, test-fit the liner(s). It's easy to confuse side and end boards, especially if the planters are nearly square. Then just follow the how-to photos to complete the planters.

Finish details

We used PPG Timeless oil finish (Mahogany). Whatever finish you choose, apply it before assembling the rings. You'll avoid slopping finish onto the aluminum corners, and if you're using cedar, you'll be able to seal the ends to prevent rot. We finished all four sides so we could choose the prettiest "show side" when we built the rings. Let the finish dry completely before gluing on the aluminum corners or they won't stick. If you're impatient, choose a water-based finish. If you go with oil-based, your three-hour project may become a three-day one.

Working with the aluminum parts

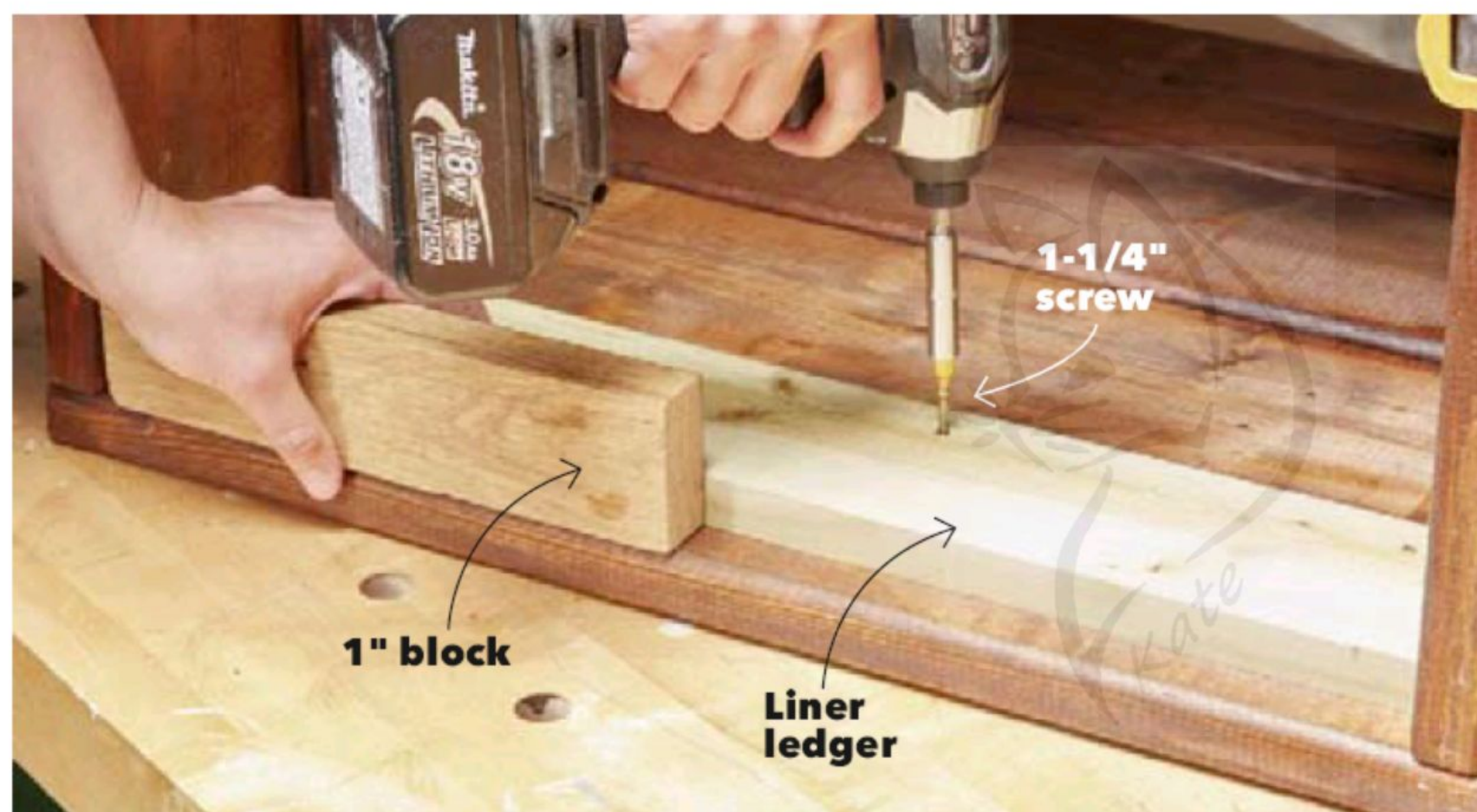
You can cut aluminum with a hacksaw, a jigsaw, or a miter saw fitted with a carbide blade. Wear eye and hearing protection. If you use a miter saw, cut slowly.

The aluminum corner trim adds style and hides the end grain of the decking. It's best to attach it with clear silicone caulk instead of construction adhesive. Either product will likely squeeze out a bit when you clamp on the corners (**Photo 10**), and it's no fun cleaning up colored adhesive from all the joints. That said, keep the silicone bead about 1/2 in. away from the outside corners of the decking to minimize squeeze-out.

Cut the 1-in. tubing support blocks to span all the way from the base of the feet to the bottom of the planter (**Photo 11**). They support the entire weight of the planter and the soil-filled liners.

5 FIND THE LIP HEIGHT

Measure the liner lip height and cut a gauge block to a width that size.



6 INSTALL THE LINER LEDGER

Cut the ledger boards to fit. Then, using the gauge block to position them, screw them into place with 1-1/4-in. screws spaced every 6 in.



7 TIE THE RINGS TOGETHER

Cut and install 18-in. 1x4 corner blocks to the inside corners with 1-1/4-in. screws, two into each deck board.



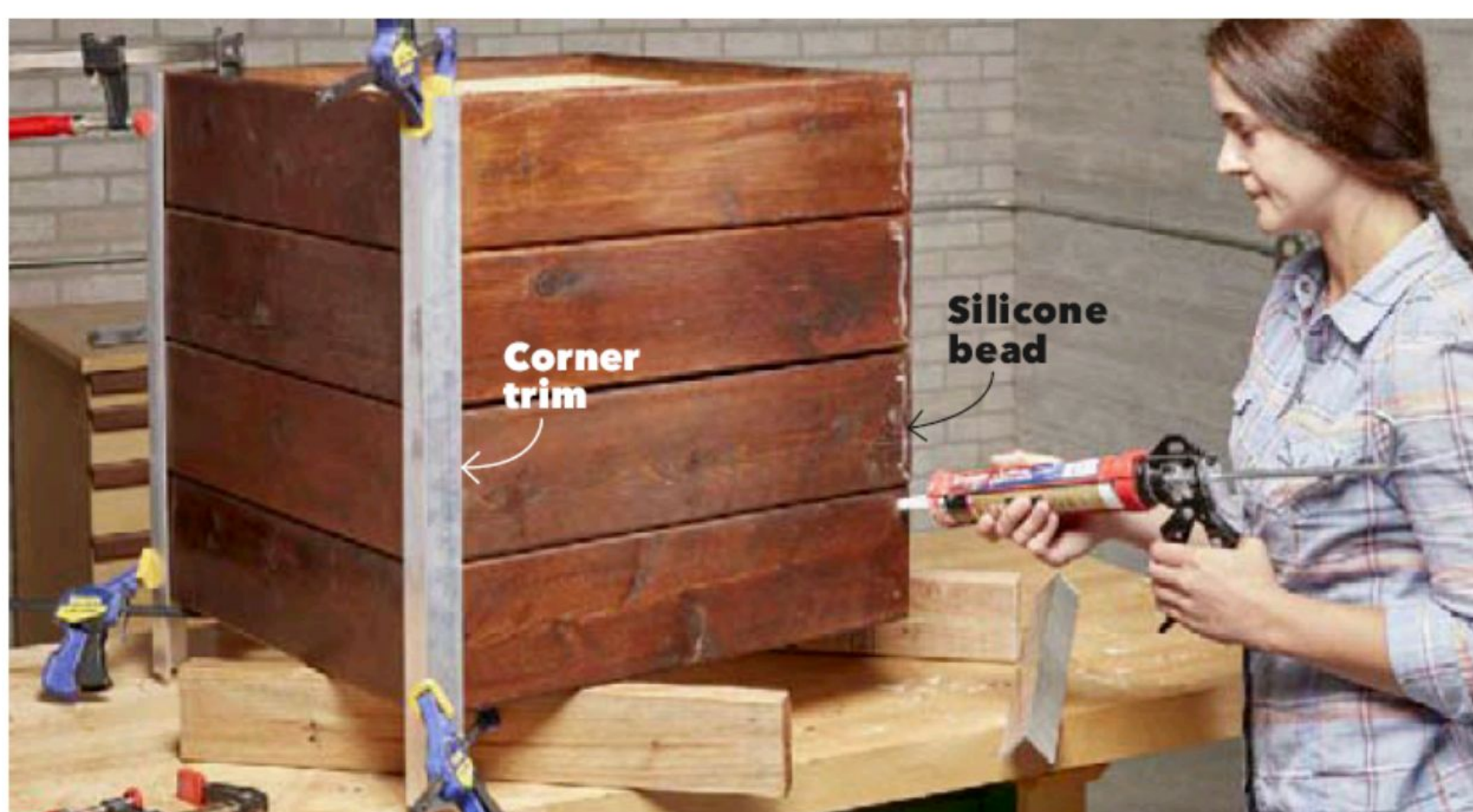
8 MARK THE DIAGONAL BRACE

Rest the planter upside down. Center a 2x4 over opposite corners and scribe the angle cuts, then cut them with a circular saw.



9 ADD THE DIAGONAL BRACE

Support the brace on 2x4 scraps while you toe-screw it to the inside corners with 2-in. screws.



10 GLUE ON THE CORNER TRIM LEGS

Cut four 25-in. aluminum angle corner trim pieces. Then apply a bead of silicone caulk to the corners and clamp each one into place.



11 ADD THE SUPPORT BLOCKS

Cut, glue and silicone the 1-in. square aluminum tubing support blocks to the inside of the aluminum angle corners.

ELECTRICAL BOX BASICS

How to pick the best junction box for any job

BY BRAD HOLDEN

With the variety of different electrical boxes available at home centers, how do you know what to buy? Don't worry, it's not that complicated. We'll whittle it down to about a dozen boxes to cover almost every situation.

New work: 3 types do it all

If you have the walls opened up for remodeling or putting on an addition, these three boxes cover about 99 percent of your needs.

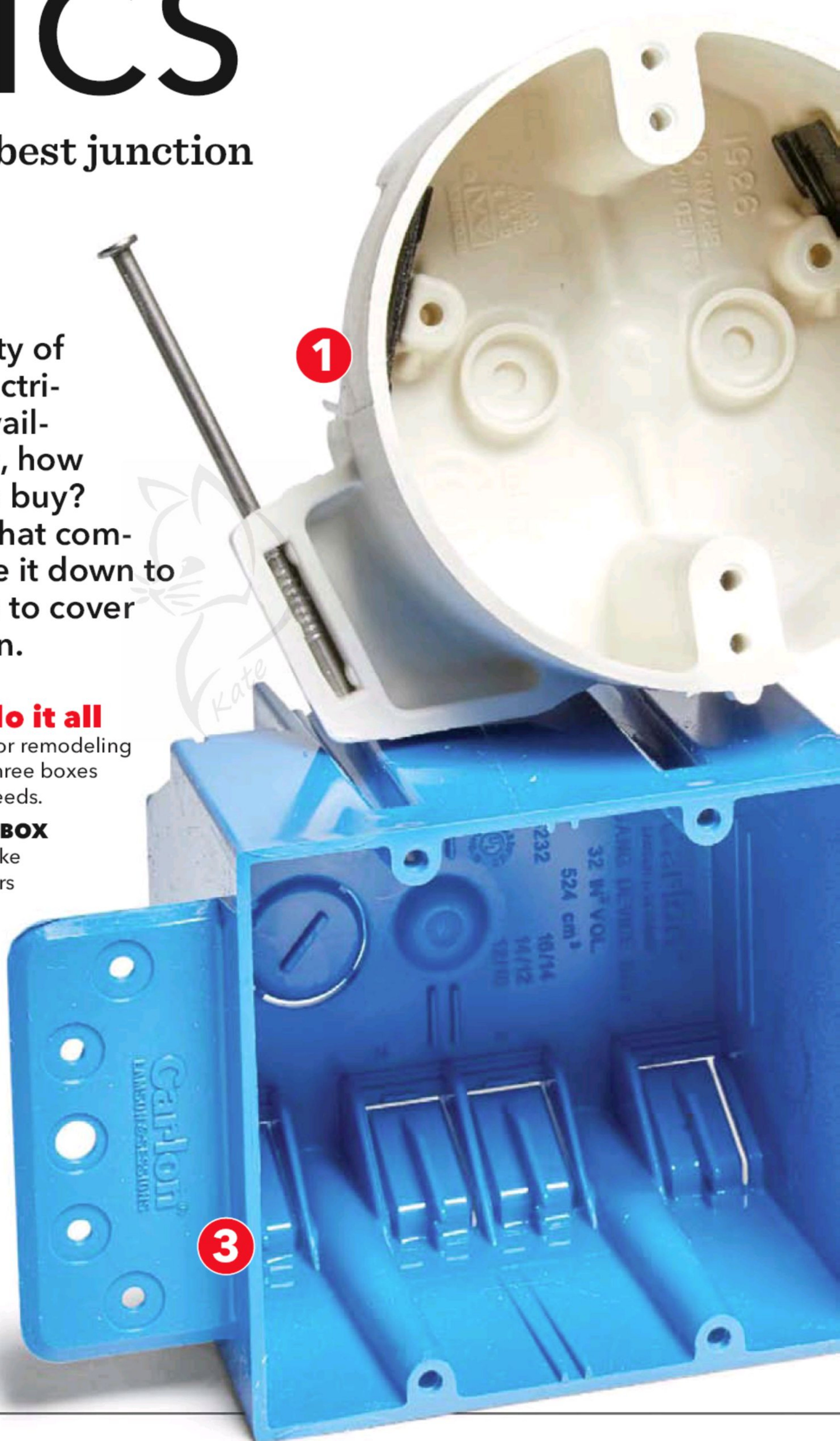
1 22-CU.-IN. 4-IN. ROUND BOX
for ceiling light fixtures, smoke alarms, carbon monoxide detectors and wall sconce light fixtures.

2 22-CU.-IN. SINGLE-GANG BOX
for a typical outlet or switch.

3 32-CU.-IN. DOUBLE-GANG BOX
for two light switches together in the same box, or two duplex receptacle outlets.



MEET THE EXPERT
John Williamson is a master electrician and electrical inspector in Minnesota.

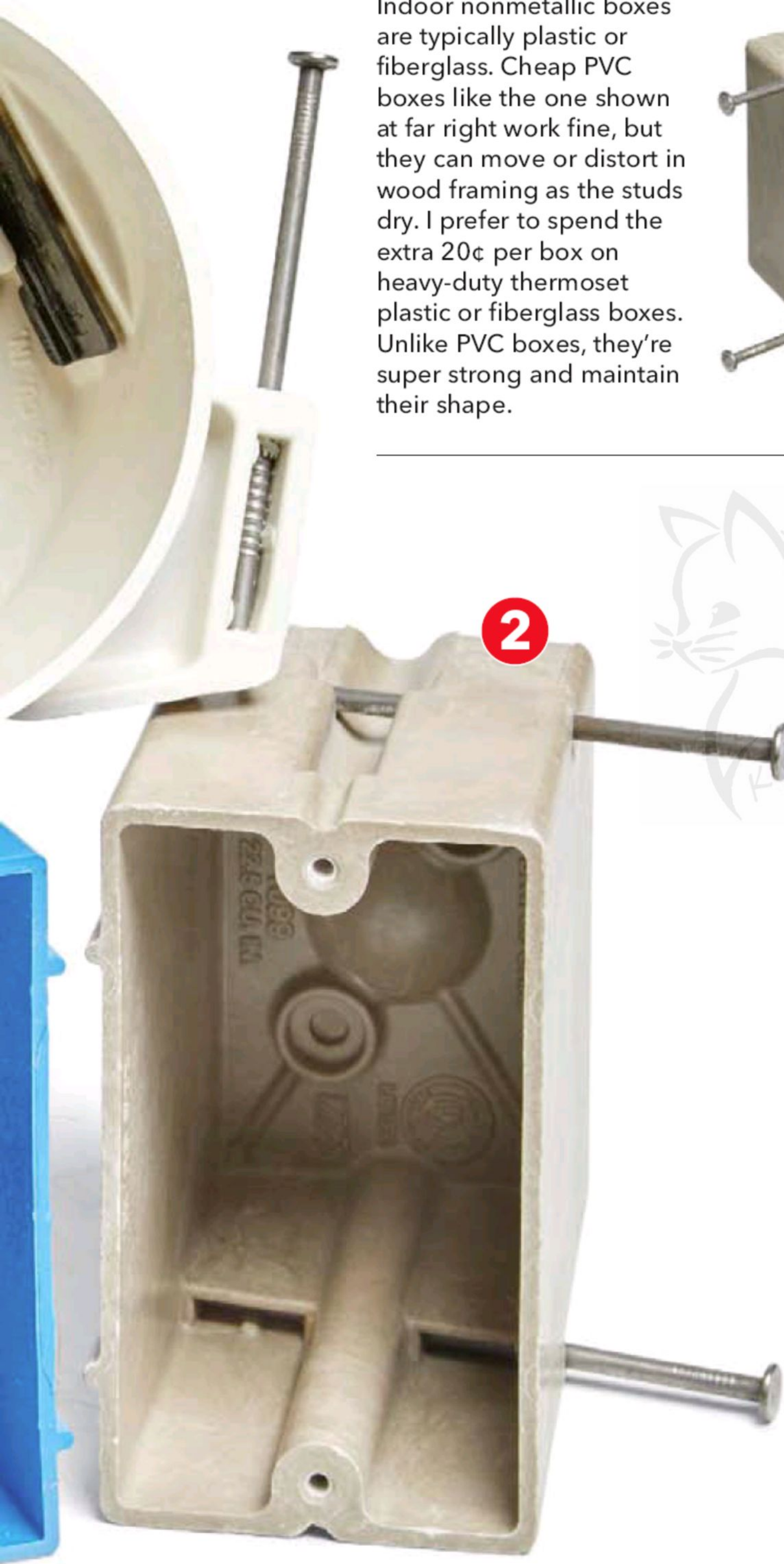
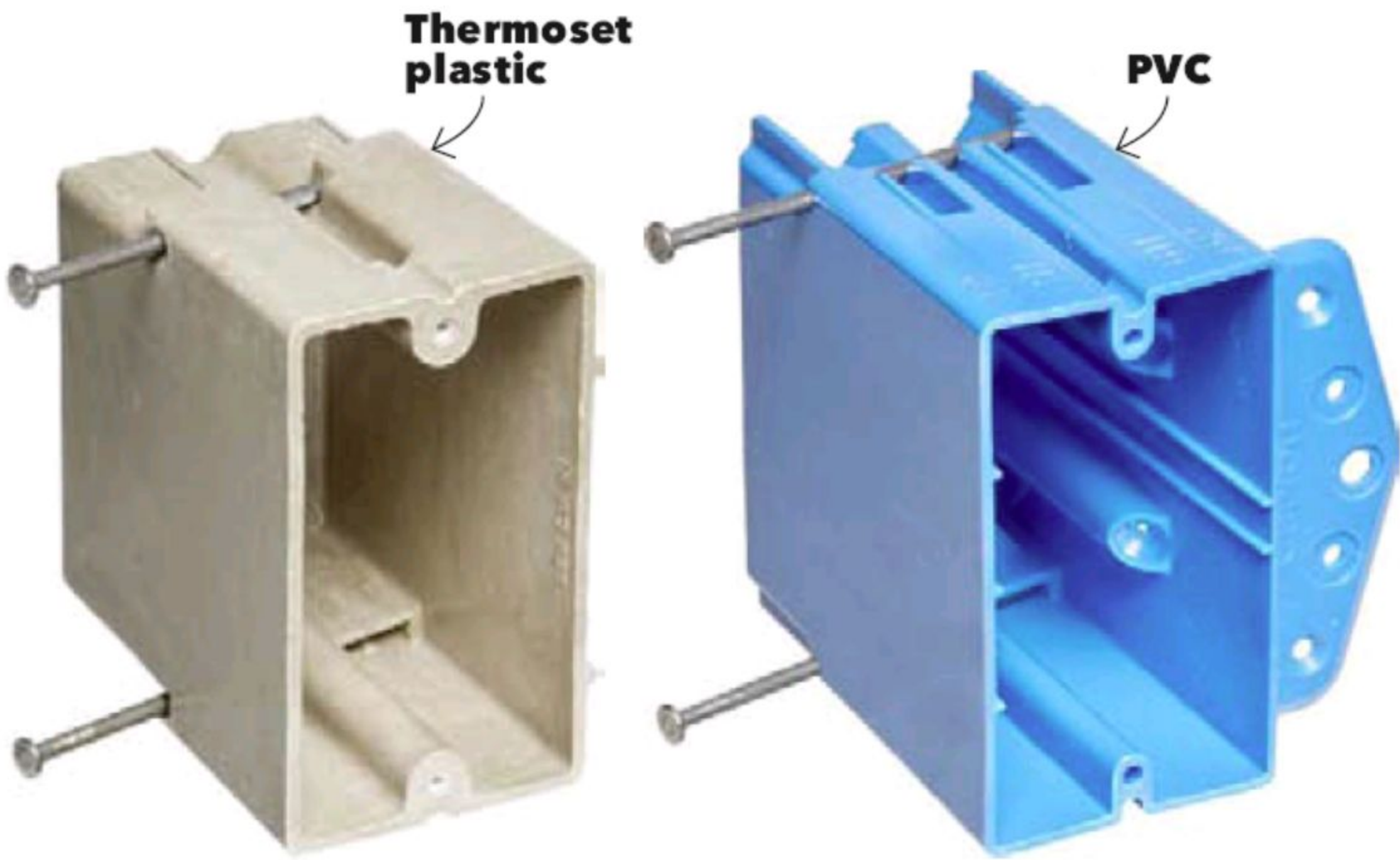


The purpose of electrical boxes

Wiring connections—where wires join an outlet, switch or other wires—must be inside an electrical box. Here’s why: Connections are the weak link in an electrical system. If they get damaged, loosened or pulled apart, you’re left without power, or worse, with a fire. Electrical boxes are simply meant to protect vulnerable connections.

Box material

Indoor nonmetallic boxes are typically plastic or fiberglass. Cheap PVC boxes like the one shown at far right work fine, but they can move or distort in wood framing as the studs dry. I prefer to spend the extra 20¢ per box on heavy-duty thermoset plastic or fiberglass boxes. Unlike PVC boxes, they’re super strong and maintain their shape.



BOX SIZE

Wires, receptacles and switches need adequate space. Crowded boxes can damage wires, resulting in a fire or shock hazard. You can use the chart below to calculate the required box size. Add up the numbers for the corresponding components in the box to find how many cubic inches you’ll need. In most cases, I skip the math and just buy the largest volume box available in the style I need. I’ve never been frustrated by having a box that was too large!

BOX VOLUME CALCULATOR

Conductor Size	14 AWG*	12 AWG	10 AWG
EACH INSULATED WIRE	2	2.25	2.5
ALL GROUNDING WIRES COMBINED	2	2.25	2.5
EACH SWITCH OR RECEPTACLE	4	4.5	5
ALL INTERNAL CABLE CLAMPS	2	2.25	2.5

* American wire gauge

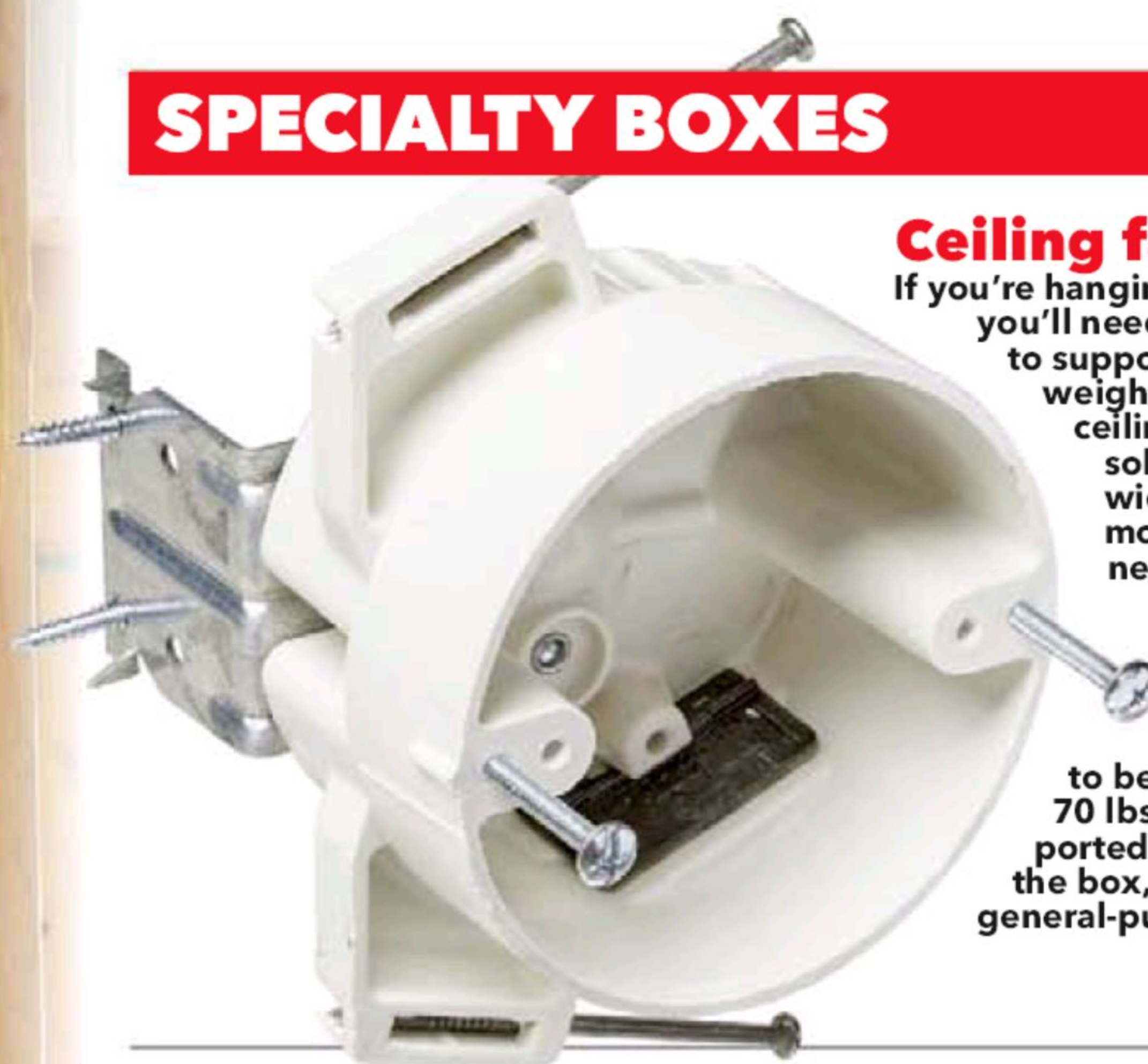
EXAMPLE: A BOX WITH FOUR 14-2 TYPE-NM CABLES WITH GROUND

8 INSULATED WIRES	= 16 CUBIC IN.
ALL 4 GROUNDING WIRES	= 2 CUBIC IN.
1 SWITCH	= 4 CUBIC IN.
1 RECEPTACLE	= 4 CUBIC IN.
ALL CABLE CLAMPS	= 2 CUBIC IN.
MINIMUM BOX VOLUME	= 28 CUBIC IN.

SPECIALTY BOXES

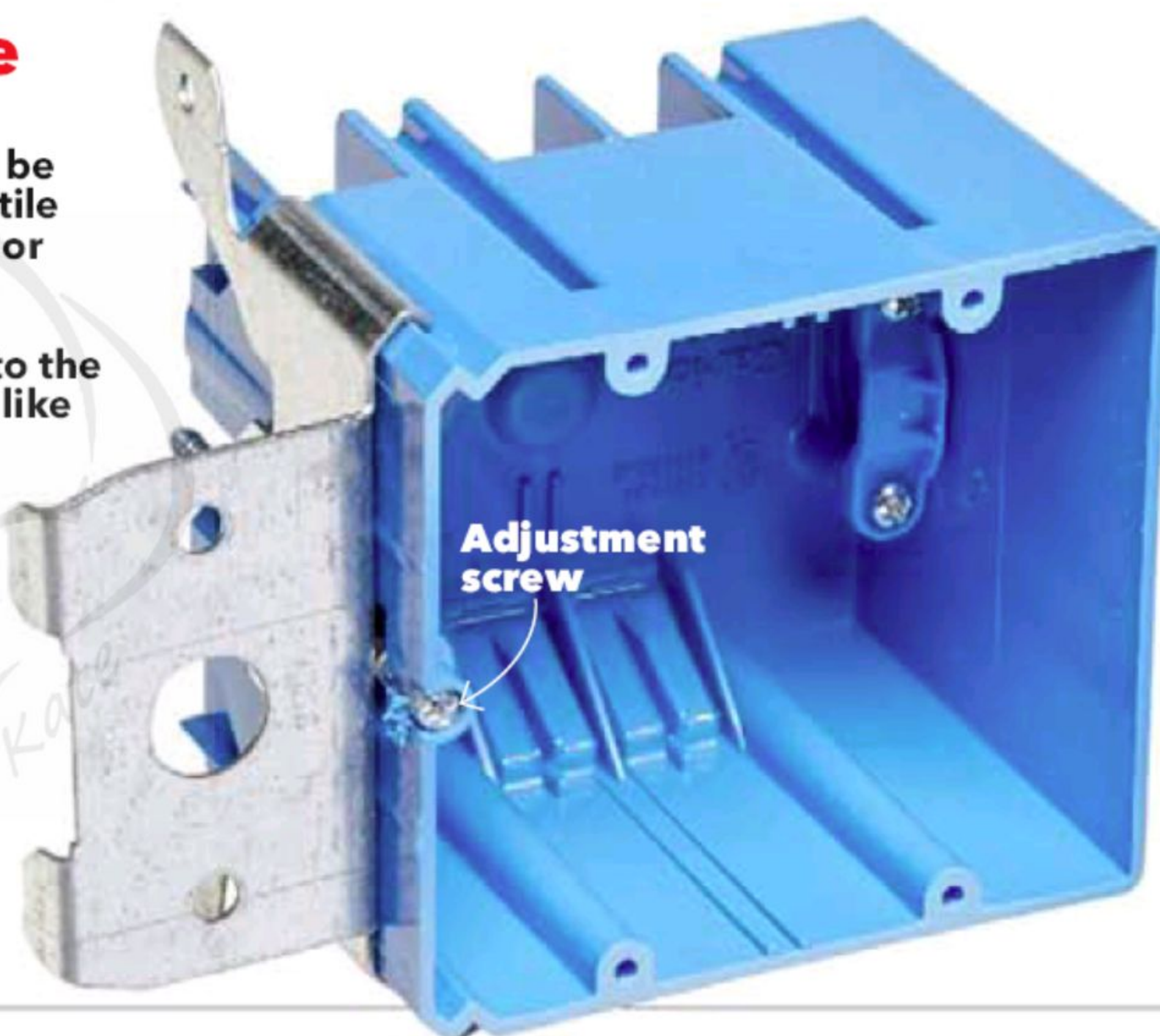
Ceiling fan boxes

If you're hanging a ceiling fan, you'll need a box designed to support the extra weight. These boxes for ceiling paddle fans are sold as kits, with a wide variety of mounting options for new work and old work (defined below). Boxes that are the sole support of the fan have to be rated for up to 70 lbs. If the fan is supported independently of the box, you can use a general-purpose box.



Adjustable boxes

If you know you'll be installing ceramic tile or wood paneling or wainscoting, buy adjustable boxes. They're mounted to the framing members like any other box; you just turn a screw to adjust the depth flush with the wall treatment. The adjustment screw is accessible even after the wall treatment is applied.



Exterior surface-mount boxes

Exterior surface-mount boxes—often molded PVC—have either threaded or glued hubs and are used with PVC electrical conduit. I like cast-aluminum boxes for outdoor projects. They're extra durable and weatherproof. They often come as a kit, including a ground-fault circuit interrupter (GFCI) receptacle and a weatherproof cover, or as a lighting kit with gaskets and lamp holders for floodlights.





Surface-mount boxes

On concrete or block walls, surface-mount boxes and conduit are the way to go. These boxes can be plastic or metal. Because they're exposed, they need to be mounted perfectly plumb and level. They also require conduit to protect the wires.



Pan boxes

Four-inch round pan boxes (short for "pancake") come in handy if a ceiling joist is right where you need to install your dining room light fixture. Cutting a notch in the ceiling joist would weaken it. Pan boxes are only 1/2 in. deep and only have a volume of 6 cu. in., but they will safely accommodate the three wires you need for your light fixture.

Gasket boxes

Energy code boxes are for insulated walls and ceilings. They typically have a molded flange with a foam gasket as well as foam-lined cable entries. This helps form an airtight seal to keep out drafts. I like to caulk the box flange right to the vapor barrier.



Metal boxes

You can wire a whole home using only non-metallic boxes, but metal boxes still come in handy for certain situations. They're extremely sturdy and work well where you need lots of volume in the box—for example, for a welder receptacle in your workshop or for a hub where multiple cables meet. As with nonmetallic boxes, get the large ones, which are 4 in. square by 2-1/8 in. deep. You'll find cover options for most configurations of switches and receptacles, as well as mud rings.



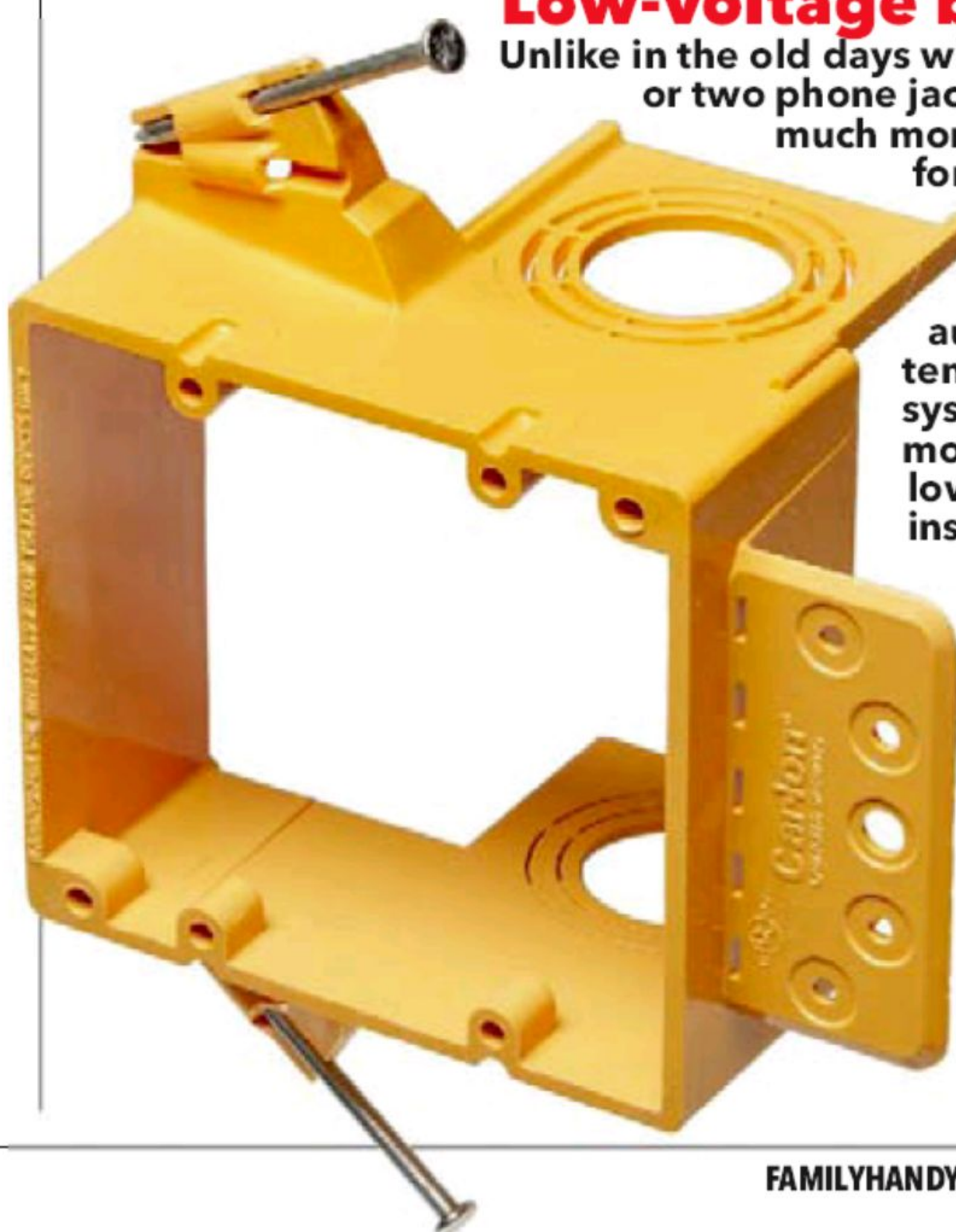
"Old work" boxes

Old work (or "remodeling") boxes are for walls that are covered with drywall or other material. They don't need to be fastened to a stud, so you can install them anywhere. There are several types. The one shown has flip-out tabs that squeeze the box flanges against the drywall. Using the box face as a marking template, you'll get a nice, close fit.



Low-voltage brackets

Unlike in the old days when homes had one or two phone jacks, today we have much more low-voltage wiring for computers, cable TV, home entertainment systems, and whole-house audio, security and temperature control systems. Save time and money by installing low-voltage brackets instead of electrical boxes. Low-voltage wiring doesn't necessarily need an enclosed box. In fact, you often don't want an enclosed box because it may require the wires to make a sharp bend, which impedes the performance of some cables.



"To you, it's the perfect lift chair. To me, it's the best sleep chair I've ever had."

— J. Fitzgerald, VA



Sit up, lie down —
and anywhere
in between!

Easy-to-use remote for
massage, heat, recline and lift

We've all had nights when we just can't lie down in bed and sleep, whether it's from heartburn, cardiac problems, hip or back aches – it could be a variety of reasons. Those are the nights we'd give anything for a comfortable chair to sleep in, one that reclines to exactly the right degree, raises feet and legs to precisely the desired level, supports the head and shoulders properly, operates easily even in the dead of night, and sends a hopeful sleeper right off to dreamland.

Our Perfect Sleep Chair® is just the chair to do it all. It's a chair, true – the finest of lift chairs – but this chair is so much more! It's designed to provide total comfort and relaxation not found in other chairs. It can't be beat for comfortable, long-term sitting, TV viewing, relaxed reclining and – yes! –

peaceful sleep. Our chair's recline technology allows you to pause the chair in an infinite number of positions, including the lay flat position and the zero gravity position where your body experiences a minimum of internal and external stresses. You'll love the other benefits, too: It helps with correct spinal alignment, promotes back pressure relief, and encourages better posture to prevent back and muscle pain.



This lift chair puts you safely on your feet!

And there's more! The overstuffed, oversized biscuit style back and unique seat design will cradle you in comfort. Generously filled, wide armrests provide enhanced arm support when sitting or reclining. The high and low heat settings along with the multiple massage settings, can provide a soothing relaxation you might get at a spa – just imagine getting all that in a lift chair! It even has a battery backup in case of a power outage. Shipping charge includes white glove delivery. Professionals will deliver the chair to the exact spot in your home where you want it, unpack it, inspect it, test it, position it, and even carry the packaging away! You get your choice of bonded stain and water repellent leather or plush microfiber in a variety of colors to fit any decor. **Call now!**

The Perfect Sleep Chair®

1-888-764-5293

Please mention code 110777 when ordering.

Because each Perfect Sleep Chair is a custom-made bedding product, we can only accept returns on chairs that are damaged or defective.

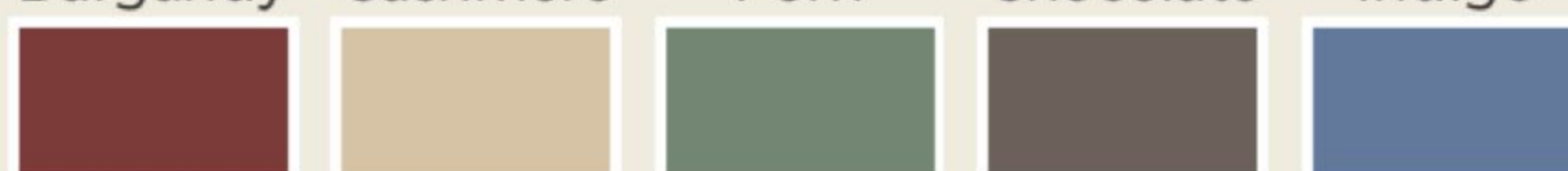
Long Lasting DuraLux Leather

Tan Chocolate Burgundy Black Blue



DuraLux II Microfiber

Burgundy Cashmere Fern Chocolate Indigo



© 2019 firstSTREET for Boomers and Beyond, Inc.

46504

Best ProTips

Expert advice from the job site. By Gary Wentz

ROOF TEAR-OFF

Simplify an ugly job



If you're a roofer, you have your routine perfected already. But for the rest of us—who tear off asphalt shingles only occasionally—here's a primer on how to do it quickly, safely and right.

ROOF SAFETY IS ESSENTIAL!

Working on a roof is dangerous, so take precautions.

- Set roof jacks (\$11 each) and a 2x10 about 3 ft. up from the roof edge (Photo 1).
- Wear a safety harness (\$150; Photo 2), which you can buy at safety equipment stores and at some roofing suppliers and home centers.
- Wear soft rubber-soled shoes for traction, long pants, work gloves and safety glasses.

BEST PRO TIPS

Prep for the tear-off

Doing a little prep work on the ground will keep nails and other debris out of the grass and flower beds, reduce cleanup time and preserve the landscaping. Place plywood over the air conditioner (be sure the power to it is turned off) and over doors or windows near the spot where you'll be tossing the debris off the roof. Then cover plants, shrubs, grass and other areas around the house with tarps to vastly simplify cleanup.

Rent a trash container (a 20-cu.-yd. size will handle most roofs and costs \$200 to \$300). If possible, have it dropped next to the house so you can easily throw old shingles directly into it from the roof.

For safety and better footing, nail the roof jacks below the area you intend to strip first (**Photo 1**). Buy the adjustable type designed to hold a 2x10 board. Space the jacks no more than 4 ft. apart. Fasten each with at least three 16d nails driven through the roof sheathing into a rafter.

Strip the roof

Start the tear-off at the section farthest from the trash container. Standing at the peak, use a garden fork or a notched roofing shovel to tear away the ridge caps and the top courses of shingles (**Photo 3**). Forks and roofing shovels are available at roofing and home centers, starting at \$26. Some roofers prefer forks because they don't get caught on nails, making it easier and faster to remove the shingles. Others like the shovels because they pull out more nails with the shingles.

Work the fork under the ridge caps, prying them loose. As they come loose, allow them to slide down to the roof jacks. Or, if they don't slide down the roof, carry them to the edge of the roof and throw them into the trash container.

Once the ridge caps are gone, slide the fork under the shingles and felt paper and pry the shingles up. Some nails will come up with the shingles. Others won't. Ignore them for now.

Remove shingles in a 2- to 3-ft.-wide section as you work down the roof (**Photo 4**). The shingles will roll up like a ball in front of the fork. Push the shingles down to the roof jacks. Continue tearing off the shingles and underlayment until you reach the roof jacks, then start over at the top of the roof.

Into the trash

As the old roofing material piles up at the roof jacks, carry it to the edge of the roof and toss it into the trash container below (**Photo 5**). If you couldn't get the trash container close to the house, throw the shingles onto a tarp on the ground. Make the pile in a flat area away from flowers and shrubs.

Shingles are heavy. They usually come off in clumps. If you're peeling off two or more layers of shingles, even a small section will be heavy. You may have to pull the shingles apart to make them light enough to carry. Rolling the shingles and underlayment into a ball will also make them easier to handle.



1 START WITH ROOF JACKS

Nail roof jacks to the rafters and then nail on a 2x10 to prevent you—and the shingles—from sliding off the roof.



2 HARNESS UP!

Use a safety harness system to prevent falls. Wear boots or shoes with soft rubber soles for a good grip and long pants to protect against the skin-scraping shingles.



3 ATTACK THE RIDGE FIRST

Tear off the ridge caps so you can work the fork under the shingles near the peak.

Create Your Own Outdoor Room...In Just Seconds!



Motorized & Manual Awnings Available!

Introducing The Revolutionary SunSetter Retractable Awning!

If you're tired of having your outdoor enjoyment rained on...baked out...or just plain ruined by unpredictable weather...

At last there is a solution! One that lets you take control of the weather on your deck or patio, while saving on energy bills! It's the incredible SunSetter Retractable Awning! A simple...easy-to-use...& affordable way to outsmart the weather and start enjoying your deck or patio more...rain or shine!

The SunSetter® is like adding a whole extra outdoor room to your home...giving you instant protection from glaring sun...or light showers! Plus it's incredibly easy to use...opening & closing effortlessly in *less than 60 seconds!*

So, stop struggling with the weather...& start enjoying your deck or patio more!

For a **FREE** Info Kit & DVD email your name & address to freedvd@sunsetter.com

**FREE!
Info Kit
& DVD**



\$200 Savings Certificate Included!

**LOW
Factory
Direct
Prices!**

**Opens at the Touch
of a Button!**



Protects you from 99% of UV rays



You choose full sun or total protection in just seconds!

FREE Info Kit & DVD
Call Toll-Free: 1-800-876-8060 Ext. 35413

☒ **Yes!** Please send your **FREE** Info Kit & DVD...including a \$200 Savings Certificate...**TODAY!**

Name _____

Address _____

City _____ State _____ Zip _____

Email _____

(Important: Be sure to give us your email address to receive our best deals!)

SunSetter®
RETRACTABLE AWNINGS

184 Charles Street, Dept. 35413, Malden, MA 02148
Visit us today at www.sunsetter.com

BEST PRO TIPS



4 ROLL DOWNHILL

Work from the peak down, tearing off shingles in easy-to-carry sections. Tear off a section all the way down to the roof jacks before returning to the peak.

Use care at roof penetrations

Slow down and work carefully near chimneys, skylights, dormers or an exterior wall. While it's usually best to replace metal flashing, sometimes it's better to reuse difficult-to-replace types if they're in good shape. But if you see rust and cracks in the metal, replace it. Damaged metal won't last as long as your new roof.

If you're keeping the old metal flashing, remove nails and bend it upward off the shingles with a pry bar (**Photo 6**). Be careful not to damage the flashing. Once it's out of the way, pull any nails and remove any shingles and underlayment that are underneath. Do the same with step flashing (the flashing interwoven with the shingles) where the roof abuts a wall (**Photo 7**).

Tear off shingles along the edge

After stripping the shingles down to the roof jacks, remove the jacks. Work the remaining courses loose with a fork or shovel, but don't pry them completely free or they'll slide off the roof (**Photo 8**).

Loosen the shingles all along the eaves. Then pull off the shingles with your hands, carry them across the roof to the trash container location and throw them in.

Some roofs have a self-stick ice and water barrier installed along the edge. This asphalt membrane usually pulls up with a fork or shovel, but it may require some scraping. If it refuses to come loose, simply leave it and install your new underlayment over it.

If you don't have time before dark to clean the roof and apply underlayment, nail down tarps for the night.

Toss old valley and vent flashing

Pry the flashing in valleys and over plumbing vents last. This flashing usually has the same life span as the shingles, so plan to replace it.

Starting at the top of the valley, slip the fork or a flat bar under the flashing and pry the metal edges loose.



5 HANDLE THEM JUST ONCE

Throw old shingles directly into the trash container as they pile up at the roof jacks. Dispose of the shingles before the pile gets too large and they slide off the roof.



6 SAVE SPECIAL FLASHINGS

Pull nails carefully around flashings you plan to reuse. Skylight and chimney flashings are often worth saving if they're in good condition.



7 GO GENTLE ON STEP FLASHING

Pull nails from any step flashing you want to save, bend it up slightly and pull out the shingles from underneath.

NORTH AMERICA'S

#1 Selling Walk-In Tub

Featuring our *New Exclusive Shower Package*

NEW PRODUCT

Now you can finally have all of the soothing benefits of a relaxing warm bath, or enjoy a convenient refreshing shower while seated or standing. Introducing Safe Step Walk-In Tub's exclusive **NEW Shower Package!**

- ✓ First and only walk-in tub available with a customizable shower
- ✓ Fixed rainfall shower head is adjustable for your height and pivots to offer a seated shower option
- ✓ Durable frameless tempered glass enclosure available
- ✓ High-quality tub complete with a comprehensive lifetime warranty on the entire tub
- ✓ Top-of-the-line installation and service, all included at one low, affordable price

Now you can have the best of both worlds—there isn't a better, more affordable walk-in tub!

Call today and receive a
FREE SHOWER PACKAGE!

FOR A LIMITED TIME ONLY
Call Toll-Free 1-800-587-5737

SAFE STEP
WALK-IN TUB
www.BuySafeStep.com

With purchase of a new Safe Step Walk-In Tub.
Not applicable with any previous walk-in tub purchase.
Offer available while supplies last. No cash value.
Must present offer at time of purchase.



"Trust me, your body will thank you!"
— Terry Bradshaw

1-800-587-5737

FINANCING
AVAILABLE
WITH APPROVED
CREDIT



BEST PRO TIPS

Continue working down the valley, lifting up the flashing (**Photo 9**). Pry up and toss out old vent flashing as well (**Photo 10**).

Clean the deck

Once a section has been stripped, go back and pull out protruding nails. Then use a large broom to sweep the roof deck clean (**Photo 11**). Walk carefully. The shingle granules make the sheathing slippery.

When the roof is clean and bare, inspect the sheathing for damage. Rotted areas and broken boards are the most common problems. Cut out and replace damaged sections as needed. Use new sheathing that's the same thickness as the old. When you remove a damaged section, center the cuts over the rafters so you can nail the new sheathing to the rafters. Also keep an eye out for loose roof sheathing that needs nailing.

“Buttoning up” the roof

This is the final prep step before shingling. It consists of installing ice and water barrier (\$50 a roll) and underlayment. The underlayment acts as a temporary weather barrier to keep rain out. But it won't stop heavy rain and wind, so once you start a section, always try to flash and shingle it by the end of the day.

Ice and water barrier is used at roof edges and other vulnerable areas. To install it, snap a chalk line 36 in. from the edge of the eaves. If you have gutters, you'll want the ice and water barrier to cover all the gutter flashing that's on the roof (**Photo 12**).

Starting at the rake edge of the roof, align the ice and water barrier with the chalk line. Tack it at the top with staples every few feet. Once the entire section is tacked along the chalk line, lift up the bottom part, peel off the backing, then let it fall back into place. The ice and water barrier will immediately stick to the roof.

Flip the top part of the ice and water barrier back over the bottom section (the staples will easily pop out), peel off the backing, then set it back into place on the roof. Work carefully to avoid wrinkles. They're hard to get out. Move on to the next section of roof edge, overlapping the vertical seams of the ice and water barrier by 6 in.

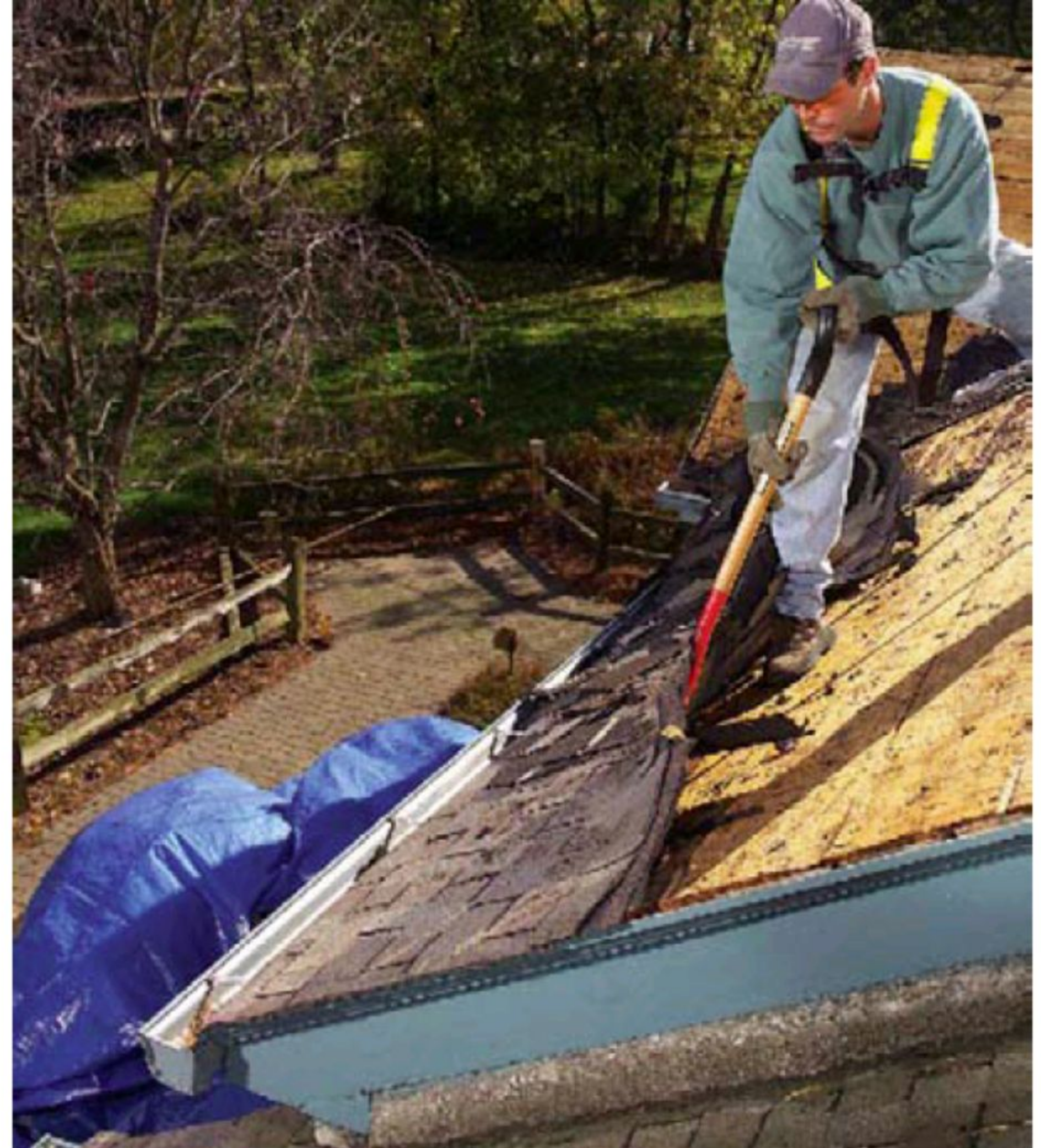
Add a second course above the first, if required, overlapping the first by 4 in. Also lay the ice and water barrier in valleys and around chimneys, skylights and other roof penetrations.

Then unroll and staple down underlayment over the rest of the roof. Use plenty of staples (5/16 in.) to make the underlayment safer to walk on and keep it from blowing off. This is where the hammer-type stapler (\$30) pays off. You can drive a dozen staples in seconds.

Clean up the area

Before climbing off the roof, clean any debris out of the gutters. You don't want nails and shingle granules pouring out of your downspouts the next time it rains.

Run a broom magnet over the yard to pick up stray nails. You can rent one at tool rental stores for about \$15. Make several passes in different directions. Even if you were careful, nails have a way of ending up in the lawn.



8 FINISH UP THE EAVES

Remove the roof jacks and work the shingles loose along the roof edge with a fork. Then pull them off by hand.



9 TRASH THE VALLEY FLASHING

Pry up the old flashing in the valleys using a fork. Valley flashing is never worth reusing.

BECOME A FAMILY HANDYMAN **INSIDER**

Tackle even the hardest projects with unlimited access to project plans, online quick classes & Family Handyman INSIDER benefits!

Get INSIDER Access To:

- ✓ 24/7 Online Classes
- ✓ 60+ Project Plans
- ✓ Expert Guidance

**Do it ALL yourself
with this toolbox
of support.**

START YOUR **FREE TRIAL TODAY!**

Go to: **fhinsider.com**

**family
handyman **INSIDER****



Grizzly Industrial

BUY DIRECT & SAVE!

9" BENCHTOP BANDSAW



MADE IN AN
ISO 9001
FACTORY

G0803 ONLY \$199⁹⁵

1 HP DUST COLLECTOR



G8027 ONLY \$245⁰⁰

12 1/2" LEAN & MEAN PLANER

WITH DOUBLE-SIDED
KNIVES!



G0505 ONLY \$395⁰⁰

6" BENCHTOP JOINTER WITH SPIRAL CUTTERHEAD

INCLUDES A BUILT-IN DUST
COLLECTION SYSTEM

FREE PAIR OF
SAFETY PUSH
BLOCKS



MADE IN AN
ISO 9001
FACTORY

G0821 ONLY \$495⁰⁰

1/4 HP BENCHTOP OSCILLATING SANDER



G0723 ONLY \$239⁹⁵

10" BENCHTOP TABLE SAW WITH RIVING KNIFE

MADE IN AN
ISO 9001
FACTORY



OUTFEED
EXTENSION
ARM



G0869 ONLY \$299⁹⁵

6" COMBINATION SANDER 6" X 48" BELT, 9" DISC

Z-SERIES



EXCLUSIVE
QUICK-RELEASE
BELT SYSTEM



G1014Z ONLY \$425⁰⁰

THE ULTIMATE 14" BANDSAW



MADE IN AN
ISO 9001
FACTORY



G0555 ONLY \$625⁰⁰

PLEASE VISIT GRIZZLY.COM® FOR COMPLETE DETAILS & SPECIFICATIONS

PRICING CODE
19FAMILY
MENTION THIS CODE
WHEN PLACING YOUR ORDER
19985R

1-800-523-4777
grizzly.com®

VIEW VIDEOS AT
grizzly.com



TECHNICAL SERVICE:
570-546-9663
FAX: 800-438-5901

BUY NOW,
PAY LATER
with Affirm
Closest monthly payments
at checkout



10 POP OFF VENT FLASHING

Pry flashing loose around vent pipes. Use a pry bar rather than a fork to avoid damaging the pipes. Never reuse vent flashing.



11 SWEEP AND INSPECT

Sweep the roof clean to avoid slips and falls. Watch for any nails you missed earlier and pull them.



12 BUTTON UP

Cover the roof right away to protect against rain. Cover the lower end with self-stick ice and water barrier. Then staple down underlayment to protect the rest of the roof.

**family
handyman**
BUILD IT. FIX IT. LIVE IT!

**FOR EVERY
LEVEL
OF DIYer**

Don't miss out...
Try It FREE!

NEW book!

Custom
DIY Projects

Tackle Home Improvements with Confidence!

- **Handy Guides and Helpful Tips** for projects large and small.
- **700+ Detailed Photos**—that SHOW you how to finish the job.
- **Project Plans** with clear directions, cutting guides and shopping lists.
- **Expert Advice** you can trust from real pros.
- **288 Pages** filled with full-color inspiration and "you-can-do-it" confidence.

**family
handyman**



**BEST
TIPS
& PROJECTS
2019**



**FREE
30-Day
Preview!**

Claim your **FREE PREVIEW** now at:
familyhandyman.com/FAMILY9

**Detailed Storage
Improvements**



**Pro Plumbing
Tips**



**Easy Electrical
Projects**



**Clever Tool
Hacks!**



Work+Stop

FREE INFORMATION

Circle the numbers for each advertiser or category on the attached card, stamp and mail or visit **WorkShop-FreeInfo.com**

AUTO

100

1. **geico.com**

You could save 15% or more. Get a FREE rate quote today. **1-800-947-AUTO Geico.com**


2.

Buy everything from one lug nut to a new fender at reliably low prices. Get your auto parts at **RockAuto.com**

BUILDING & CONSTRUCTION

101

- 3. DRYLOK[®] by UGL** Waterproofing masonry made easy. See how easy it is to protect basement walls and other masonry surfaces from the damaging effects of water penetration with Fast Plug and DRYLOK Etch. United Gilsonite Laboratories. **1.800.272.3235 ugl.com**

- 4. Genovations[®] Deck Flooring & Rolling** Low-maintenance PVC decking with a lifetime warranty. Contact us at **888-309-1808** or visit us at **GenovationsDeck.com**

- 5. pro'wood[®] PROFESSIONAL GRADE[™]** ProWood[®] professional grade treated lumber offers a wide selection including color-infused ProWood Dura Color[®]. **ProWoodLumber.com**

KITCHEN & BATH

104

- 6. Johnson Hardware[®]** *Engineered Excellence* For Pocket Door Hardware, visit **johnsonhardware.com**, call **800-837-5664**, or follow on Twitter **@JohnsonHrdware**.

- 7. NEOPERL[®]** *flow, stop and go[®]* NEOPERL, Inc. designs and manufactures water-saving products that enhance the stream quality and control the flow rate of faucets and shower products. **Neoperl.com**

OUTDOOR/LAWN & GARDEN

105

8.

The Cyclone Rake: The ultimate way to a beautiful, clean lawn. Hang up your hand rake today. **Cyclonerake.com 888-531-7253**

- 9. LP[®]** *BUILDING PRODUCTS* Get so much more than a shed. Discover unique practical benefits, plus tools and advice to help you get started. **LPshed.com 1-844-557-7433**

- 10. STA-BIL[®]** STA-BIL[®] 360 Protection is the ultimate fuel additive for your small engines. Designed for use at every fill up and the only additive recommended by Briggs & Stratton. **KeepFuelFresh.com**

- 11. Zoysia Farm[®] NURSERIES** *Improving America's Lawns Since 1953* Want a great lawn? Start with a better grass – Amazoy Zoysia Grass! **1-410-756-2311 Zoysiafarms.com**

TOOLS

107

12. **Grizzly**
Industrial, Inc.

Grizzly Industrial, Inc. Purveyors of Fine Machinery since 1983.

Grizzly.com 1-800-523-4777

13. **HARBOR FREIGHT**
QUALITY TOOLS AT RIDICULOUSLY LOW PRICES

Harbor Freight Tools is the leading discount tool retailer in the U.S. selling great quality tools at "ridiculously low prices" in over 800+ stores nationwide and on its website.

HarborFreight.com 1-800-423-2567

14. **WOODCRAFT**

Shop Woodcraft Supply for quality woodworking products — over 20,000 including brand-name tools and hardware — at stores nationwide, our catalog and Woodcraft.com

MISCELLANEOUS

108

15. **ALL-PRO™ LED**

Upgrade your outdoor security lighting with LED motion activated, flood and dusk-to-dawn consumer products.

Learn more at Eaton.com/lighting

16.



SimpliSafe wireless home security systems are easy to self-install, easy to purchase direct online, and don't require a contract or a telephone line. 24/7 Professional Monitoring for just \$14.99 a month. That's smarter home security. Protect your home today. Go now to SimpliSafe.com/handy or call 888-799-1859



LEARN MORE. BUILD MORE.

Online home improvement classes made for you by the pros.

REGISTER TODAY!

DIYUniversity.com

IT'S FREE!

TALK SHOP

FOR A CHANCE TO

WIN STUFF!

Join the *Family Handyman* Inner Circle today!

- Share feedback & chat with editors
- Answer quick polls on DIY topics
- Chances to win great prizes & more!

GO TO TMBINNERCIRCLE.COM

**family
handyman**

**ENTER FOR A CHANCE
TO WIN A**

\$100

**AMERICAN
EXPRESS
GIFT CARD**

**WHEN YOU REQUEST
ANY OF THIS FREE
INFORMATION ONLINE
OR WITH THE CARD
ATTACHED**

No purchase necessary to enter or win. Sweepstakes begins 2/12/19 and closes 2/12/20. Open to residents of the U.S., its territories and possessions, ages 21 and over. Void where prohibited. For entry and other details including official rules visit WorkShop-FreeInfo.com.

Work Wheels

Expert advice on repair, maintenance and gear. By Josh Risberg

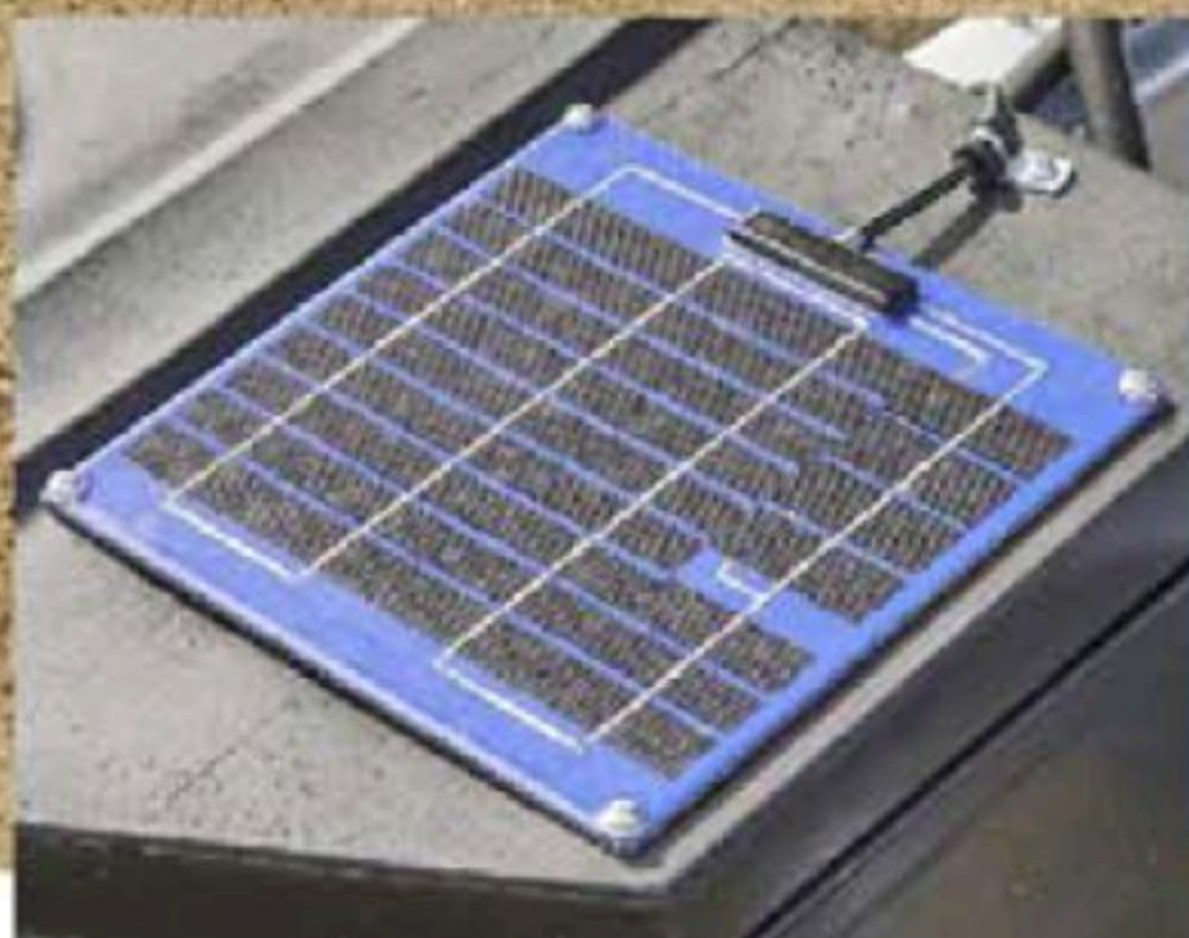
Easy off-loading

A dump trailer can save you tons of labor (literally) on a job, but the cost of owning one is steep: Most sell for \$8,000 or more, though small models cost as little as \$3,000. If those costs don't make sense for you, this might: We checked rental costs in a few U.S. locations and found you can rent one for \$100 to \$200 per day, depending on the size. Be sure you call the rental center to make sure your truck can handle the load. Large dump trailers require large trucks and maybe a trailer brake controller. Lift systems are powered by a battery mounted on the trailer, and operation is as simple as pushing "up" and "down" buttons. Sure beats a shovel!



A SIDE GATE IS HANDY

Some dump trailers have a side gate in addition to the standard rear gate, which allows for easier access and leveling of the trailer load if needed.



RECHARGING OPTIONS

This trailer has a solar panel to charge the battery, but most are charged by your truck or by plugging into a standard electric outlet.



UNLOAD WITH YOUR THUMB

Most trailers have a wired controller, but some new models have a wireless remote just like the key fob for your truck.

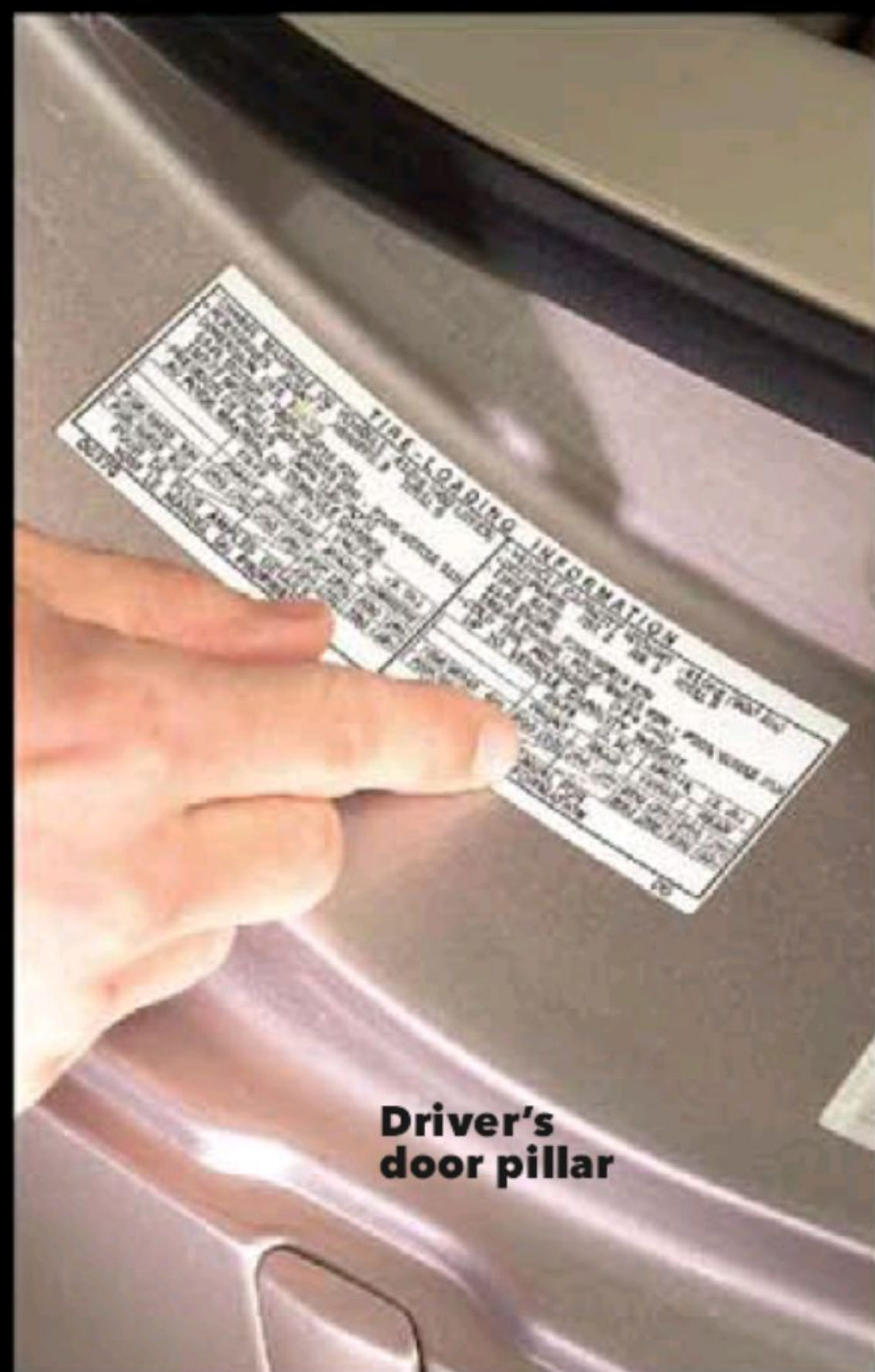


BUY THE RIGHT TRANSMISSION FLUID

Carmakers have made major improvements to transmission fluids in recent years. Contact the dealership parts department to see if your car requires a newer fluid. Then call auto parts stores to see if you find one that stocks it for less. If you strike out, bite the bullet and buy it from the dealer.

GET ACCURATE TIRE PRESSURE READINGS

Low air pressure causes tires to use more gas, wear faster and run hotter. Hot tires are more prone to blow out on extended highway drives. If you're going on a road trip, check them all (including the spare) before you leave. Look for the correct air pressure on the decal located on either the driver's door or the door pillar. If the decal is missing, check your owner's manual. Always make sure the tires are cold when you check the tire pressure.



Driver's door pillar



Upgrade to LED

Taillights get bounced around, dunked in the lake and soaked with road salt. So it's no surprise that bulb filaments break and sockets corrode, causing a lot of lighting malfunctions.

Sealed LED trailer lights are a brilliant solution. Prices start at about \$25 per pair. Many are labeled "boat trailer lights," but water resistance is useful for any trailer lights. Before you remove your old lights, write down the wiring scheme. Then swap in the new lights.

Splice the new lights into your existing trailer harness or install the new harness from the kit. Before you take the trailer on the road, test the brake lights and turn signals.





**Need more
Family Handyman?
Get our best tips
and hints in your
inbox. Sign up at
tfhmag.com/diytips**

GOT A DIY QUESTION?

Finding answers is easy at familyhandyman.com. Just use the search box at the top of the page to get expert step-by-step help with your projects.

GOT A HANDY HINT OR TIP FOR US?

To share your information with us, submit a copy of your original contribution, including photos and/or sketches, by email to:

submissions@familyhandyman.com

Or mail to: *Family Handyman*,
2915 Commers Drive, Suite 700,
Eagan, MN 55121

Please include your name, mailing address and email address if you have one, and indicate to which department you are submitting. We reserve the right to publish your submission in any appropriate department, or elsewhere. Contributions will not be acknowledged or returned.

RIGHTS

By submitting material to us, you grant Home Service Publications, Inc., its parent company subsidiaries, affiliates, partners and licensees worldwide use of the material without time limitation, including the right to use your name and city/state/province in connection with any such use. We reserve the right to modify, reproduce and distribute your material in any medium (now or hereafter existing) and in any manner or appropriate place, including but not limited to magazines, promotional merchandise and marketing, and other related materials.

By submitting material to us, you represent and warrant that you have full authority to grant the rights set forth above and that your material will not, in whole or in part,

infringe the intellectual property rights, rights of privacy or publicity, or any other rights of any third party. You further represent and warrant that you have attained the legal age of majority in your state/province (18 in most states/provinces). If you're a minor under the law of your state/province, your parent or guardian must submit on your behalf.

CUSTOMER CARE

For subscriptions, renewals, gifts, payments, account info and other inquiries, email: customer-care@familyhandyman.com or visit: familyhandyman.com/customer-care

You can also write to: *Family Handyman* Customer Care, PO Box 6099, Harlan, IA 51593-1599

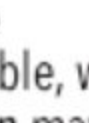
Single copies of past issues are available for purchase at our affiliate, Shoptasteofhome.com. The cost is the cover price (either \$3.99 or \$4.99) plus \$1 shipping and handling for each copy.

COMMENTS AND SUGGESTIONS

We welcome your ideas and opinions. Write to: The Editor, *Family Handyman*, 2915 Commers Dr., Suite 700, Eagan, MN 55121. Fax: 651-994-2250. Email: feedback@familyhandyman.com

TO REQUEST PERMISSION TO REPRINT

If you'd like permission to reprint any material that appears in *Family Handyman*, please write to us with the nature of your request. Please include as much detail as possible relating to your intended use of the material and specify the issue date and page number (or URL, as applicable) where the material originally appeared. Please send an email to permissions@tmbi.com

FAMILY HANDYMAN® ISSN: 0014-7230, USPS: 515-930. Vol. 69, No. 4, 595th Edition. Published 8 times per year: March, April, May, June, July/August, September, October/November, December/January/February by Home Service Publications, Inc., 1610 N. Second St., Suite 102, Milwaukee, WI 53212. We may also occasionally publish extra issues and special issues (which count as two in a subscription). Periodicals postage paid at Milwaukee, WI, and at additional mailing offices. **POSTMASTER:** Send address changes to customer-care@familyhandyman.com, visit familyhandyman.com/customer-care or write to *Family Handyman* Customer Care, PO Box 6099, Harlan, IA 51593-1599. **SUBSCRIPTIONS:** In the U.S.A., its territories and possessions, \$24 for one year (8 issues). For countries outside the U.S.A., subscriptions are \$28.97 per year in American currency. Canadian GST registration number R123771891. CPM agreement number 40065693. **Printed in the U.S.A.** Copyright ©2019 Home Service Publications, Inc. All rights reserved. Unauthorized reproduction, in any manner, is prohibited. *Family Handyman*, Handy Hints, Great Goofs and Build It. Fix It. Live It! are registered trademarks of Trusted Media Brands, Inc. Wordless Workshop, Workshop Tips and  are trademarks of Trusted Media Brands, Inc. **SUBSCRIBERS:** If the U.S. Postal Service alerts us that your magazine is undeliverable, we have no further obligation unless we receive a new address within one year. **CONSUMER INFORMATION:** *Family Handyman* may share information about you with third parties for the purpose of offering products and services that may interest you. If you would rather not receive such offers via postal mail, please write to: *Family Handyman* Customer Mailing List, PO Box 3122, Harlan, IA 51593-0188. You can also visit www.tmbi.com/preference-center to manage your preferences and opt out of receiving such offers via email. Please see our Privacy Policy at www.tmbi.com/privacy-policy.

family handyman

EDITORIAL

Chief Content Officer **Nick Grzechowiak**
Editor-in-Chief **Gary Wentz**
Senior Editors **Mary Flanagan**
Travis Larson
Associate Editors **Mike Berner**
Brad Holden
Josh Risberg
Managing Editor **Donna Bierbach**
Assistant Editors **Matt Boley**
Elizabeth Flaherty
Harrison Kral
Contributing Copy Editor **Peggy Parker**
Contributing Editors **Spike Carlsen**
Rick Muscoplat
April Wilkerson
Editorial Services Associate **Peggy McDermott**

ART

Associate Creative Director **Vern Johnson**
Art Director **Marcia Roepke**
Graphic Designer **Mariah Cates**
Production Artist **Mary Schwender**
Photographer **Tom Fenenga**

DIGITAL

Digital Product Manager **Gina Kapfhamer**
Senior Analyst, Digital Analytics **Ashley Knoebel**
Senior Digital Editor **Jenny Stanley**
Associate Digital Editor **Nick Gerhardt**
Social Media Manager **Kellen Berg**
Online Learning Manager **Kat Gritsenko**
Senior Video Producer **Jeff Breitenstein**
Video Producer **Will Leighton**
Production Assistant **Courtney McDermott**

ADVERTISING

Director, Sales Services **Gigi Myer**
VP, Integrated Sales **John Dyckman**
New York, 646-518-4215 **Richie Matz**
Ray Rienecker
Myra Martinez
Midwest, 312-540-4824 **Matt Avery**
West Coast, 646-518-4215 **John Dyckman**
Classified and Small Display **Eric Genova**
Ads: 212-779-7172, ext. 221
Senior Marketing Manager **Michael Moya**
Associate Marketing Manager **Christine Galletta**
Advertising Coordinator **Selena Cohen**
Senior Production Manager **Leslie Kogan**

TRUSTED MEDIA BRANDS, INC.

President & Chief Executive Officer **Bonnie Kintzer**
Chief Administrative Officer/Chief Financial Officer **Dean Durbin**
Chief Marketing Officer **C. Alec Casey**
Chief Digital Officer **Vince Errico**
SVP, Advertising Sales **John Boland**
VP, Human Resources **Jen Tyrrell**
VP, Human Resources and Benefits **Heather Schwartz**
General Counsel **Mark Sirota**
VP, Operations **Michael Garzone**
VP, Product Marketing **Brian Kennedy**
VP, Consumer Acquisition **Heather Plant**
VP, Consumer Marketing Planning **Jim Woods**
VP, Digital Product & Technology **Nick Contardo**
VP, Digital Content & Audience Development **Kari Hodes**
VP, Programmatic and Data Product Operations **Scott Mulqueen**
VP, Revenue Operations **Larry Mlawski**
VP, Digital Sales **Randy Saperstone**

EDITORIAL OFFICE

2915 Commers Drive, Suite 700,
Eagan, MN 55121; 651-454-9200



**ULTRA
SAFE**

**SUPER
EFFICIENT**

**TOTALLY
SILENT**

**HEATING
FOR PEACE OF MIND!**





WWW.EHEAT.COM
1-800-807-0107

ENERGY SAVING
heats room as little as 4 cents per hour!*

ULTRA-SAFE
leave unattended 24/7; cool to the touch

HEALTHY
fanless - doesn't blow dust or dry the air,
ideal for those who have asthma or dry eyes

SILENT
fanless design, auto dimming power light

STYLISH AND SLEEK
slim space saving design, only 2" thin!

EASY INSTALL
installs in minutes, no drill required;
hardwired & easy plug-in models available

10% OFF 1 or more Envi Heaters. Coupon Code: FH1910 / free shipping!



**SELF-CLEANING
Rain Gutter
OUTLET**

The SpoutOff

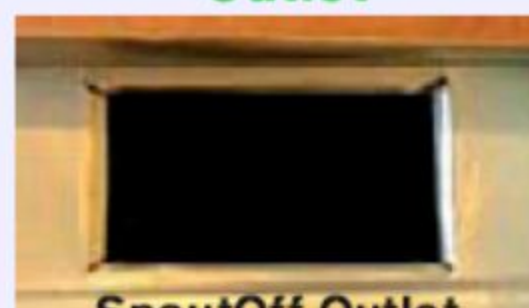
*Which outlet do you want
in YOUR rain gutters?*

Self-CLOGGING
Outlet



Standard Outlet

Self-CLEANING
Outlet



SpoutOff Outlet

thespoutoff.com

1-866-289-1442

Need more space?
Build your own
murphy bed.






Piston-lift
mechanism kit
includes
step-by-step
construction plans
and instructional
DVD

Create-A-Bed®

Toll Free **1-877-966-3852**

www.createabed.com

Storm Windows — to protect
your windows against weather, hurricanes,
heat and cooling loss, cuts noise



Most innovative **interior** and
exterior storm frames and lenses.
Avoid expensive window replace-
ment, easy do it yourself install.
Direct from manufacturer, built
in Chicago, see our factory video.



sales@stormsnaps.com
Alpina Manufacturing, Chicago, IL

Visit our website for easy online ordering or call us for info:

1-800-915-2828 • STORMSNAPS.COM

5-Minute Fence Stain




- Stain 100 ft of fence in just 5 minutes!
- Sprayer attaches directly to garden hose.
- No masking, simply hose off over-spray.
- One quart covers 600 square ft.
- Select from three natural wood tones; Natural Cedar, Dark Cedar or Redwood.

FiveMinuteFence.com

**15
Snow
Guard
Models**

Snow Guards For Metal Roofs



**Metal
Roof
Accessory
Attachment**

Attach Roof Accessories With RoofClamp

**METAL
ROOF
SNOW
RETENTION**



SNOBAR COLORBAR COLORRAIL



**EASY
Gutter
Leaf
Protection**

Available In 4, 5, 6, 7, And 8 Inch Diameters



**Prevent Chimney
& Vent Pipe
Damage**

**3 Sizes Available For Most Roof Types
Standing Seam Adapter Plate Available**



Toll Free: 800-766-5291
Phone: 717-737-4398

www.SNOJAX.com

Stop Dangerous Snow Slides On Metal Roofs

SnoBlox-Snojox 671 Willow Street Lemoyne, PA 17043

INCINOLET®
electric incinerating toilets

PROBLEM SOLVED!

Need a toilet conveniently located?
Home, cabin, shop, boat or dock –
INCINOLET is your best solution!

SIMPLE to
install, maintain.
Only electricity
needed: 120
or 240 volts

ULTRA CLEAN:
waste reduced
to sterile ash,
as little as a
cupful weekly.
Dump in garbage.

TOP QUALITY: stainless steel,
platinum odor control, quality
construction for a lifetime of satisfaction.



www.incinolet.com
*Call 1-800-527-5551 for info,
prices and personal attention.*

RESEARCH PRODUCTS/Blankenship
2639 Andjon • Dallas, Texas 75220

**Earn
\$500 a day**
making bunk beds
from your shop!

Even if you only have basic woodworking
skills you can easily learn this business.

THIS MONTH'S SPECIAL
2 Territories for the Price of 1

- Perfect for both
beginning
woodworkers
and experts alike
- Recover your
investment with ease
- Ranked A+ by the Better
Business Bureau**



1800BunkBed
It's Your Business!™

ACT TODAY
to see if your territory is available!

Visit 1800BunkBed.com

SHELVES THAT SLIDE

- Custom Made for your Cabinets
- Kitchens • Pantry • Bathrooms
- Limited Lifetime Warranty
- Baltic Birch Construction
- 100 Pound Capacity

1-800-598-7390
www.shelveshat-slide.com
Order On-Line

*Custom pull out shelves
and Kitchen cabinet accessories*



Call or email for a free catalog

Weed Razer
The most efficient & effective tool
made for removing aquatic weeds.

Clears your lake or pond weeds in minutes!

**Weed Razer Pro clears
a path up to 62"**

Using the Weed Razer is simple:

1. Give it a toss
2. Let it sink
3. Pull it in

Also Available

TORRENT
MUCK BLOWER

CREATE A
MUCK AND
SILT FREE
SWIMMING
AREA

877-356-6455
www.WeedRazers.com

STAY SAFE IN THE HOME YOU LOVE.

DID YOU KNOW?

- ✓ 1 in 4 seniors will fall this year.*
- ✓ Most falls happen on the stairs.
- ✓ Acorn Stairlifts has the best solution to stay safe on the stairs.



GET \$250 OFF
YOUR PURCHASE
OF AN ACORN
STAIRLIFT!**

**PLUS, RECEIVE A FREE STAIRLIFT BUYING
GUIDE & DVD JUST FOR CALLING!**

1-866-881-6275

*According to the CDC. **Not valid on previous purchases. Not valid with any other offers or discounts. Not valid on refurbished models. Only valid towards purchase of a NEW Acorn Stairlift directly from the manufacturer. \$250 discount will be applied to new orders. Please mention this ad when calling. AZ ROC 278722, CA 942619, MN LC670698, OK 50110, OR CCB 198506, RI 88, WA ACORNSI8940B, WV WV049654, MA HIC169936, NJ 13VH07752300, PA PA101967, CT ELV 0425003-R5, AK 134057.



Underbed Dressers



**Put Up to 24 Drawers
Under Your Beds**

ultimatebed.com

Where will your customers
look for the things they need
to get the job done?

The Workshop

Advertise today.

Call 203-604-1744
for more information.

NEW!

Oil Vanish™

Oil Stain Remover

Quickly dissolves oil stains from driveways, garages, and parking areas.

Penetrates deep to lift the toughest stains - new or old.

Easy-to Use: Apply, Scrub and Rinse.

OilVanish.com

Available at these fine retailers

Body Fat Reduction Formula



Specially Formulated to
Help Maintain Lean Muscle
Mass & Reduce Body Fat

Save \$2.00 online at:
www.IrwinNaturals.com by entering
coupon code: **013880**

**CLA LEAN BODY FAT REDUCTION
SAVE \$2**

EXPIRES: 08/31/19 MANUFACTURERS COUPON

Consumer: Redeemable at retail locations only. Not valid for online or mail-order purchases. Retailer: Irwin Naturals will reimburse you for the face value plus 8 (cents) handling provided it is redeemed by a consumer at the time of purchase on the brand specified. Coupons not properly redeemed will be void and held. Reproduction by any party by any means is expressly prohibited. Any other use constitutes fraud. Irwin Naturals reserves the right to deny reimbursement (due to misredemption activity) and/or request proof of purchase for coupon(s) submitted. Mail to: CMS Dept. 10363, Irwin Naturals, 1 Fawcett Drive, Del Rio, TX 78840. Cash value: .001 (cents). Void where taxed or restricted. ONE COUPON PER PURCHASE. Not valid for mail order/websites. Retail only.

0710363-013880

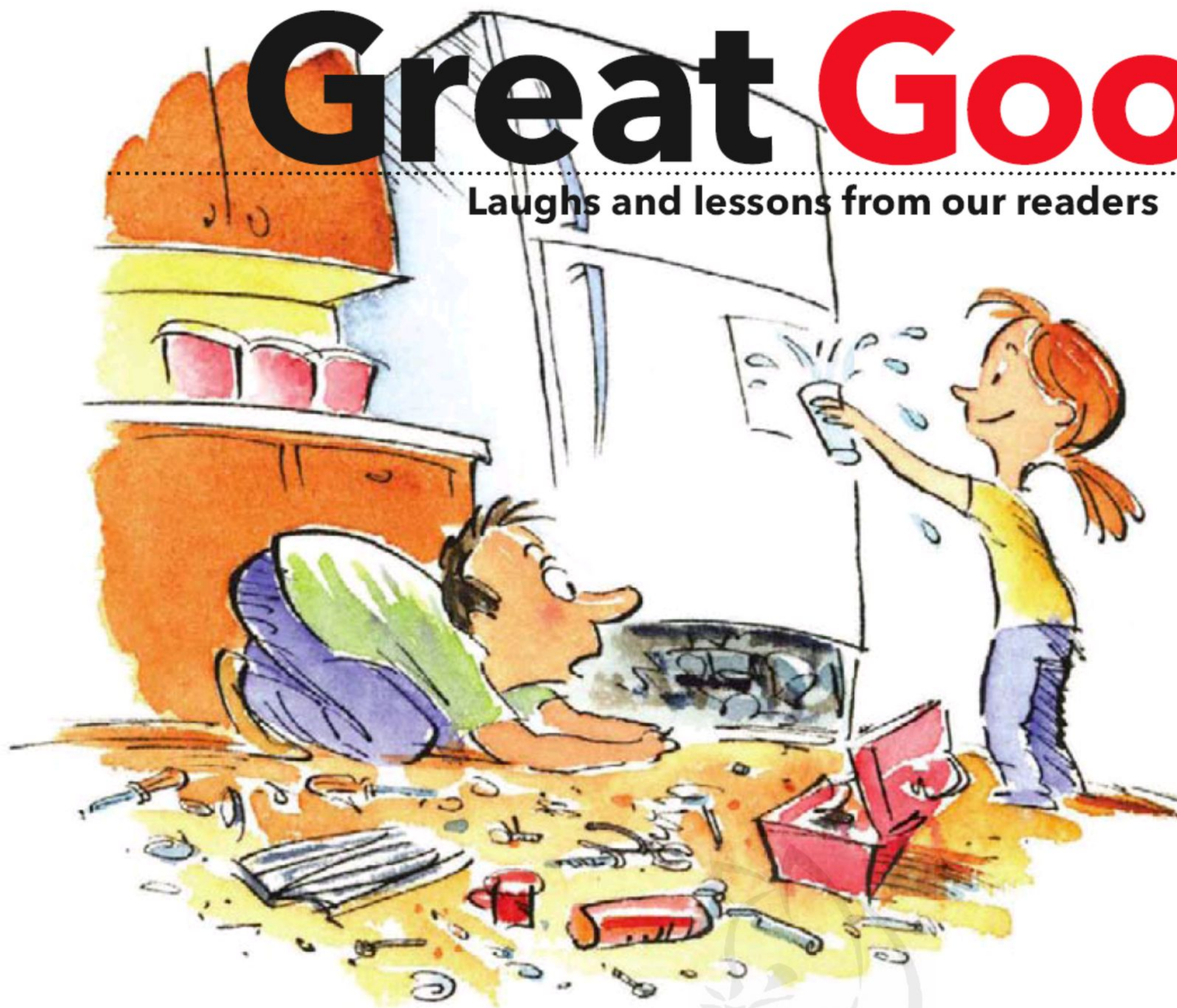
These statements have not been evaluated by the Food & Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.

Follow Us On...



Great Goofs®

Laughs and lessons from our readers



THAT QUIET LITTLE DRIP!

The water dispenser in my refrigerator door wasn't working, so I figured the solenoid valve was shot. After a one-hour trip to the parts store for a new \$60 valve, I installed it. Guess what? Still no water! After 30 minutes of troubleshooting and checking the electrical connections and the water hookup, I was as perplexed as ever. That's when my 7-year-old daughter waltzed in and asked me what I was doing. Then she told me that she'd pressed the water lock button on the fridge door after learning about water conservation in school. I felt like a big drip!

TONY JACKSON



10 FEET OF TRIM IN A 9-FOOT CAR

On my way to work one day, I stopped at my local home center to buy trim for my daughter's bedroom. I folded down the backseat in my car and ran the pieces of trim through the trunk, resting the front ends on the dashboard. I slammed the trunk shut, then recoiled in horror at the sound of breaking glass. The trim was too long for the car, and the slamming trunk acted like a battering ram, shoving the trim through the windshield. My little trim project suddenly got a lot more expensive—and my car was impossible to drive with the shattered windshield.

TOM DOBBS

TRY THE HARD WAY FIRST

My parents were giving me a sofa, and I had found the perfect spot for it—the downstairs family room. My dad and I maneuvered the heavy sofa through the front door and down the stairs, then discovered that it wouldn't fit through the door at the bottom of the stairs. So I removed the casing and jambs. Then it wouldn't fit through the family room door, so I took off those casings and jambs too.

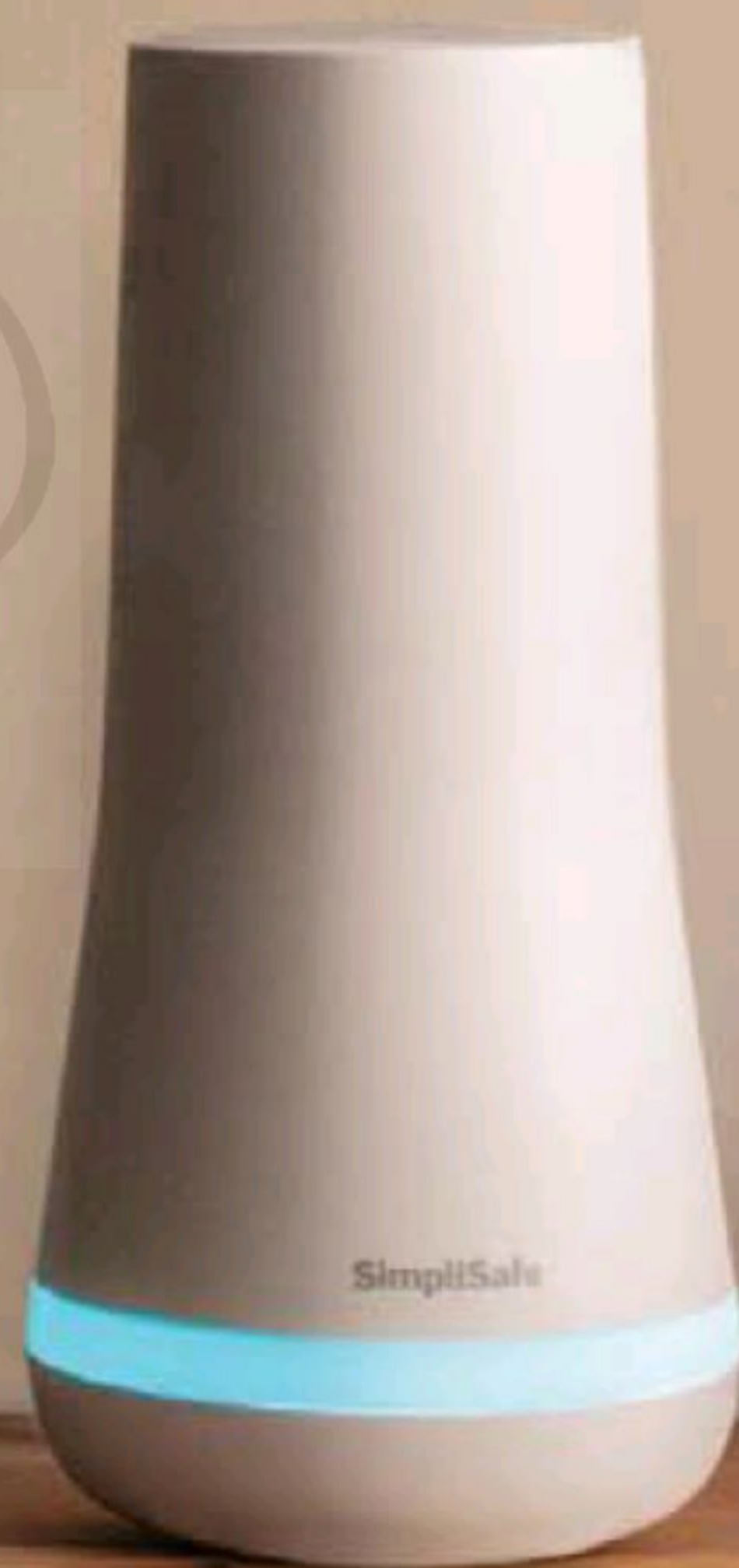
When we moved the sofa for the last time, we heard something rattling around inside it. I reached into the sofa and pulled out some loose change and the instructions for removing the sofa back. I thought about those instructions the whole time I was nailing on the casings and jambs.

DARIN D. ZURN

Stop fear at the front door.

Some days, the world can feel like a downright alarming place. At SimpliSafe, we know it feels good to fear less. So we blanket your home with award-winning 24/7 security that stands up to the unexpected, from blizzards to burglars to blackouts. It's exceptional protection at an exceptionally fair price. As more than 3 million customers know, fear has no place in a place like home.

Right now, get free shipping at [SimpliSafe.com/handy](https://www.simplisafe.com/handy)



SimpliSafe™
HOME SECURITY

LifeProof™ Vinyl Plank Flooring in Sterling Oak



A FLOOR YOU'LL LOVE **FOREVER**

The look you want is now backed for life. At The Home Depot®, LifeProof™ vinyl plank flooring comes in over 40 shades. Each of them waterproof, scratch-resistant and easy to install. Today is the day for doing. Learn more at <http://www.homedepot.com/Vinyl-Plank/LifeProof>

More saving. More doing.®

