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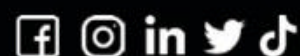


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MARCH 2021





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3 THINGS

I learned this month

Nuggets of knowledge picked up on the job

GARY WENTZ
EDITOR-IN-CHIEF



Sometimes you find treasures!

Whenever I tear into an old wall, I feel like a kid opening a present. What will I find inside? Usually, the only gift is pathetic plumbing that I'll have to replace. But every once in a while, I get a treasure or at least an interesting mystery: What the heck is this thing? How old is it? How did it get here? Those riddles help keep my mind occupied while I'm lugging buckets of plaster out to the trash. And before I close up the wall, I always try to plant a perplexing present for the next remodeler.

WHAT'S THE BEST THING YOU'VE EVER FOUND INSIDE A WALL?

Please send me a photo: editors@thefamilyhandyman.com. If you find money, please mail it directly to me.



Too good to be true

When I saw this in a recently remodeled basement, I thought: What a great way to add a drain line! No need to cut and fuss with the existing line. Just drill a hole and clamp on a saddle. But I was also suspicious and checked the plumbing code. Sure enough—saddle fittings aren't allowed for domestic supply or drain lines. Ever. Keep this in mind: There are hundreds of code-prohibited items for sale online. They sometimes show up in stores, too.

Drywall shortcut

In our October '20 issue, I described how I caulked some inside corners, skipping the slow mudding and taping process. A flood of emails followed. A small minority (about 5%) predicted problems such as cracks in the caulk. But the majority of emails came from people who've tried this method themselves. Like me, they reported good results—no problems even 10 or 20 years later. Bottom line: I'll never mud an inside corner again. Huge thanks to all of you who wrote in!

HAVE A SHORTCUT TO SHARE?

If you have a time-saving trick, share it with me—and your fellow readers. Just shoot me an email at editors@thefamilyhandyman.com



For certain adults with **newly diagnosed metastatic non-small cell lung cancer (NSCLC)** that **tests positive for PD-L1**



**= A CHANCE FOR MORE
SNUGGLY SUNDAYS**

A Chance to Live Longer™

THE 1ST AND ONLY FDA-APPROVED **CHEMO-FREE COMBINATION**
OF 2 IMMUNOTHERAPIES THAT WORKS DIFFERENTLY

In a study of newly diagnosed advanced NSCLC patients, half of those on OPDIVO + YERVOY were alive at 17.1 months versus 14.9 months on platinum-based chemotherapy.

Results may vary. OPDIVO® + YERVOY® is not approved for patients younger than 18 years of age.

Indication & Important Safety Information for OPDIVO (nivolumab) + YERVOY (ipilimumab)

Only your healthcare professional knows the specifics of your condition and how OPDIVO in combination with YERVOY may fit into your overall therapy. The information below does not take the place of talking with your healthcare professional, so talk to them if you have any questions.

What are OPDIVO and YERVOY?

OPDIVO and YERVOY are prescription medicines used to treat people with a type of advanced stage lung cancer called non-small cell lung cancer (NSCLC). OPDIVO may be used in combination with YERVOY as your first treatment for NSCLC when your lung cancer has spread to other parts of your body (metastatic) **and** your tumors are positive for PD-L1, but do not have an abnormal EGFR or ALK gene.

It is not known if OPDIVO and YERVOY are safe and effective when used in children younger than 18 years of age.

What is the most important information I should know about OPDIVO and YERVOY?

OPDIVO and YERVOY are medicines that may treat certain cancers by working with your immune system. OPDIVO and YERVOY can cause your immune system to attack normal organs and tissues in any area of your body and can affect the way they work. These problems can sometimes become serious or life-threatening and can lead to death and may happen anytime during treatment or even after your treatment has ended. You may have more than one of these problems at the same time. Some of these problems may happen more often when OPDIVO is used in combination with YERVOY.

Call or see your healthcare provider right away if you develop any new or worse signs or symptoms, including

- **Lung problems:** new or worsening cough; shortness of breath; chest pain
- **Intestinal problems:** diarrhea (loose stools) or more frequent bowel movements than usual; stools that are black, tarry, sticky, or have blood or mucus; severe stomach-area (abdominal) pain or tenderness
- **Liver problems:** yellowing of your skin or the whites of your eyes; severe nausea or vomiting; pain on the right side of your stomach area (abdomen); dark urine (tea colored); bleeding or bruising more easily than normal

- **Hormone gland problems:** headaches that will not go away or unusual headaches; eye sensitivity to light; eye problems; rapid heartbeat; increased sweating; extreme tiredness; weight gain or weight loss; feeling more hungry or thirsty than usual; urinating more often than usual; hair loss; feeling cold; constipation; your voice gets deeper; dizziness or fainting; changes in mood or behavior, such as decreased sex drive, irritability, or forgetfulness
- **Kidney problems:** decrease in the amount of urine; blood in your urine; swelling in your ankles; loss of appetite
- **Skin problems:** rash; itching; skin blistering or peeling; painful sores or ulcers in mouth or nose, throat, or genital area
- **Eye problems:** blurry vision, double vision, or other vision problems; eye pain or redness

Problems can also happen in other organs and tissues. These are not all of the signs and symptoms of immune system problems that can happen with OPDIVO and YERVOY. Call or see your healthcare provider right away for any new or worsening signs or symptoms, which may include:

- Chest pain; irregular heartbeat; shortness of breath; swelling of ankles
- Confusion; sleepiness; memory problems; changes in mood or behavior; stiff neck; balance problems; tingling or numbness of the arms or legs
- Double vision; blurry vision; sensitivity to light; eye pain; changes in eye sight
- Persistent or severe muscle pain or weakness; muscle cramps
- Low red blood cells; bruising

Getting medical help right away may help keep these problems from becoming more serious. Your healthcare team will check you for these problems during treatment and may treat you with corticosteroid or hormone replacement medicines. Your healthcare team may also need to delay or completely stop your treatment if you have severe side effects.

Your healthcare team will check you for these problems during treatment and may treat you with corticosteroid or hormone replacement medicines. Your healthcare team may also need to delay or completely stop your treatment if you have severe side effects.

What should I tell my healthcare provider before receiving OPDIVO and YERVOY? Before you receive OPDIVO and YERVOY, tell your healthcare provider about all of your medical conditions, including if you:

- have immune system problems such as Crohn's disease, ulcerative colitis, or lupus
- have received an organ transplant



Talk to your doctor about OPDIVO + YERVOY

www.OPDIVOYERVOY.com 1-855-OPDIVOYERVOY

- have received or plan to receive a stem cell transplant that uses donor stem cells (allogeneic)
- have received radiation treatment to your chest area in the past and have received other medicines that are like OPDIVO
- have a condition that affects your nervous system, such as myasthenia gravis or Guillain-Barré syndrome
- are pregnant or plan to become pregnant. OPDIVO and YERVOY can harm your unborn baby
- are breastfeeding or plan to breastfeed. It is not known if OPDIVO or YERVOY passes into your breast milk. Do not breastfeed during treatment with OPDIVO or YERVOY and for 5 months after the last dose of OPDIVO or YERVOY

Females who are able to become pregnant: Your healthcare provider should do a pregnancy test before you start receiving OPDIVO or YERVOY.

- You should use an effective method of birth control during your treatment and for at least 5 months after your last dose of OPDIVO or YERVOY. Talk to your healthcare provider about birth control methods that you can use during this time.
- Tell your healthcare provider right away if you become pregnant or think you are pregnant during treatment with OPDIVO or YERVOY. You or your healthcare provider should contact Bristol Myers Squibb at 1-844-593-7869 as soon as you become aware of the pregnancy.

Tell your healthcare provider about all the medicines you take, including prescription and over-the-counter medicines, vitamins, and herbal supplements.

Know the medicines you take. Keep a list of them to show your healthcare providers and pharmacist when you get a new medicine.

What are the possible side effects of OPDIVO and YERVOY?

OPDIVO and YERVOY can cause serious side effects, including:

- **See “What is the most important information I should know about OPDIVO + YERVOY?”**
- **Severe infusion reactions.** Tell your healthcare team or nurse right away if you get these symptoms during an infusion of OPDIVO or YERVOY: chills or shaking; itching or rash; flushing; shortness of breath or wheezing; dizziness; feel like passing out; fever; back or neck pain

- **Complications, including graft-versus-host disease (GVHD), of bone marrow (stem cell) transplant that uses donor stem cells (allogeneic).** These complications can be severe and can lead to death. These complications may happen if you underwent transplantation either before or after being treated with OPDIVO or YERVOY. Your healthcare provider will monitor you for these complications.

The most common side effects of OPDIVO when used in combination with YERVOY include: feeling tired; diarrhea; rash; itching; nausea; pain in muscles, bones, and joints; fever; cough; decreased appetite; vomiting; stomach-area (abdominal) pain; shortness of breath; upper respiratory tract infection; headache; low thyroid hormone levels (hypothyroidism); decreased weight; and dizziness.

These are not all the possible side effects of OPDIVO and YERVOY. Call your doctor for medical advice about side effects.

You are encouraged to report side effects of prescription drugs to the FDA. Call 1-800-FDA-1088.

OPDIVO (10 mg/mL) and YERVOY (5 mg/mL) are injections for intravenous (IV) use.

This is a brief summary of the most important information about OPDIVO and YERVOY. For more information, talk with your healthcare providers, call 1-855-673-4861, or go to www.OPDIVO.com.



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7356US2002303-03-01 12/20



FEATURES

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Maximize Your Drawer Space

Eight simple projects to improve the storage in your kitchen and beyond.

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Rethink the Way You Buy Paint

Most people choose the color first—and that's a mistake!

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Sling Chair, Simplified

Wood and leather are a beautiful combination—and comfortable too.

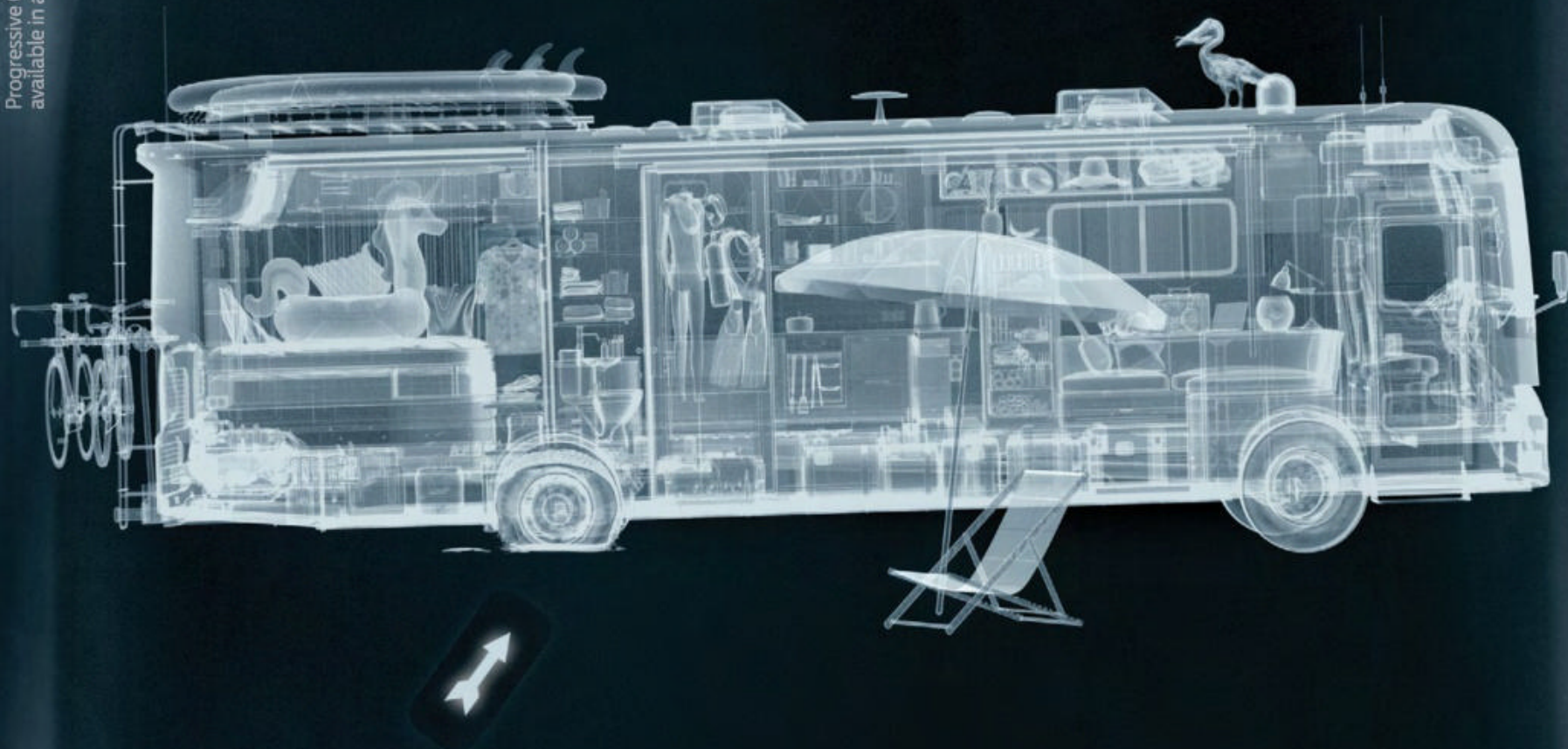
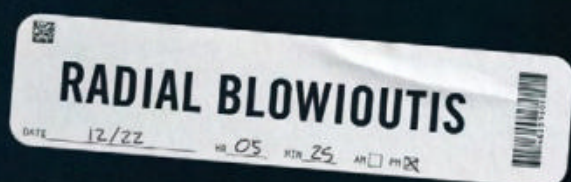
50

Super-Spacious Storage Bed

No room for your stuff? This platform design can hold a closetful!

Progressive Casualty Ins. Co. & affiliates. Coverage features subject to policy terms, and may not be available in all states or for all vehicles. Additional charge applies. Prices vary based on how you buy.

R



Translation: A major blowout on the right side has your family waiting on the roadside.

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DEPARTMENTS

10 Stuff We Love

Work shirts that actually work, quick bit changes, a one-hand recip saw, and more.

16 Handy Hints®

Clever tips for organizing wrenches, fishing wire, and yes, changing a lightbulb.

20 homeLAB

Tech to help you monitor your indoor air, upgrade an old alarm system, and control your shades.

59 Best Pro Tips

Easy low-tech ways to get stronger Wi-Fi throughout your house.

64 Home Care

How to work safely on your electrical panel, put out a fire, and prevent plumbing leaks.

78 Reader Info

Here's how to subscribe, renew, send us a hint, and more!

80 Great Goofs®

Tools for the taking, a super-pricy lightbulb change, and the perfect plumbing trap.



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SPRING PROJECTS

Get an early start on all your lawn and garden projects! Learn how to fix your retaining wall, how to build your own pergola or simply how to get your outdoor spaces ready for that inviting spring weather. You'll find plenty of inspiration and instruction by hovering your camera here:



OUR FAVORITE FEMALE DIYers

March is Women's History Month. In the spirit of celebrating all the builders in our lives who happen to be women, take a look at our editors' list of favorites who are changing the DIY game: familyhandyman.com/list/female-diylers/



SPRING CLEANING

It's that time of year again—spring cleaning season. To learn which cleaning projects to tackle first and which products will help you get the job done right, visit our cleaning page: familyhandyman.com/topics/cleaning/



BRAND NEW BOOK!

Don't miss out on this limited time offer! Our 288-page *Whole House Repair Guide* is just \$10 and ships free! You'll start saving money instantly when you follow the expert instructions in this photo-packed book. familyhandyman.com/GDE21



WE'VE LAUNCHED HANDYMAN PRO!

Check out our *Handyman Pro* newsletter to get timely news on construction industry trends, products and tips to help pros run their businesses better. Sign up here: familyhandyman.com/pro



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With the DIY Quick Class Subscription, you'll get unlimited access to *Family Handyman's* complete library of quick DIY University online classes. This includes two new projects per month! Sign up for a free 7-day trial: DIYUniversity.com

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Stuff We Love

Our favorite DIY tools, materials + gear

Work Shirts That Actually Work

Any builder knows the value of a solid work shirt; durability, affordability and comfort are absolutely nonnegotiable. Thankfully, long gone are the days of women having to wear men's shirts in the workshop for lack of choices. March is Women's History Month, and what better time to celebrate the many companies that now make high-quality work wear for women: Dovetail, Carhartt and, my personal favorite, Duluth Trading Co.

True, Duluth Trading's entire catalog is pretty spectacular, but the women's flannel shirts really stand out. They're comfortable, stylish and built for movement. They seem like they're genuinely me—that may be why I own 10 of them.

Go to duluthtrading.com or check out one of its brick-and-mortar stores. Plan to spend \$35 to \$70. If you shop online, be sure to visit its "Duluth Women" page to learn more about the strong community of female builders and makers who are making their mark.

AMY NOVAK
EXECUTIVE DIGITAL EDITOR

PHOTO: DULUTH TRADING CO.



DOUBLE YOUR DUPLEX

If you're plagued by power strips, here's a better solution. Called "theOUTlet," it converts any duplex outlet to a fourplex. The basic model with four AC outlets costs \$40, and the model that also includes two USB ports (shown here) is \$50. Designed to fit into a standard electrical box, they meet code for tamper resistance. They aren't available in GFCI versions yet, but both are UL listed. Get them at opentheoutlet.com.

MIKE BERNER, ASSOCIATE EDITOR



Quick-Change Act For Drill Drivers

For countersinking and setting screws, I always reach for my DeWalt flip bits. I can drill and countersink holes with one end and then flip the bit and drive screws with the other end. DeWalt recently upgraded the design with a beefier body and an improved collar mechanism. A single unit with a No. 8 or 10 countersink is \$20. They're also available in 8- and 12-piece sets for \$28 and \$36 respectively. Find them online and at home centers.

BRAD HOLDEN, SENIOR EDITOR



A BETTER RIP GUIDE

A typical rip guide that comes with a saw has about 6 in. of cut capacity, and it's not always easy to use. This SkatePlate quickly attaches to your saw for smooth, easy rip-guide function with greater capacity. The SkatePlate and its guide both have rollers, helping you achieve smooth, accurate cuts. The standard SkatePlate rip guide has a 12-in. capacity, but you can get the SkateGuide-Zilla, which cuts up to 24 in. It's a bit of a reach to make cuts that wide, but manageable with the smooth roller action.

This is an ideal accessory for breaking down sheet goods—much safer than handling 4 x 8-ft. sheets alone on a table saw. You won't get quite the accuracy of a track saw, but you won't pay the hefty price either. The SkatePlate and guide combo costs \$80. The SkateGuide-Zilla is \$40. You can buy them both at skateplate.com and in some home centers.

BILL BERGMANN, ASSOCIATE EDITOR





STRONG, SECURE STRETCH STRAPS

I've never been more confident securing a load of materials than when I've used these TitanStraps. The simple aluminum buckle is easy to fasten. The stretch in these straps offers a controlled amount of

tension with no recoil when you're unbuckling them; a much safer feeling than you get from other stretch straps. Made of a UV- and chemical-resistant polymer, TitanStraps remain pliable even in single-digit

cold. Ranging in size from 9 to 25 in., the Utility Variety four-pack costs \$30; the Industrial Variety pack with longer lengths is \$42. Find them online at titanstraps.com.

BILL BERGMANN, ASSOCIATE EDITOR



One-Handed Recip Saw

Tired of hoisting your old beast of a reciprocating saw overhead or trying to squeeze it into tight spaces? At 13 in. long and 5 lbs., the Ryobi ONE+ HP 18V reciprocating saw makes for much easier work. Plumbers love these saws for quick demo work and fast pipe cuts. The bare tool (no battery) is \$99.

BILL BERGMANN, ASSOCIATE EDITOR

For adults with type 2 diabetes (T2D), along with diet and exercise, once-daily RYBELSUS® can help lower blood sugar

Wake Up to the Possibilities of Reaching Your A1C Goal



RYBELSUS® is proven to lower blood sugar and A1C

In a 6-month study of people with an average starting A1C of 8%, the majority of **people taking RYBELSUS® reached an A1C of less than 7%^a**:

- Nearly 7 out of 10 people on 7 mg of RYBELSUS®
- Nearly 8 out of 10 people on 14 mg of RYBELSUS®
- About 3 out of 10 people on a sugar pill



RYBELSUS® may help you lose some weight

While not for weight loss, in the same 6-month study, people with an average starting weight of 195 pounds **lost up to 8 pounds^a**:

- 5 pounds on 7 mg of RYBELSUS®
- 8 pounds on 14 mg of RYBELSUS®
- 3 pounds on a sugar pill

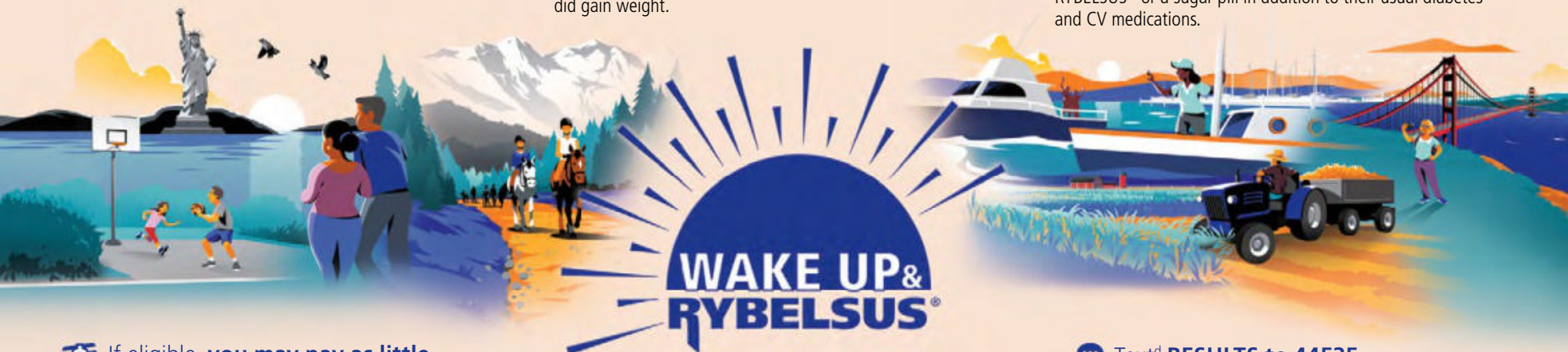
While many people in medical studies lost weight, some did gain weight.



RYBELSUS® does not increase the risk of major cardiovascular (CV) events such as heart attack, stroke, or death^b

^aIn a 6-month study looking at A1C with 703 adults with T2D comparing 7 mg RYBELSUS® and 14 mg RYBELSUS® with a sugar pill when both were added to diet and exercise.

^bIn a cardiovascular safety study, 3183 adults with T2D and a high risk of CV events were treated with either 14 mg RYBELSUS® or a sugar pill in addition to their usual diabetes and CV medications.



If eligible, you may pay as little as \$10 for a 30-day prescription^c

Text^d **RESULTS to 44535** to learn more about RYBELSUS®

What is Rybelsus®?

Rybelsus® (semaglutide) tablets 7 mg or 14 mg is a prescription medicine for adults with type 2 diabetes that along with diet and exercise may improve blood sugar (glucose).

- Rybelsus® is not recommended as the first choice of medicine for treating diabetes
- It is not known if Rybelsus® can be used in people who have had pancreatitis
- Rybelsus® is not for use in people with type 1 diabetes and people with diabetic ketoacidosis
- It is not known if Rybelsus® is safe and effective for use in children under 18 years of age

Important Safety Information

What is the most important information I should know about Rybelsus®?

Rybelsus® may cause serious side effects, including:

- **Possible thyroid tumors, including cancer.** Tell your healthcare provider if you get a lump or swelling in your neck, hoarseness, trouble swallowing, or shortness of breath. These may be symptoms of thyroid cancer. In studies with rodents, Rybelsus® and medicines that work like Rybelsus® caused thyroid tumors, including thyroid cancer. It is not known if Rybelsus® will cause thyroid tumors or a type of thyroid cancer called medullary thyroid carcinoma (MTC) in people

Do not use Rybelsus® if:

- you or any of your family have ever had MTC, or if you have an endocrine system condition called Multiple Endocrine Neoplasia syndrome type 2 (MEN 2)
- you are allergic to semaglutide or any of the ingredients in Rybelsus®

Before using Rybelsus®, tell your healthcare provider if you have any other medical conditions, including if you:

- have or have had problems with your pancreas or kidneys
- have a history of vision problems related to your diabetes
- are pregnant or plan to become pregnant. It is not known if Rybelsus® will harm your unborn baby. You should stop using Rybelsus® 2 months before you plan to become pregnant. Talk to your healthcare provider about the best way to control your blood sugar if you plan to become pregnant or while you are pregnant
- are breastfeeding or plan to breastfeed. Breastfeeding is not recommended during treatment with Rybelsus®

Tell your healthcare provider about all the medicines you take, including prescription and over-the-counter medicines, vitamins, and herbal supplements. Rybelsus® may affect the way some medicines work and some medicines may affect the way Rybelsus® works.

What are the possible side effects of Rybelsus®? Rybelsus® may cause serious side effects, including:

- **inflammation of your pancreas (pancreatitis).** Stop using Rybelsus® and call your healthcare provider right away if you have severe pain in your stomach area (abdomen) that will not go away, with or without vomiting. You may feel the pain from your abdomen to your back
- **changes in vision.** Tell your healthcare provider if you have changes in vision during treatment with Rybelsus®
- **low blood sugar (hypoglycemia).** Your risk for getting low blood sugar may be higher if you use Rybelsus® with another medicine that can

cause low blood sugar, such as a sulfonylurea or insulin. **Signs and symptoms of low blood sugar may include:** dizziness or lightheadedness, blurred vision, anxiety, irritability or mood changes, sweating, slurred speech, hunger, confusion or drowsiness, shakiness, weakness, headache, fast heartbeat, and feeling jittery

- **kidney problems (kidney failure).** In people who have kidney problems, diarrhea, nausea, and vomiting may cause a loss of fluids (dehydration), which may cause kidney problems to get worse. It is important for you to drink fluids to help reduce your chance of dehydration
- **serious allergic reactions.** Stop using Rybelsus® and get medical help right away, if you have any symptoms of a serious allergic reaction including itching, rash, or difficulty breathing

The most common side effects of Rybelsus® may include nausea, stomach (abdominal) pain, diarrhea, decreased appetite, vomiting, and constipation. Nausea, vomiting, and diarrhea are most common when you first start Rybelsus®.

Please see Brief Summary of Prescribing Information on adjacent page.

^cCommercially insured patients only. Offer valid for up to six 30-day fills. Eligibility and other restrictions apply.

^dMessage and data rates may apply. Check with your mobile service provider. Message frequency will be based on your selections. Text **HELP** to **44535** for help. Text **STOP** to **44535** to quit. See Terms and Conditions of Use at RYBELSUS.com.

See cost and savings info at RYBELSUS.com, and ask your healthcare provider about RYBELSUS® today.



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RYBELSUS®
semaglutide tablets 7mg | 14mg

Brief Summary of information about RYBELSUS® (semaglutide) tablets



Rx Only

This information is not comprehensive.

- Talk to your healthcare provider or pharmacist
- Visit www.novo-pi.com/rybelsus.pdf to obtain the FDA-approved product labeling
- Call 1-833-GLP-PILL

Read this Medication Guide before you start using RYBELSUS® and each time you get a refill. There may be new information. This information does not take the place of talking to your healthcare provider about your medical condition or your treatment.

What is the most important information I should know about RYBELSUS®?

RYBELSUS® may cause serious side effects, including:

- **Possible thyroid tumors, including cancer.** Tell your healthcare provider if you get a lump or swelling in your neck, hoarseness, trouble swallowing, or shortness of breath. These may be symptoms of thyroid cancer. In studies with rodents, RYBELSUS® and medicines that work like RYBELSUS® caused thyroid tumors, including thyroid cancer. It is not known if RYBELSUS® will cause thyroid tumors or a type of thyroid cancer called medullary thyroid carcinoma (MTC) in people.
- Do not use RYBELSUS® if you or any of your family have ever had a type of thyroid cancer called medullary thyroid carcinoma (MTC), or if you have an endocrine system condition called Multiple Endocrine Neoplasia syndrome type 2 (MEN 2).

What is RYBELSUS®?

RYBELSUS® is a prescription medicine used along with diet and exercise to improve blood sugar (glucose) in adults with type 2 diabetes.

- RYBELSUS® is not recommended as the first choice of medicine for treating diabetes.
- It is not known if RYBELSUS® can be used in people who have had pancreatitis.
- RYBELSUS® is not for use in patients with type 1 diabetes and people with diabetic ketoacidosis.

It is not known if RYBELSUS® is safe and effective for use in children under 18 years of age.

Do not use RYBELSUS® if:

- you or any of your family have ever had a type of thyroid cancer called medullary thyroid carcinoma (MTC) or if you have an endocrine system condition called Multiple Endocrine Neoplasia syndrome type 2 (MEN 2).
- you are allergic to semaglutide or any of the ingredients in RYBELSUS®.

Before using RYBELSUS®, tell your healthcare provider if you have any other medical conditions, including if you:

- have or have had problems with your pancreas or kidneys.
- have a history of vision problems related to your diabetes.
- are pregnant or plan to become pregnant. It is not known if RYBELSUS® will harm your unborn baby. You should stop using RYBELSUS® 2 months before you plan to become pregnant. Talk to your healthcare provider about the best way to control your blood sugar if you plan to become pregnant or while you are pregnant.
- are breastfeeding or plan to breastfeed. Breastfeeding is not recommended during treatment with RYBELSUS®.

Tell your healthcare provider about all the medicines you take, including prescription and over-the-counter medicines, vitamins, and herbal supplements. RYBELSUS® may affect the way some medicines work and some medicines may affect the way RYBELSUS® works.

Before using RYBELSUS®, talk to your healthcare provider about low blood sugar and how to manage it. Tell your healthcare provider if you are taking other medicines to treat diabetes, including insulin or sulfonylureas.

Know the medicines you take. Keep a list of them to show your healthcare provider and pharmacist when you get a new medicine.

How should I take RYBELSUS®?

- Take RYBELSUS® exactly as your healthcare provider tells you to.
- Take RYBELSUS® by mouth on an empty stomach when you first wake up.
- Take RYBELSUS® with a sip of water (no more than 4 ounces).
- Do not split, crush or chew. Swallow RYBELSUS® whole.
- After 30 minutes, you can eat, drink, or take other oral medications. RYBELSUS® works best if you eat 30 to 60 minutes after taking RYBELSUS®.
- If you miss a dose of RYBELSUS®, skip the missed dose and go back to your regular schedule.
- Talk to your healthcare provider about how to prevent, recognize and manage low blood sugar (hypoglycemia), high blood sugar (hyperglycemia), and problems you have because of your diabetes.

What are the possible side effects of RYBELSUS®?

RYBELSUS® may cause serious side effects, including:

- **See “What is the most important information I should know about RYBELSUS®?”**
- **inflammation of your pancreas (pancreatitis).** Stop using RYBELSUS® and call your healthcare provider right away if you have severe pain in your stomach area (abdomen) that will not go away, with or without vomiting. You may feel the pain from your abdomen to your back.
- **changes in vision.** Tell your healthcare provider if you have changes in vision during treatment with RYBELSUS®.
- **low blood sugar (hypoglycemia).** Your risk for getting low blood sugar may be higher if you use RYBELSUS® with another medicine that can cause low blood sugar, such as a sulfonylurea or insulin. **Signs and symptoms of low blood sugar may include:**
 - dizziness or light-headedness
 - blurred vision
 - anxiety, irritability, or mood changes
 - sweating
 - slurred speech
 - hunger
 - confusion or drowsiness
 - shakiness
 - weakness
 - headache
 - fast heartbeat
 - feeling jittery
- **kidney problems (kidney failure).** In people who have kidney problems, diarrhea, nausea, and vomiting may cause a loss of fluids (dehydration) which may cause kidney problems to get worse. It is important for you to drink fluids to help reduce your chance of dehydration.
- **serious allergic reactions.** Stop using RYBELSUS® and get medical help right away, if you have any symptoms of a serious allergic reaction including itching, rash, or difficulty breathing.

The most common side effects of RYBELSUS® may include nausea, stomach (abdominal) pain, diarrhea, decreased appetite, vomiting and constipation. Nausea, vomiting and diarrhea are most common when you first start RYBELSUS®. Talk to your healthcare provider about any side effect that bothers you or does not go away. These are not all the possible side effects of RYBELSUS®.

Call your doctor for medical advice about side effects. You may report side effects to FDA at 1-800-FDA-1088.

How should I store RYBELSUS®?

- Store RYBELSUS® at room temperature between 68°F and 77°F (20°C to 25°C).
- Store in a dry place away from moisture.
- Store tablet in the original pack.
- Keep the tablet in the pack until you are ready to take it.
- **Keep RYBELSUS® and all medicines out of the reach of children.**

Revised: 01/2020



A Step Up for Drilling Metal

For safe, fast and accurate drilling in sheet metal and light-gauge steel, step bits are the best bet. Each step on the bit increases in diameter, making for less drill torque as you work incrementally toward the desired hole size. You'll have no need for a pilot hole to keep that larger standard bit from skating around, and no trouble hanging on to your drill or workpiece when it finally gets through your material. This titanium set of three from Neiko gives you a range of 28 hole sizes and costs just \$18 online.

JAY CORK, ASSOCIATE EDITOR



SUPER-SIZE ADJUSTABLE WRENCH

Available in 6-, 8-, 10- and 12-in. versions, the Proferred Tools Adjustable Plumbing Wrench is the bigmouth of this category. Its jaws open up 50% wider than other wrenches of this type. The 12-in. wrench we've used has a max opening of 2-1/4 in. Also impressive is its 1-1/2-in. jaw depth—that's 30% more than you can get from a typical adjustable wrench.

Another plus is that the head is thinner than most, so it slips more easily into the tight spaces encountered in plumbing and automotive work. The anti-slip handle is super secure and comfortable to use. If not a flat-out replacement for your old adjustable wrench, it's certainly a welcome addition to the tool kit of anyone with a tough nut to crack. The four size options range in price from \$15 to \$30.

JAY CORK, ASSOCIATE EDITOR



COMPACT, LIGHTWEIGHT FOOTING FOR CEILING WORK

Years ago, I got tired of installing ceiling trim from a ladder. So, I made a pair of long, wide, stubby sawhorses that I could comfortably stand on at the right height. The Werner Aluminum Work Platform has made my old horses obsolete. It's lightweight, has a generous 14-in. x 46-in. platform and folds up neatly for storage. Using one hand, you can adjust the legs from 20 to 30 in., perfect for 8- or 9-ft. ceilings.

Instead of reaching to unsafe extremes from a ladder, I can now comfortably cover about a 4 x 8-ft. area overhead. It also makes for a level perch on stairs. This safe step up is available for \$120 at home centers.

MIKE BERNER, ASSOCIATE EDITOR



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MAKE FISHING WIRES A "BREEZE"

A buddy was helping me run electrical wiring through the conduit mounted underneath my deck to my patio light out by the pool. But after hours of trying to snake the fish tape through the twists and turns of the conduit, we hadn't gotten anywhere. Then he came up with a brilliant solution: Use an air compressor to blow twine through the conduit. It worked like a dream! Within seconds, the twine had reached its destination. We tied the twine to the wiring and pulled it through. We finished the project with enough time left for a swim.

STEPHEN RANKIN



CLOG-FREE BELT SANDING

I was cleaning new treated deck boards with my belt sander to prep the wood for a semitransparent stain. The gunk on the boards kept clogging the belt. To keep the belt clean and make it last longer, I screwed a wire brush to the sawhorse and every so often touched the running belt to the brush. It cleaned the belt up nicely—and my deck looks great!

DONALD HONIGFORD



How Many Pieces of Duct Tape...

... does it take to change a lightbulb? One, if you fold it right. If you've ever tried to unscrew a lightbulb from a recessed fixture, you know how tough it can be to get your fingers around the bulb. Use duct tape to make a "handle." Rip a piece of duct tape off the roll and fold the ends back over themselves, leaving a sticky section in the middle. Put the sticky section on the bulb, grasp the ends and give the tape a twist. This trick works great—and that's no joke!

ANGIE RODRIGUEZ



NO MORE GLUE STAINS

To prevent stains caused by oozing glue along joints, clamp the pieces together without glue. Put tape on the joint, then cut along it with a sharp blade. Separate the pieces, apply the glue and clamp them together again. The glue will ooze onto the tape, not the wood. Peel off the tape before the glue dries.

TRAVIS LARSON



WRENCH CADDY

Organize the wrenches in your toolbox by stringing them onto a large, bright-colored carabiner (about \$6 at camping and discount stores). It will keep your wrenches together and make them portable and easy to spot.

CAMERON LIDESTRI

HANDY HINTS



TABLECLOTH DROP CLOTH

Vinyl tablecloths—the kind usually used on picnic tables—make great drop cloths. They're tougher than plastic sheeting, and if you put the smooth side down, they don't slip around on hard flooring the way canvas drop cloths do. On carpet, put the smooth side up. They're cheaper than drop cloths too: \$2 to \$4 at discount stores.

KRISTEN CASTILLO



RENEW RUBBER GLOVES

I frequently get holes in the fingertips of my gardening gloves. When my new gloves developed holes after only a few days, I decided to prolong their life with Flex Seal liquid rubber sealant. After washing the gloves and letting them dry, I brushed Flex Seal on the fingertips and let them dry overnight. I'm still using the gloves months later.

KAREN MERKEL



High-Visibility Tools

I used to have trouble keeping track of my gardening tools while I was working in the yard; they'd disappear into the grass. Now, I wrap the handles with fluorescent tape so they're easier to spot.

BOB AMSTERDAM



LIVE LIFE WITHOUT PAIN

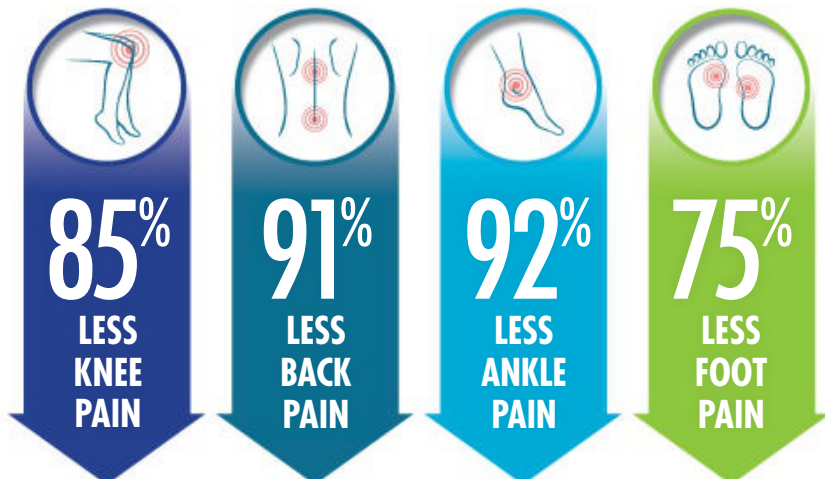
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homeLAB

A TESTING ZONE FOR *INNOVATIONS*

THE AIR YOU BREATHE

We spend about 90 percent of our time indoors. Today's technology can tell us the quality of our indoor air so we can improve it.



BY BILL BERGMANN

The Airthings Wave Plus monitor (\$300 online) sends real-time air quality data to your phone with six sensors that monitor:

■ **TEMPERATURE.** The ability to check your home's temperature while you're away—especially if you relocate in the winter—can prevent a plumbing pipe catastrophe.

■ **HUMIDITY.** Keeping your home at an optimum humidity level wards off mold from too much

moisture. It also reduces your household's susceptibility to flu, colds and allergies from air that's too dry.

■ **AIR PRESSURE.**

Knowing whether air is escaping or infiltrating, and at what rate, is important for energy efficiency.

■ **RADON.** Radon is a known cause of cancer, and unsafe levels must be mitigated. Also, many states require full disclosure of unsafe radon levels with the sale of a house.

■ **CARBON**

MONOXIDE. Carbon monoxide (CO) is known as the silent killer. It's vital to know that CO levels are in check.

■ **VOLATILE ORGANIC COMPOUNDS (VOCs).**

Common cleaners, paints, building materials, carpeting and other products emit VOCs that can linger in your home for a long time. VOCs can be mildly irritating or cause cancer or damage the central nervous system.

I've had the Wave Plus set up in my basement laundry/utilities area for two months. My sensor averages have been in the green, but I did notice a spike in CO when the dryer was running. After I retaped some duct seams, those CO spikes lessened noticeably. If an air monitor motivates the ounce of prevention needed to ensure a safe and healthy house, then it's a smart thing worth having.

BOTTOM RIGHT: DECKORATORS

WHAT IS AVAXHOME?

AVAXHOME-

the biggest Internet portal,
providing you various content:
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fresh magazines, hot games,
recent software, latest music releases.

Unlimited satisfaction one low price

Cheap constant access to piping hot media

Protect your downloadings from Big brother

Safer, than torrent-trackers

18 years of seamless operation and our users' satisfaction

All languages

Brand new content

One site



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AvaxHome - Your End Place

We have everything for all of your needs. Just open <https://avxlive.icu>



Remote

OPEN UP TO SMART SHADES

Given the cost of window coverings, one might not even consider paying more for shades with luxury features, and those with remote control certainly fit in that category. However, now that mechanized shades are becoming “smart,” the benefits might outweigh the pain of the luxury price tag.

Smart shades allow you to set up daily schedules for automatically opening and closing the shades, maximizing passive solar for warmth in the winter and minimizing it in the summer. The Hunter Douglas PowerView Hub uses light and temperature sensors to raise and lower your shades. You can also customize settings for specific rooms.

Like programmable lights, your shades will operate even when you are away, for a measure of security.

The Hunter Douglas Duette smart shades in our homeLAB offer energy savings. As with all honeycomb shades, multiple layers of fabric form cells that provide thermal insulation. They also insulate against sound and improve a room’s acoustics.

DURABLE DECKING

Most composite decking contains some wood fiber, so it’s still susceptible to mold, mildew, rot or infestation, and seasonal movement. Mineral-based composite (MBC) decking, however, contains no wood fiber, avoiding those issues. In fact, MBC was originally developed for marine applications and can be installed in direct contact with water.

The Deckorators MBC products shown here come in three wood grain styles and a variety of colors. Whereas some composite decking requires 12-in. O.C. (on-center) framing, these boards are lightweight and stiff enough to install on 16-in. O.C. framing; perfect for redecking over existing framing. Deckorators has an impressive 50-year structural warranty and a 25-year stain/fade and removal/replacement promise. At about \$11 per square foot, it costs more up front, but you’ll save over time.





UTS-1 Wireless Charger installed under a desk

UTS-1 Wireless Charger

1" thickness test

CHARGING THROUGH THICK AND THIN

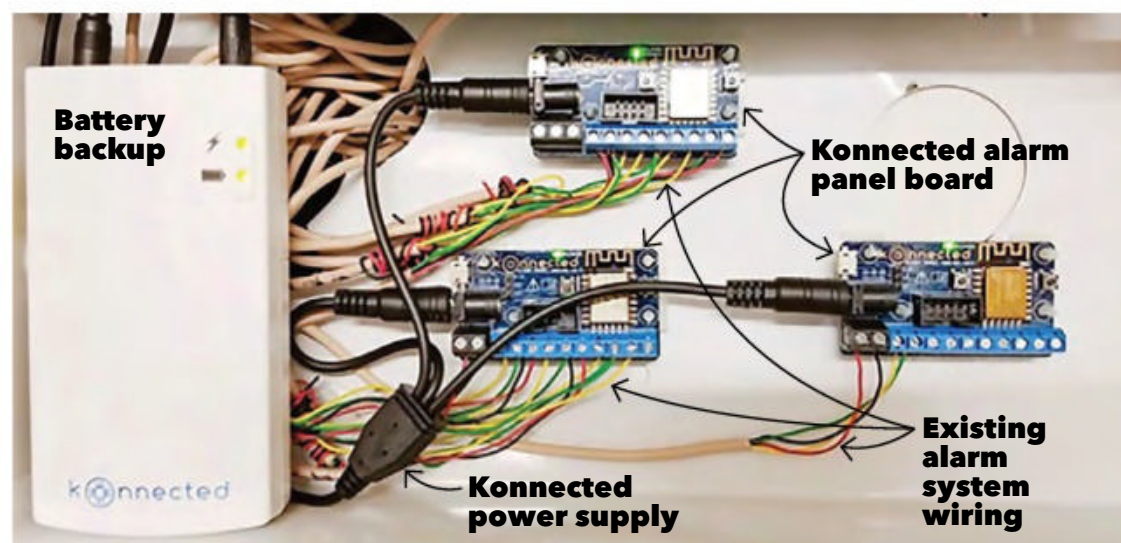
Most smartphones are now enabled for wireless charging, usually involving a dock with a cord taking up valuable desk space. Most under-mount wireless chargers can't charge through more than 1/4 in. of material, but the Kew Labs UTS-1 charges through surfaces up to 1 in. thick. Our tests with a variety of materials, ranging from solid wood to plywood and particleboard, proved this true. As the thickness and density of the material increased, however, it became more difficult to find the "sweet spot" for charging.

The UTS-1 comes with self-adhesive strips, but for a solid install, we recommend using the mounting flange and screws. Kew also supplies self-adhesive cord ties for routing its cord neatly out of the way. Available online, the Kew Labs UTS-1 costs \$120.

SMART UPGRADES FOR OLD ALARM SYSTEMS

If you'd like to upgrade your old wired security system to the world of smart technology, try one of these options that use your existing system. This Connected interface installs in your alarm panel and integrates your existing sensors into several home automation platforms, including Samsung SmartThings, Home Assistant, Hubitat and OpenHAB.

These systems enable automation functions like lights turning on if a sensor is tripped or, in combination with a voice assistant like Alexa, announcing that a specific door or window is open. You can



also monitor your system from your smartphone. Most of these kits still offer the assurance of an automated 911 call when alarms are triggered.

Some old systems aren't compatible with smart upgrades, so check with the smart system manufacturer

before you buy. A six-zone Connected kit costs \$100. Twelve-, 18- and 24-zone kits are also available. Adding a battery backup (\$38) lets you monitor your home during a power outage. If you're tech smart and DIY savvy, you'll find the installation straightforward.



BUILT-IN DUST COLLECTION

When I was a contractor, dust control was a constant concern—for the cleanliness of my clients' homes and for their health and that of myself and my crew. That meant lugging a shop vacuum in and out and another thing taking up space. This Sirocco 8-1/2-in. Dustless Table Saw is the first of its kind and provides a solution to these common job site concerns. Its vacuum is integral to the motor and sucks dust out of the lower blade housing and the upper blade guard.

According to Sirocco, the saw is 98.5% dust free. I don't have a way to test that, but this saw does a surprisingly good job of managing dust for most cutting operations. For cuts requiring guard removal, don't expect a dustless operation. One drawback is that the location of the vacuum hose limits cutting wider boards and sheet goods. For the \$500 price tag, you can find a more robust saw, but with the Sirocco, you're buying easy dust collection.



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Bad to the Bone

Full tang stainless steel blade with natural bone handle —now **ONLY \$79!**

The very best hunting knives possess a perfect balance of form and function. They're carefully constructed from fine materials, but also have that little something extra to connect the owner with nature. If you're on the hunt for a knife that combines impeccable craftsmanship with a sense of wonder, the **\$79 Huntsman Blade** is the trophy you're looking for.

The blade is full tang, meaning it doesn't stop at the handle but extends to the length of the grip for the ultimate in strength. The blade is made from 420 surgical steel, famed for its sharpness and its resistance to corrosion.

The handle is made from genuine natural bone, and features decorative wood spacers and a hand-carved motif of two overlapping feathers—a reminder for you to respect and connect with the natural world.

This fusion of substance and style can garner a high price tag out in the marketplace. In fact, we found full tang, stainless steel blades with bone handles in excess of \$2,000. Well, that won't cut it around here. We have mastered the hunt for the best deal, and in turn pass the spoils on to our customers.

But we don't stop there. While supplies last, we'll include a pair of \$99 8x21 power compact binoculars *and* a genuine leather sheath **FREE** when you purchase the **Huntsman Blade**.

Your satisfaction is 100% guaranteed. Feel the knife in your hands, wear it on your hip, inspect the impeccable craftsmanship. If you don't feel like we cut you a fair deal, send it back within 30 days for a complete refund of the item price.

Limited Reserves. A deal like this won't last long. We have only 1120 **Huntsman Blades** for this ad only. Don't let this beauty slip through your fingers. Call today!

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What Stauer Clients Are Saying About Our Knives



"This knife is beautiful!"

— J., La Crescent, MN



"The feel of this knife is unbelievable...this is an incredibly fine instrument."

— H., Arvada, CO



MAXIMIZE YOUR DRAWER SPACE

8 simple projects for better storage and less clutter

BY BRAD HOLDEN

Every kitchen could use a little more organization, and these drawer projects deliver a lot! Easily accessible pots and pans, a charging drawer and much more. The projects are also easy to build: butt joints, glue, and nails or screws.

I built all but the knife rack from Baltic birch plywood. It has attractive raw edges that don't need edge banding. Or, you could use standard plywood or solid wood and apply wipe-on poly for a clean, high-end look.

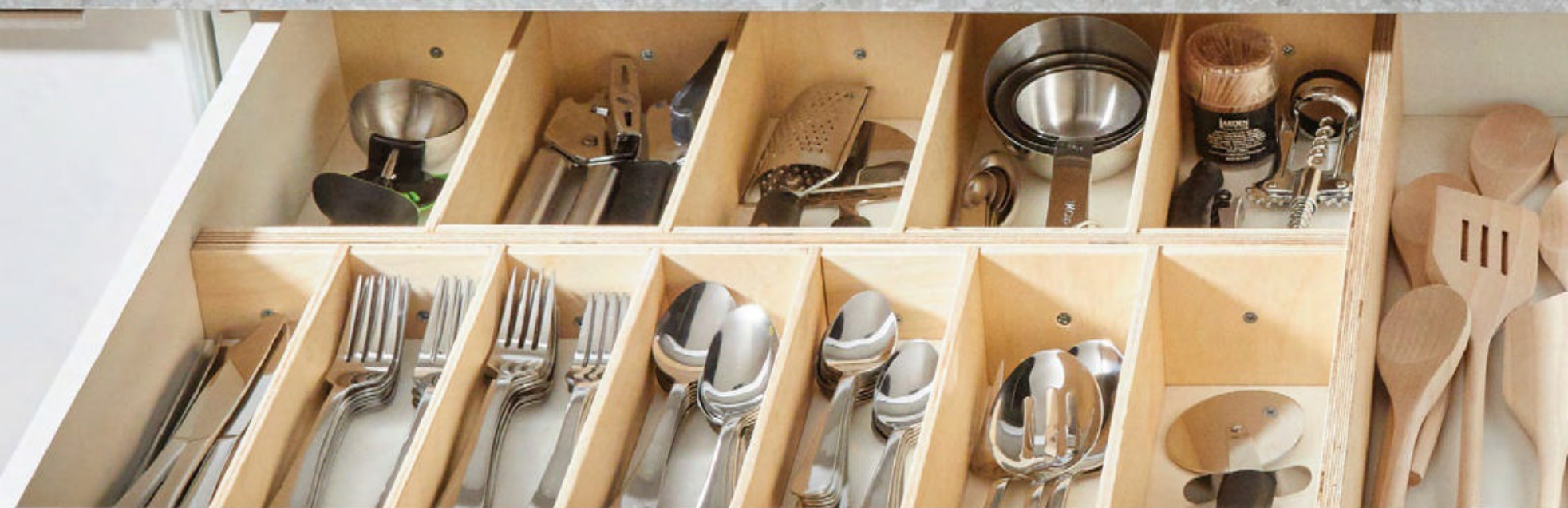


MEET THE BUILDER

Brad Holden, a senior editor at *Family Handyman*, has built custom cabinets and furniture for 30 years.

1 CUSTOM SILVERWARE TRAY

Store-bought silverware trays never fit the drawer perfectly. They shift and slide around and leave awkward space around the tray. Custom-fit partitions maximize the storage space and eliminate the annoying sliding.



START WITH THE MAIN DIVIDERS

I sectioned this big drawer using a T-shaped divider made from 1/2-in. plywood. I screwed it into place through one side and the back. If I ever want to change the configuration, it'll be easy to do. Because these drawers are melamine, I sanded and finished all the parts before adding them to the drawer.



ADD THE PARTITIONS

Divide the large sections using 1/4-in. partitions, just as in the drawer in a drawer (p. 28). Here, however, since the parts are prefinished, I attached the spacers with countersunk 1/2-in. wood screws instead of glue.



HOVER YOUR CAMERA HERE
Scan this code with your phone to see how easy it is to build every drawer style.

2 HIDDEN KNIFE RACK

A knife block takes up valuable countertop space. This simple insert puts all your cutlery inside a drawer in a safe, tidy, flat rack. My drawer is large enough to store all my sharpening supplies as well.



BUILD THE RACK

To make the blocks, glue up two layers of 3/4-in.-thick hardwood. A single thickness would set the knife handles too close together. Size the length and height of the blocks to fit your largest blade. When the glue dries, sand the blocks and glue them to a piece of 1/4-in. plywood sized to fit your drawer.

Cut 1/8-in.-thick strips of wood to space the blocks while the glue dries. Pull out the spacers as soon as the glue starts to hold so they don't get glued in place. A support strip under the handles makes them easier to grab. I added two more 1/2-in. dividers to make compartments for other supplies.



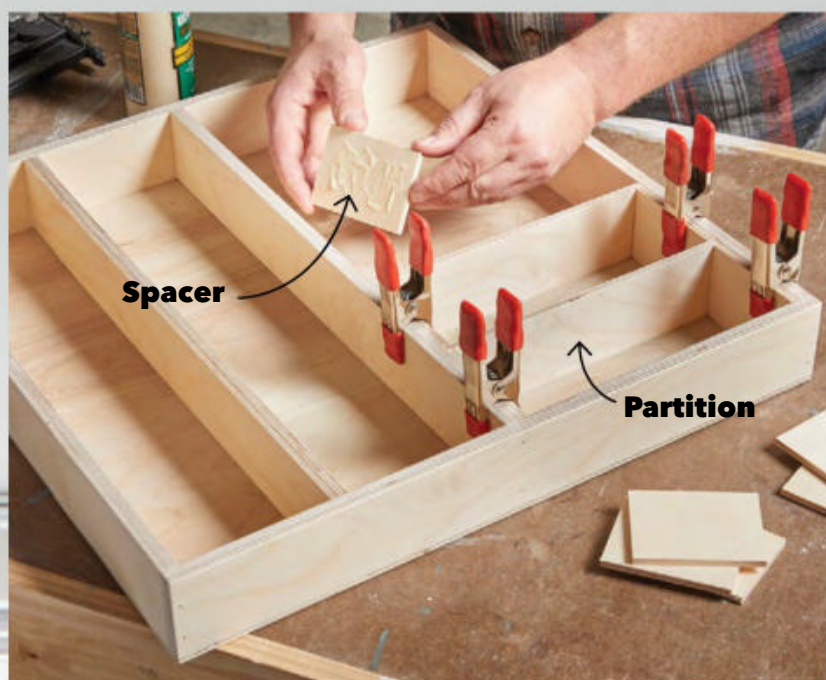
3 DRAWER IN A DRAWER

This sliding tray turns a deep drawer into two shallower drawers to make better use of the space. It looks complicated, but it's pretty simple. The drawer still operates like usual, but when you open it, you can slide the inner drawer back into the cabinet to access the lower part of the drawer.



CUT DOWN THE DRAWER BACK

Decide how deep you want the inner drawer, then cut out a section of the drawer back to accommodate. I made the long cut with a jigsaw but used an oscillating multitool to make the end cuts flush with the sides. I knew I would hit nails, so I used a bimetal blade. Measure the opening to find the dimensions for the inner drawer, allowing room for drawer slides.



BUILD THE INNER DRAWER

Cut the parts and assemble the front, back and sides. Glue and nail on a 1/4-in. plywood bottom, and then add the interior partitions you want. I used 1/2-in. plywood for the main dividers and 1/4-in. plywood for the small partitions. Instead of cutting grooves for the small partitions, I cut and glued 1/4-in.-thick spacers to hold them in place.





4 CHARGING DRAWER

Here's another way to remove clutter from the countertop. These power strips don't require any electrical wiring; they just plug into an outlet. If your kitchen is up to current code, it will have an outlet for your sink's disposal. All you need to do is route the cord to the outlet.



CUT THE OPENING

Measure the power strip and mark the cutout on the back of the drawer. Drill a hole near each corner and use a jigsaw to cut the opening. Check the fit of the power strip, and then use the jigsaw, a file or a sanding block to adjust the opening as needed.



INSTALL THE POWER STRIP

Insert the power strip into the hole and secure it with screws through the mounting holes. Use a zip tie or cable staple to attach the cord to the cabinet's back, allowing 2 to 3 in. of slack. Route the cord to your disposal outlet by drilling through cabinet sides as needed.

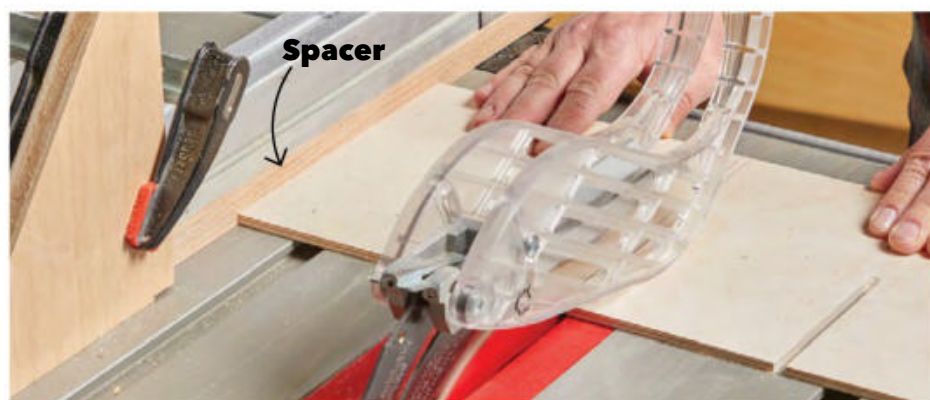
5 CUSTOM "EGG CRATE" COMPARTMENTS

Egg crate compartments are perfect for storing plastic food containers and other stackable items. The partitions aren't fastened to the drawer, so you can easily customize compartments for different containers. All you need is a way to cut slots. I'll show you an easy method using a table saw and a custom spacer. Determine the thickness of the spacer by subtracting the width of the saw's kerf from the thickness of your material.



FIRST CUT

Use your containers to figure out the bin size, then lay out the slots on each partition. The first cut defines the left-hand side of the slot. Set the fence for the first cut and clamp a stop block to the fence so you cut only halfway through the partition's height. Push the partition up to the block, and then back it out.



SECOND CUT

Slip your spacer between the fence and the partition and make the second pass. This cut defines the right-hand side of the slot. If there's waste left between the cuts, knock it out with a chisel or a utility knife.



SLIP IN THE PARTITIONS

After sanding and finishing, stand up the bottom partitions in the drawer with the slots facing up. Then add the top partitions, sliding them into the slots in the bottom partitions.

6 DEEP DRAWER SLIDER

Deep drawers are ideal for large or tall items, but when filled with lots of smaller items, they're just a mess. Adding a horizontal sliding tray on rails neatly divides that depth into much more efficient space.



BUILD A TRAY AND ADD RAILS

Build a simple tray constructed like the inner drawer on p. 28. The tray can be whatever depth you want. The width, however, should be less than half the width of the drawer so you can easily access everything below. Attach the front and back rails level with each other using screws, and set the tray on the rails. The partitions in the bottom of this drawer are optional. They're just pieces of 1/2-in. plywood assembled with glue and 1-in. wood screws.



7 ADJUSTABLE DIVIDERS

The most efficient way to store pots and pans is to stack them with the largest on the bottom. But it's annoying and noisy to dig out the pan you need. Instead, install these adjustable dividers in a deep drawer to provide easy access.



CREATE SLOTS

Cut strips to the width that best suits your drawer and pans; these are 1-1/2 in. wide. Sand, finish and attach the strips on opposite sides (front to back or side to side) inside the drawer. Use a piece of 1/4-in. plywood as a spacer between the strips, creating slots for 1/4-in. plywood partitions.



SLIP IN THE PARTITIONS

Cut, sand and finish the partitions. Slide them into the slots created by the spaced strips to accommodate your pots, pans and lids.





8 **DIAGONAL DIVIDERS**

Diagonal partitions not only optimize drawer space but also allow the drawer to accommodate longer items.

CUT AND INSTALL PARTITIONS

Rip stock to match the drawer's interior height, and then mark the drawer where you'd like the partitions. Use the marks on the drawer to figure the partition lengths, then cut each partition with opposing 45-degree angles on their ends. Check their fit and screw them into place, starting with the short pieces, then the long.

When you get to the last one, you'll probably need a stubby screwdriver to get between the partitions. To make that installation easier, I installed one long piece, removed it and then installed the second long piece. This way, when I reinstalled the first piece, the holes were already threaded, making hand-driving the screws much easier.

The risk information provided here is not comprehensive. To learn more, talk about IMBRUVICA® with your healthcare provider or pharmacist. For more information, call 1-877-877-3536 or go to www.imbruvica.com.

What is IMBRUVICA®?

IMBRUVICA® is a prescription medicine used to treat adults with:

- Mantle cell lymphoma (MCL) who have received at least one prior treatment
- Chronic lymphocytic leukemia (CLL)/Small lymphocytic lymphoma (SLL)
- Chronic lymphocytic leukemia (CLL)/Small lymphocytic lymphoma (SLL) with 17p deletion
- Waldenström's macroglobulinemia (WM)
- Marginal zone lymphoma (MZL) who require a medicine by mouth or injection (systemic therapy) and have received a certain type of prior treatment
- Chronic graft versus host disease (cGVHD) after failure of 1 or more lines of systemic therapy

It is not known if IMBRUVICA® is safe and effective in children.

What should I tell my doctor before taking IMBRUVICA®?

Before taking IMBRUVICA®, tell your healthcare provider about all of your medical conditions, including if you:

- have had recent surgery or plan to have surgery. Your healthcare provider may stop IMBRUVICA® for any planned medical, surgical, or dental procedure.
- have bleeding problems
- have or had heart rhythm problems, smoke, or have a medical condition that increases your risk of heart disease, such as high blood pressure, high cholesterol, or diabetes
- have an infection
- have liver problems
- are pregnant or plan to become pregnant. IMBRUVICA® can harm your unborn baby. If you are able to become pregnant, your healthcare provider will do a pregnancy test before starting treatment with IMBRUVICA®. Tell your healthcare provider if you are pregnant or think you may be pregnant during treatment with IMBRUVICA®.
 - **Females** who are able to become pregnant should use effective birth control (contraception) during treatment with IMBRUVICA® and for 1 month after the last dose.
 - **Males** with female partners who are able to become pregnant should use effective birth control, such as condoms, during treatment with IMBRUVICA® and for 1 month after the last dose.
- are breastfeeding or plan to breastfeed. Do not breastfeed during treatment with IMBRUVICA® and for 1 week after the last dose.

Tell your healthcare provider about all the medicines you take, including prescription and over-the-counter medicines, vitamins, and herbal supplements. Taking IMBRUVICA® with certain other medicines may affect how IMBRUVICA® works and can cause side effects.

What should I avoid while taking IMBRUVICA®?

Do not drink grapefruit juice, eat grapefruit, or eat Seville oranges (often used in marmalades) during treatment with IMBRUVICA®. These products may increase the amount of IMBRUVICA® in your blood.

What are the possible side effects of IMBRUVICA®?

IMBRUVICA® may cause serious side effects, including:

- **Bleeding problems (hemorrhage) are common** during treatment with IMBRUVICA®, and can also be serious and may lead to death. Your risk of bleeding may increase if you are also taking a blood thinner medicine. Tell your healthcare provider if you have any signs of bleeding, including:
 - blood in your stools or black stools (looks like tar)
 - pink or brown urine
 - unexpected bleeding, or bleeding that is severe or that you cannot control
 - vomit blood or vomit looks like coffee grounds
 - cough up blood or blood clots
 - increased bruising
 - dizziness
 - weakness
 - confusion
 - change in your speech
 - headache that lasts a long time or severe headache
- **Infections** can happen during treatment with IMBRUVICA®. These infections can be serious and may lead to death. Tell your healthcare provider right away if you have fever, chills, weakness, confusion, or other signs or symptoms of an infection during treatment with IMBRUVICA®.

- **Decrease in blood cell counts.** Decreased blood counts (white blood cells, platelets, and red blood cells) are common with IMBRUVICA®, but can also be severe. Your healthcare provider should do monthly blood tests to check your blood counts.
- **Heart problems.** Serious heart rhythm problems (ventricular arrhythmias, atrial fibrillation and atrial flutter), heart failure and death have happened in people treated with IMBRUVICA®, especially in people who have an increased risk for heart disease, have an infection, or who have had heart rhythm problems in the past. Tell your healthcare provider if you get any symptoms of heart problems, such as feeling as if your heart is beating fast and irregular, lightheadedness, dizziness, shortness of breath, swelling of the feet, ankles or legs, chest discomfort, or you faint. If you develop any of these symptoms, your healthcare provider may do a test to check your heart (ECG) and may change your IMBRUVICA® dose.
- **High blood pressure (hypertension).** New or worsening high blood pressure has happened in people treated with IMBRUVICA®. Your healthcare provider may start you on blood pressure medicine or change current medicines to treat your blood pressure.
- **Second primary cancers.** New cancers have happened during treatment with IMBRUVICA®, including cancers of the skin or other organs.
- **Tumor lysis syndrome (TLS).** TLS is caused by the fast breakdown of cancer cells. TLS can cause kidney failure and the need for dialysis treatment, abnormal heart rhythm, seizure, and sometimes death. Your healthcare provider may do blood tests to check you for TLS.

The most common side effects of IMBRUVICA® in adults with B-cell malignancies (MCL, CLL/SLL, WM and MZL) include:

- diarrhea
- tiredness
- muscle and bone pain
- rash
- bruising

The most common side effects of IMBRUVICA® in adults with cGVHD include:

- tiredness
- mouth sores (stomatitis)
- pneumonia
- bruising
- muscle spasms
- diarrhea
- nausea

Diarrhea is a common side effect in people who take IMBRUVICA®. Drink plenty of fluids during treatment with IMBRUVICA® to help reduce your risk of losing too much fluid (dehydration) due to diarrhea. Tell your healthcare provider if you have diarrhea that does not go away.

These are not all the possible side effects of IMBRUVICA®.

Call your doctor for medical advice about side effects. You may report side effects to FDA at 1-800-FDA-1088.

What are the ingredients in IMBRUVICA®?

Active ingredient: ibrutinib

Inactive ingredients:

IMBRUVICA® capsules: croscarmellose sodium, magnesium stearate, microcrystalline cellulose, and sodium lauryl sulfate. The 70 mg capsule shell contains gelatin, titanium dioxide, yellow iron oxide, and black ink. The 140 mg capsule shell contains gelatin, titanium dioxide, and black ink.

IMBRUVICA® tablets: colloidal silicon dioxide, croscarmellose sodium, lactose monohydrate, magnesium stearate, microcrystalline cellulose, povidone, and sodium lauryl sulfate. The film coating for each tablet contains ferrousferic oxide (140 mg, 280 mg, and 420 mg tablets), polyvinyl alcohol, polyethylene glycol, red iron oxide (280 mg and 560 mg tablets), talc, titanium dioxide, and yellow iron oxide (140 mg, 420 mg, and 560 mg tablets).

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For more information, go to www.imbruvica.com or call 1-877-877-3536.



To learn more about
IMBRUVICA® By Your Side,
call 1-888-YourSide (1-888-968-7743),
Monday-Friday, 8AM - 8PM or visit
ImbruvicaByYourSide.com



RETHINK THE WAY YOU BUY PAINT

Choose your interior paint first, then pick your color

BY JAY CORK

Walk into any paint store and you'll immediately see the beautifully lit walls full of color palettes. That can entice you to zero in on a color first. But really, you can get almost any color in almost any paint formulation. So it makes more sense to start by choosing the right paint. For expert advice on selecting paint, primer (and yes, color!), I sat down with Jessica Barr from Behr Paint.

MEET THE EXPERT

Jessica Barr is a walking database of paint wisdom. She's also a national trainer and product expert for Behr Paint Company.

PHOTO: ANDRESR/GETTY IMAGES



Pay a little more for paint

You can pay \$20 or less for a gallon of paint, but Jessica says it's smart to pay at least \$50. The reason is simple: More expensive paint contains more expensive ingredients. For the customer, those high-quality ingredients are a good investment that pays off in several ways.

- **Fewer Coats.** Save time and labor with paint that covers better, often in one coat. With fewer coats, your total paint cost may be less.
- **Lasting Color.** Higher-quality pigments will resist fading caused by UV exposure.
- **Greater Durability.** You can repaint less often if you choose a paint that stands up to abuse.
- **Better Stain Resistance.** Better polymers resist staining better.



Priming: When you need to—and when you don't

Primer has three purposes: to seal a porous surface, provide a sticky surface for paint adhesion, and block stains. A properly primed surface will make the paint you choose work better and last longer.

BLOCK WATER STAINS

Water stains on ceilings and walls should always be coated with a stain-blocking primer. Even if you're using a paint-and-primer, water stains will bleed through no matter how many coats you apply.

Water-based primers won't block pet stains or odors. In fact, they can make them worse. Oil-based primers can mask these stains and keep odors sealed.

HOWEVER, YOU CAN OFTEN SKIP THE PRIMER

It's not just hype. Quality paint-and-primer products are formulated for better adhesion over existing paint and let you skip the primer in most situations. But there are exceptions: The existing paint must be in good condition, and for bare drywall and other porous surfaces, primer is still your best choice. When in doubt, go ahead and prime. As Jessica says, "It's never a crime to prime."



Establish mood with color

Choosing the right color for a room can sometimes be a challenge. But it's easier if you think about what kind of mood you want to be in when you're in that room. Darker, earthier, subdued tones are calming and restful. Brighter tones will tend to lighten the mood, and can even make the room seem larger than it is.

Use a color wheel

A color wheel can help you find attractive color combinations. Complementary colors—colors opposite each other on a color wheel—always work well together. Choosing the complementary color of your wall paint for style accents and trim will make both colors appear cleaner and brighter than they would paired with a noncomplementary color.

Buy some samples

Once you've found a color chip you like on a sample card, you might be tempted to call it good and buy all the paint you need. But here's the problem: Those cards are just too small to give you a true read of how that color will look in your room.

Instead, buy a quart of the color you're considering and go paint half a wall. If it's exactly what you were looking for, great! That means you just got a head start on your project. If it's not, try again. The investment in a quart or two of paint just saved you a ton of time, money and effort.

Look at the color in different lighting

Your perception of color will change depending on the light conditions. After you've applied a sample color, view it in full daylight at different times of the day, and at night with just the lamps on. The difference may make you rethink your color choice.



Don't avoid low-sheen paints

Flat paints have a reputation for staining and marring easily. That's still true for the low-cost ones. But Jessica told us that newer formulations of flat paints are making them more resistant to stains, easier to clean and much more durable.

Beware of high sheen on bad walls

Choosing a sheen is mostly a matter of personal preference, but there are practical considerations too. Jessica has a few good rules of thumb. Avoid a glossy sheen on imperfect surfaces; the gloss will highlight imperfections. Lower sheens also have an advantage in high-traffic areas because touch-ups are less visible.

Choose higher sheens for kitchens and baths

The higher the sheen of the paint, the smoother the finished surface and the easier it is to clean. Higher sheen also makes paint more resistant to moisture damage. That's why Jessica suggests higher sheens in bathrooms and kitchens, where the risk of stains and moisture is higher.

Buy paint formulated for ceilings

Ceiling paint usually has the lowest sheen available, but it's also typically thicker than wall paint and formulated to be splatter resistant.

AVOID SHEEN CONFUSION

The meaning of terms like "flat" and "gloss" is pretty obvious, but in between those extremes, things get confusing. Manufacturers' terms differ a little, but here's a basic range of sheens from dullest to shiniest:

FLAT

MATTE

EGGSHELL

SATIN

SEMIGLOSS

GLOSS



WHAT'S ENAMEL?

"Enamel" is a confusing term without a clear definition. Generally, it means that a paint is formulated to be smooth and durable, but paints not labeled as enamel can have those same traits. They're sometimes labeled "cabinet and trim" or "door and trim."

Make leftover paint last

Jessica says that sooner or later, all paints go bad in storage. And this is especially true if there's only a quart left in the bottom of a gallon can. But it can be avoided. Leftover paint should be poured into a mason jar and labeled. This will greatly reduce the paint's exposure to oxygen and keep it fresh and ready to use when touch-ups are needed.

Tips to get the best paint job

■ AVOID THINNING

The use of water as a thinning agent is recommended only for use with an airless sprayer, and only if absolutely necessary. Paint that is brushed or rolled on should not be thinned. Doing so may weaken the adhesion or cause drips and runs.

■ AVOID ADDITIVES

Paint conditioners like Floetrol are used to extend the drying time of a paint, typically to deal with temperamental weather conditions. Be aware that the use of paint additives may void any paint manufacturer warranties. Overuse can also degrade the adhesion, sheen and even the washability of the paint.

■ DON'T STORE PAINT IN THE GARAGE

It's important to protect stored paint from temperature extremes. The paint's composition may degrade if it's been too hot or undergone a freeze/thaw cycle. Jessica says that storing paint at an appropriate, consistent temperature is the only way to make it last.



Apply just one coat

Here's what you need to know about "one coat" paints. Behr and other manufacturers offer products that are guaranteed to cover in one coat. Generally, they perform as promised. But be sure to check the label. One-coat coverage is guaranteed only for certain surface conditions and only within a certain color palette. Materials like concrete and unprimed drywall are more porous and are not included in the one-coat guarantee.



Spend more on roller covers

When it comes to roller covers, cost is the simplest indicator of quality. It's tempting to buy the cheapest one available and throw it away when you're done, but don't! Cheap roller covers just don't hold enough paint or apply it evenly. Instead, try the Wooster high-density wool roller with a 1/2-in. nap (\$12) shown here. It holds a lot of paint and rolls it on very smoothly.

High-density wool cover



Cheap roller cover



LEGAL NOTICE

If You Purchased or Exchanged an AmeriGas or Blue Rhino Propane Tank between December 1, 2009 and November 30, 2020, Your Rights May Be Affected by a Class Action Settlement

A Settlement, subject to court approval, has been reached in a class action lawsuit called *In re Pre-Filled Propane Tank Antitrust Litigation*, MDL No. 2567, Master Case No. 14-02567-MD-W-GAF, pending in the U.S. District Court for the Western District of Missouri.

What is The Lawsuit About?

The Lawsuit claims that in 2008, AmeriGas and Ferrellgas (doing business as Blue Rhino) agreed to reduce the amount of propane gas in the pre-filled propane tanks they sold from 17 pounds to 15 pounds, without lowering the price of the tanks. The Lawsuit concerns sales of propane tanks from December 1, 2009 to November 30, 2020 (the "Class Period"). Although this Settlement includes purchases of both AmeriGas and Blue Rhino Propane Tanks regardless of which brand was purchased, only AmeriGas is settling its claims; the claims against Ferrellgas (Blue Rhino) are continuing in court.

AmeriGas denies the claims alleged in the Lawsuit. The proposed Settlement is a compromise of disputed claims and does not mean that AmeriGas did anything wrong.

Who Is Included?

You are a Class Member and included in the Settlement if you purchased or exchanged a pre-filled AmeriGas or Blue Rhino propane gas tank—other than for the purpose of reselling them to consumers—between December 1, 2009 and November 30, 2020 and you (a) purchased it from a vending machine anywhere in the U.S. or (b) purchased it from a retailer (such as a hardware store) in Arizona, California, Iowa, Maine, Michigan, Minnesota, Nevada, New Mexico, North Carolina, North Dakota, South Dakota, Utah, or West Virginia.

What does the Settlement Provide?

AmeriGas has agreed to a Settlement Fund of \$6,500,000, from which Class Members will be paid after deduction of fees, costs, and incentive awards to the class representatives. Class Members who submit a valid claim on time will be paid according to the formula found in the Settlement Agreement. You can download the Settlement Agreement from www.PropaneSettlement.com or call the toll-free number listed below and request one. If money is left over after payments to Class Members and the payment of attorneys' fees and other expenses, it will be distributed as ordered by the Court.

Who represents you?

The Court has appointed the law firms Hagens Berman Sobol Shapiro LLP, Stueve Siegel Hanson LLP, and The Paynter Law Firm PLLC to represent you. **You do not have to pay these attorneys or anyone else to participate in the Settlement.** These law firms will ask the Court for attorneys' fees and costs, to be paid out of the Settlement Fund. You may hire your own lawyer to appear in Court for you; if you do, you have to pay that lawyer.

What are your options?

(1) **Submit a claim.** To receive a payment, you must submit a completed Claim Form either online at www.PropaneSettlement.com, by email to claims@PropaneSettlement.com, or by U.S. Mail addressed to Claims Administrator, AmeriGas Class Action Settlement, P.O. Box 2730, Portland, OR 97208-2730. **Your claim form must be submitted electronically (or postmarked) no later than March 8, 2021.** If you submit a claim, you will remain in the Settlement, and so you will be bound by the Court's orders and you will release legal claims against AmeriGas relating to the price you paid for and the fill level of propane tanks covered by the Settlement.

(2) **Do nothing, and remain in the Settlement.** You will not receive a payment, and you will release all claims against AmeriGas relating to the price or fill level of propane tanks covered by the Settlement.

(3) **Exclude Yourself from the Settlement ("Opt Out").** If you wish to be excluded from the Settlement, you must submit a written opt out request by mail or by email to the Claims Administrator that (1) lists your name, address, and telephone number; (2) states that you wish to be excluded from the settlement in the lawsuit *In re Pre-Filled Propane Antitrust Litigation*, MDL No. 2567, Master Case No. 14-02567-MD-W-GAF; and (3) is signed by you if submitted by mail or, if submitted by email, includes a statement under penalty of perjury that it is being submitted by you personally or by a person legally authorized to act on your behalf (such as a guardian or conservator). Your opt out request must be **submitted (or postmarked, if mailed) no later than March 8, 2021. You will not receive any money under the Settlement if you opt out.**

(4) **Object to or Comment on the Settlement.** If you do not opt out of the Settlement, you can comment in support of or object to the Settlement, the proposed award of attorneys' fees and expenses, or the proposed incentive awards to the class representatives. Comments and objections must be in writing and must be filed and served no later than **March 8, 2021.** Your comment must be signed, must reference "*In re Pre-Filled Propane Antitrust Litigation*, MDL No. 2567, Master Case No. 14-02567-MD-W-GAF" and must state (1) your name, address, and telephone number; (2) the dates and locations of your eligible purchases or exchanges of AmeriGas or Blue Rhino Propane Tanks during the Class Period; (3) whether your objection applies to all Class members or only some Class members; and (4) the specific grounds for your objection. You will be bound by the Court's orders in this litigation, even if your objection is rejected. If you are represented by a lawyer, your objection must include your lawyer's name and contact information. If you file an objection, you or your lawyer may appear at the Fairness Hearing to explain your objection, but you are not required to attend.

Fairness Hearing

The Court will determine whether to approve the Settlement, attorneys' fees and expenses, and incentive awards to the class representatives at a Fairness Hearing to be held on **March 30, 2021, at 10:00 a.m. CT**, at the United States Courthouse, 400 East 9th Street, Kansas City, Missouri 64106. You may attend this hearing if you wish, but you do not have to attend in order to participate in the Settlement. Because of the COVID-19 pandemic, the Fairness Hearing may be continued or changed from an in-person hearing to a hearing by videoconference or teleconference. Information for participating in the Fairness Hearing will be posted on the Claims Administrator's website.

For more information about the proposed Settlement, Your Legal Rights and Filing a Claim: Visit www.PropaneSettlement.com or Call 1-855-940-5296



Curtis Rempel is a part-time maker and full-time musician with the country music duo High Valley.

PHOTOS: JOSH GICKER



SLING CHAIR SIMPLIFIED

Timeless style, designed for
the weekend woodworker

BY CURTIS REMPEL

Whether it's names for my children or designs for furniture, I'm always on the lookout for something timeless. The durability, look and feel of a piece need to transcend the ages and stay relevant for lifetimes to come. That's the goal with this chair. In addition, I designed this project for simplicity, so you can make one yourself without special skills or tools.



Wood and leather, great together

The wood frame is assembled with glue only, no nails or screws. It includes two types of interlocking joints: bridle joints and half laps. Both require a tight fit to make a chair sturdy. You don't have to be a veteran woodworker to make this project, but it's not a good one for a first-timer. I used 1-1/2-in.-thick oak for this project. Alternatively, you could glue 3/4-in. boards together. I finished the wood with a couple coats of Watco Danish Oil (Natural).

Don't let the leather put you off this project. It's about as simple as leatherwork gets. If you have the skills to do the woodworking, you'll have no trouble with the leather. Or, if you prefer, you can use canvas or other fabrics, which cost much less. I bought my leather for \$250 at buckleguy.com.

WHAT IT TAKES

TIME	COST	SKILL LEVEL
Weekend	\$150-\$400	Intermediate

TOOLS

Basic woodworking tools, circular saw, jigsaw, table saw, dado blade, leather punch

Figure A
Front Leg

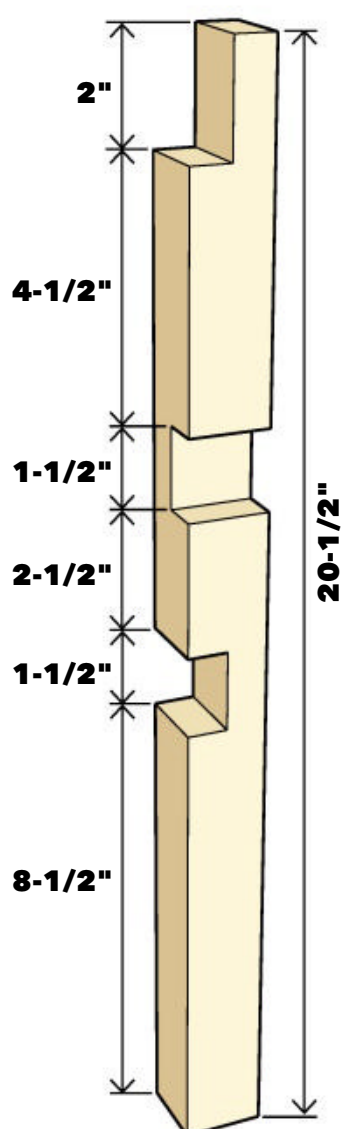


Figure B
Stile

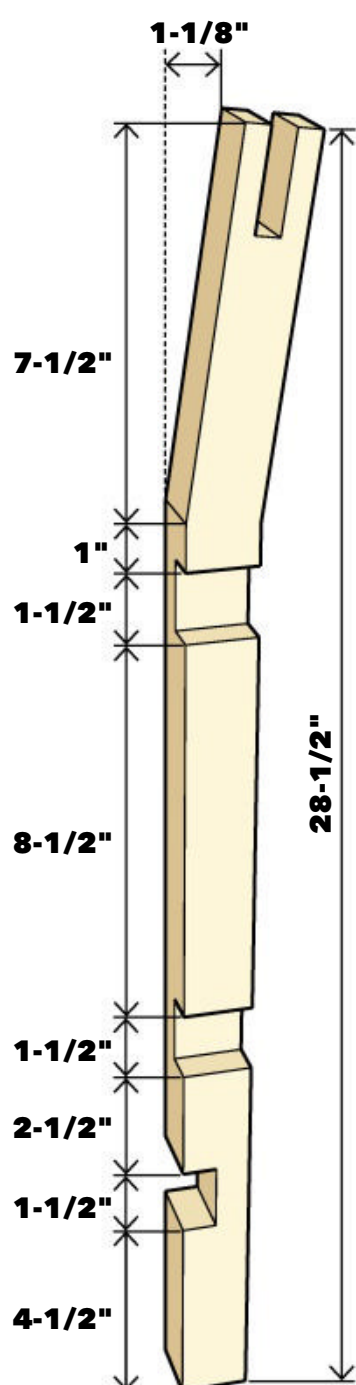


Figure C Stretcher

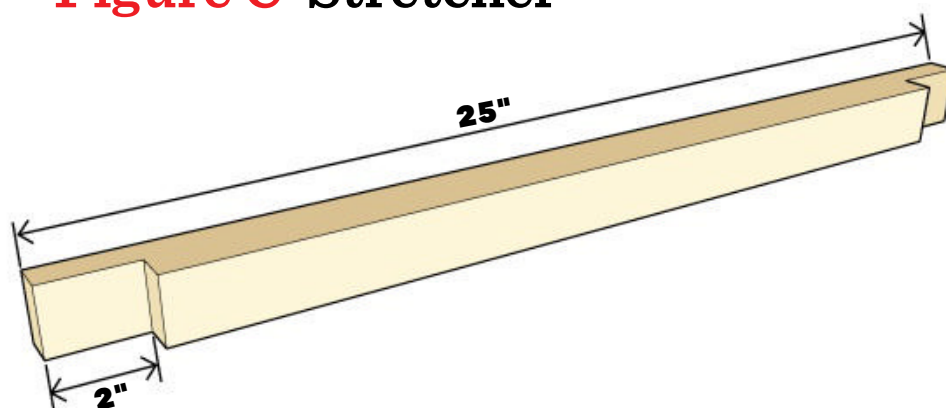


Figure D Top Rail

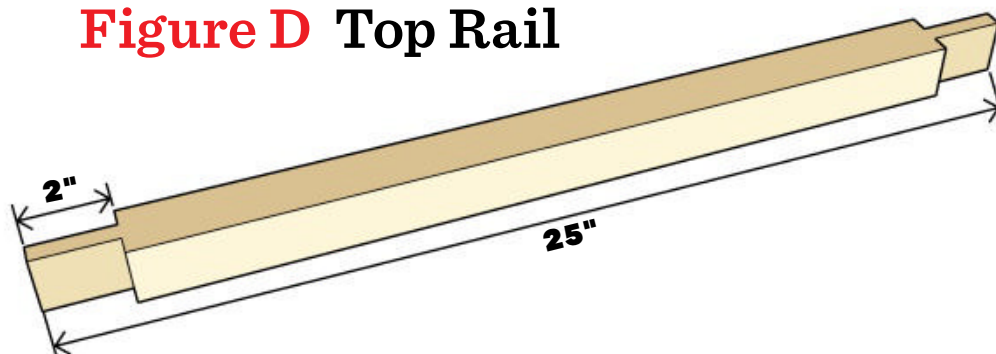
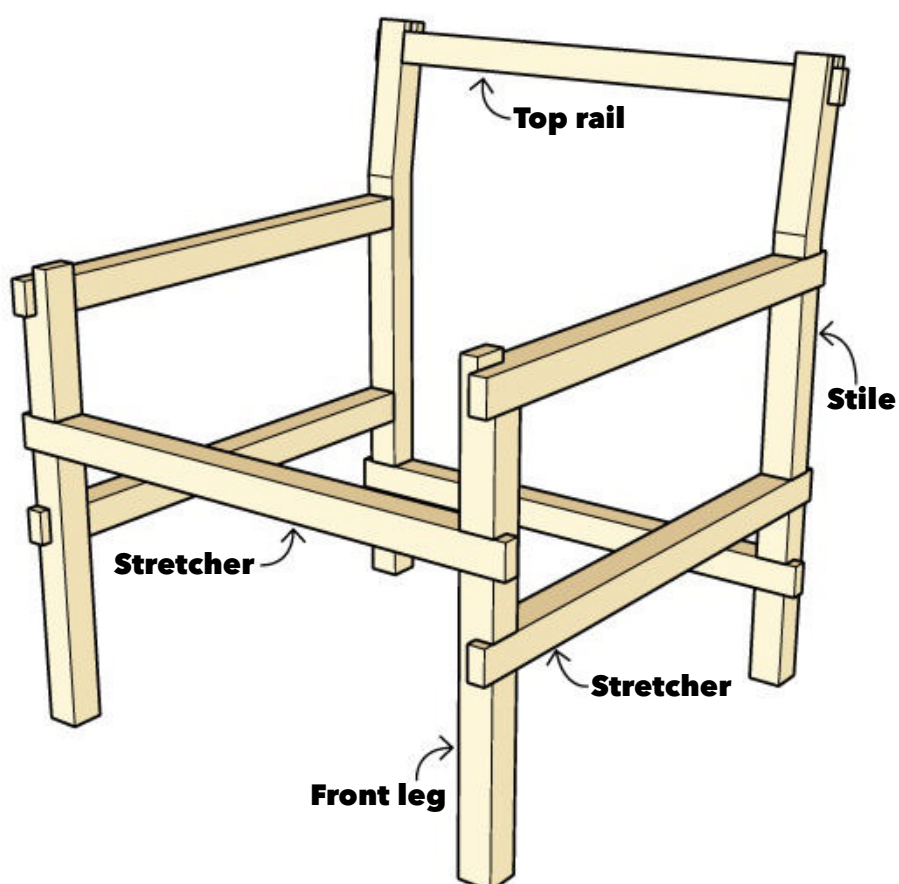


Figure E Assembled Chair

FINISHED DIMENSIONS: 27-1/2" H x 25" W x 25" D



Materials List

ITEM	QTY.
2x2	20 lin. ft.
2x6	5 lin. ft.
Leather or canvas (20-1/2" x 39")	
Wood glue	
1" washer-head screws	
Finishing supplies	



Meet the builder

If Curtis Rempel looks familiar, it may be because you've seen him in a music video. If you listen to much country music, you've certainly heard his voice—Curtis and his brother, Brad, make up the duo High Valley. Next to music, Curtis's passion is working with his hands—with wood, leather or just fixing things around his Nashville farm. You can check out his music at highvalleymusic.com or buy his handmade leather and wood creations at curtandmyr.co.



1 CUT THE PARTS

This chair is made mostly of straight, simple parts you can cut on a table saw. But the two back stiles are curved. I first cut the straight sections with a circular saw, stopping when I reached the curved segment. Then I cut the curves with a jigsaw.

2 SAND THE STILES

Smooth out the imperfections in the first stile and then use it as a template to mark the second. After you've cut and sanded the second stile, clamp them together and sand both until they're identical.

3 CUT THE SLOTS

I built a plywood box jig (8 x 14 in.) to hold the stiles upright while I cut the slots. The slots are too large to cut in a single pass with my benchtop table saw. So I set up my dado blade for 1/4-in.-wide cuts.

4 CUT THE TENONS

I cut the tenons the same way I cut the slots, taking 1/4-in. bites and adjusting the fence after each cut. This was time-consuming, but it gave me clean, tight-fitting joints.

WARNING:
You have to remove your blade guard for upright cuts. Be extra careful!

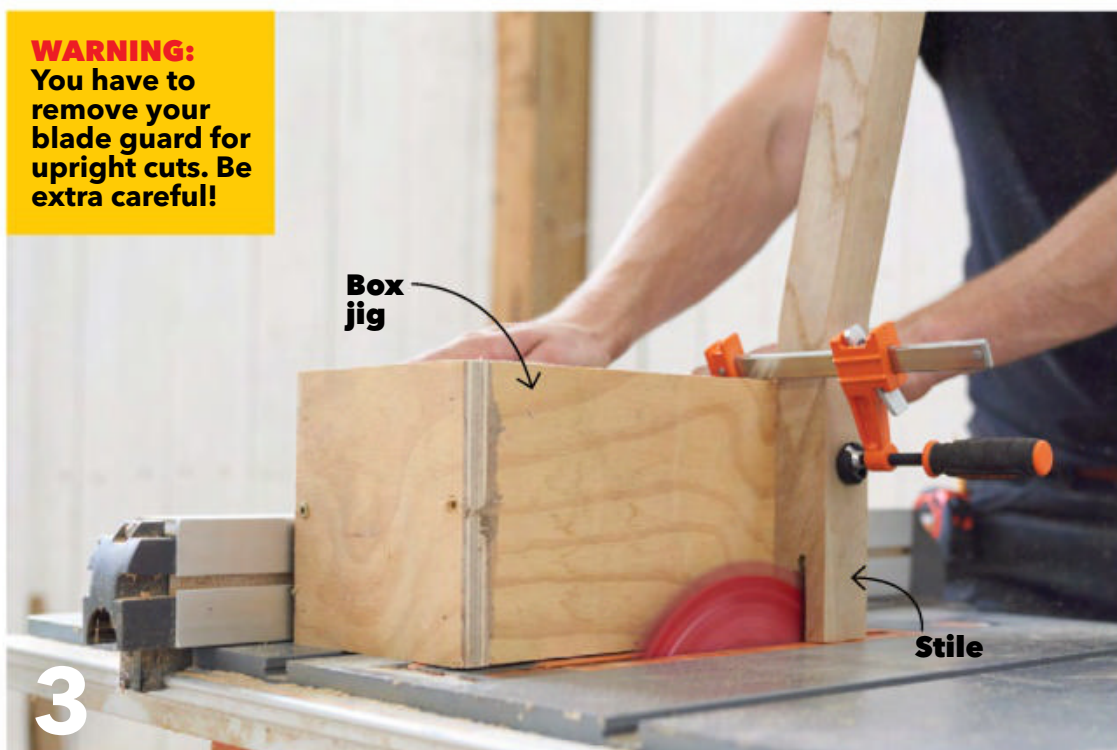
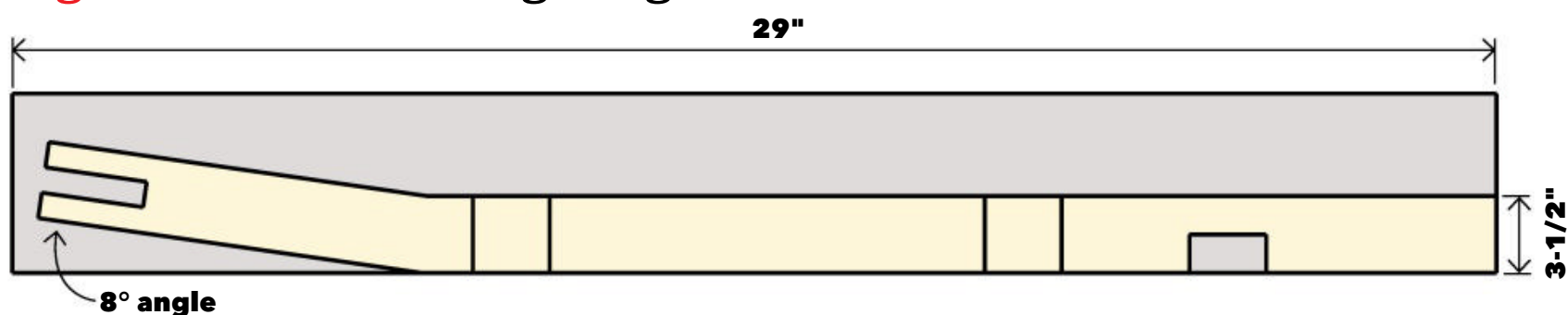
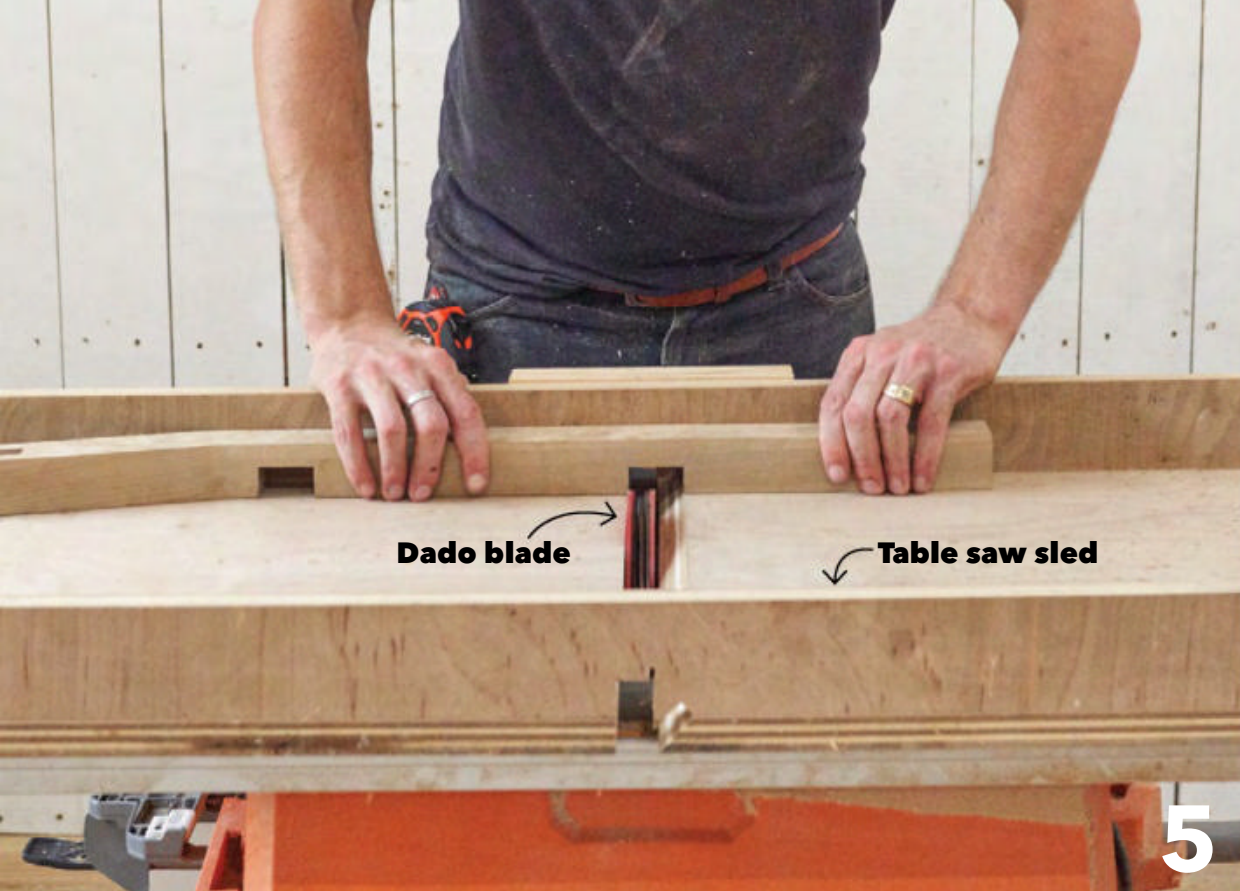


Figure F Stile Cutting Diagram





5 CUT THE HALF LAPS

I used a table saw sled to cut notches and tenons for the half lap joints. To build your own table saw sled, search for “table saw sled” at familyhandyman.com.

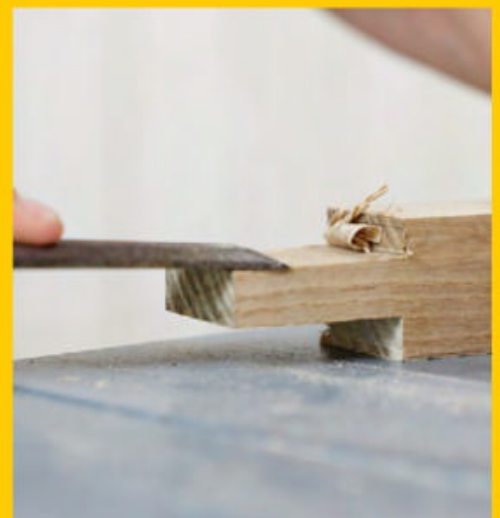
6 GLUE IT UP

Completely assemble the whole chair without glue. This “dry run” might feel like a waste of time, but it’s better than discovering problems during the glue-up. After the dry run, go ahead and assemble the chair with glue.



GETTING A CLOSE FIT

For tight-fitting joints, I cut slots and notches first. Later, as I cut tenons, I stopped and tested the fit before adjusting the table saw fence and making the final passes using the box jig. I aimed for a slightly too-tight fit. Then when needed, I cut paper-thin shavings off the tenons with a sharp chisel.





7 TRIM THE TENONS

I cut off the excess length with a Japanese saw, but any flush-cutting saw will work.

8 ROUT THE EDGES

Sharp corners will damage the leather, so the top rail and front stretcher must be rounded. The other parts don't require it, but I rounded them all with a 1/2-in. round-over bit anyway.

9 CLEAN UP THE ROUND-OVERS

My router work was far from perfect, but smoothing out the flaws was easy with a rasp.

10 SAND, SAND, SAND...

Perfecting the round-overs and joints took over an hour. I began with a random orbit sander and 100-grit discs, then used 150-grit. To remove the swirls left by the sander, I sanded by hand with 150-grit.





11

11 CUT THE LEATHER

To make the sling, cut leather to 20-1/2 x 39 in. Mark the leather by dragging a nail along a straight-edge. That will leave a scratch line on the leather. Then put a fresh, sharp blade in your utility knife and cut along the scratch line.



12

12 PUNCH HOLES IN THE SLING

At both ends of the sling, punch screw holes 1/2 in. from the edges and about 4 in. apart. A leather punch costs about \$15 online.

13 FASTEN THE SLING

Screw the sling to the undersides of the rail and stretcher using washer-head screws. When you're driving screws with a drill, it's easy for the bit to slip and damage the leather, so I drove these screws by hand.



13



How to choose leather

For this chair, I supplied Curtis with our Wickett & Craig Traditional Harness veg tanned leather in a 9-11 oz. weight. If you don't know leather jargon, that sounds pretty confusing. Understanding these five terms will help you make a smart choice:

Thickness, or "weight," is given in ounces, usually 2 oz. up to 16 oz. Thick leather is used for items like saddles, shoe soles and belts. Thin leather is used for wallets and handbags.

Temper refers to suppleness. Leather temper can be described as firm, medium, semi-soft and soft. Stiffer leathers are best for things that have to hold their shape, like tool pouches. Softer leather is best for items that need to move and bend, like handbags.

Grain refers to the composition and appearance of the hide. Generally, the highest quality leathers are "full grain," meaning the surface is left untouched. Others, such as top grain, genuine or bonded, are usually sanded or buffed, resulting in a smooth texture with less visible natural grain.

Color can be added in several ways: 100% aniline dyes are translucent, allowing the true texture to remain. Other treatments, like semi-aniline or pigment, give a more consistent surface and resist wear better, but show less grain. Finally, there's paint, which completely hides the grain.

Tannage refers to how the leather was processed. One method is vegetable, or "veg" tanning, which uses organic materials such as tree bark and tends to yield stiffer leather. It's usually more expensive. Chrome tanning uses some nonorganic chemicals and often produces softer leather.



MEET THE EXPERT

Hugh Harriss is a fourth-generation leather expert in a family business that got its start by supplying English leather to U.S. shoemakers. Today, he runs a brass hardware factory and an online leather craft store. If you need leather, hardware, tools or expert advice, you'll find it at buckleguy.com.



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SUPER-SPACIOUS STORAGE BED

Turn that
wasted space
under your bed into
easy-access storage

BY MIKE BERNER

My growing family is quickly outgrowing our small home. Toys are overtaking the living room, and closets are more than full. My wife and I needed a new place to put stuff without adding any more



MEET THE BUILDER
Mike Berner is a carpenter and associate editor at *Family Handyman*. With a family of five living in a small house, he's always looking for a better place to put his slippers.

space. Our bed was the answer: It was already sitting there taking up space—why not take advantage of it for storage? So, I built a few simple boxes and drawers and assembled them to make a cool platform bed frame. Here's how I did it.





IT'S LIKE ADDING MORE CLOSET SPACE!

A typical linen closet offers about 50 cu. ft. of storage. By enlarging the footprint of this queen-size bed by 6 in. on each side and 16 in. at the foot, I added the equivalent of almost half a linen closet in previously wasted space.



HOVER YOUR CAMERA HERE

See how to build this platform bed—and look at all the space you'll gain!



1-1/2"
rigid foam

Saw guide

1

1 SLICE UP THE PLYWOOD

Large sheets of plywood are difficult to cut on the table saw, and making crosscuts is unsafe. To cut a sheet down into smaller pieces, I set it on a piece of rigid foam and make my cuts on the floor. The foam won't dull the blade, your parts won't crash to the floor, and you won't need sawhorses.

2

2 ASSEMBLE THE BENCH AND BOXES

Glue and nail the sides to the bottom. Then fasten the back to the sides and bottom with glue and brad nails. Attach the extra divider in the storage bench the same way to support the lid. The tops will go on later.



Storage
bench divider

Storage
bench side

Storage
bench
back

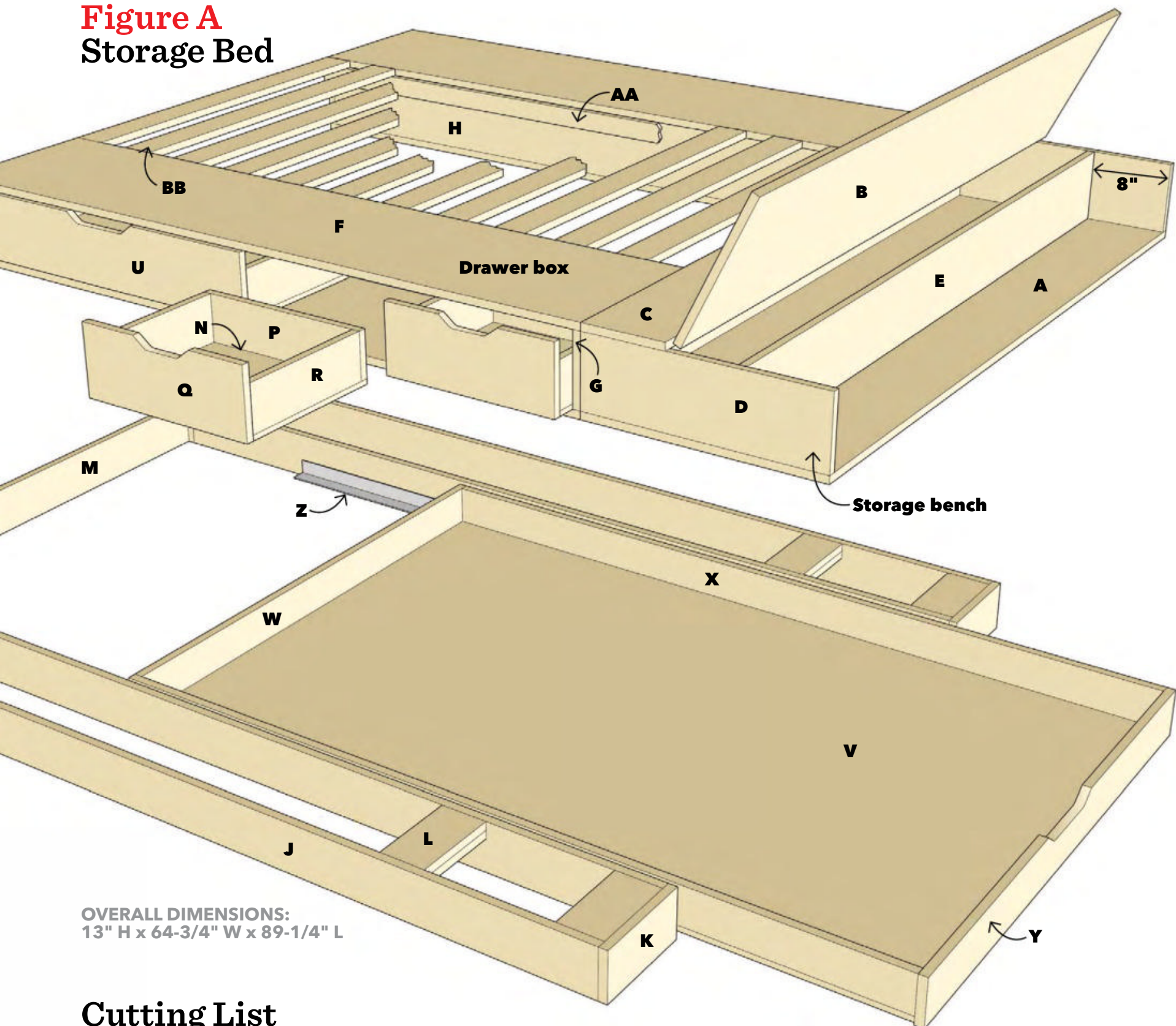
WHAT IT TAKES

TIME	COST	SKILL LEVEL
A few days	\$450	Intermediate

TOOLS

Basic hand tools, table saw, jigsaw, circular saw, drill, brad nailer

Figure A
Storage Bed

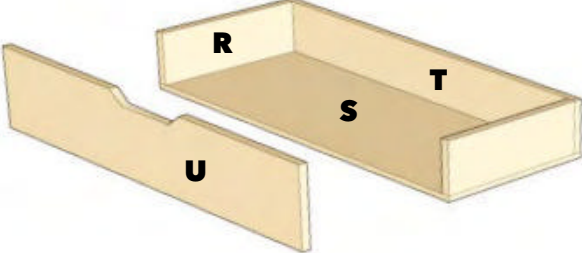


OVERALL DIMENSIONS:
13" H x 64-3/4" W x 89-1/4" L

Cutting List

PART	QTY.	PART NAME	DIMENSIONS
A	1	Storage bench bottom	3/4" x 23" x 72"
B	1	Storage bench lift lid	3/4" x 15" x 72"
C	1	Storage bench fixed top	3/4" x 8" x 72"
D	2	Storage bench sides	3/4" x 7" x 23"
E	1	Storage bench divider	3/4" x 7" x 70-1/2"
F	4	Drawer box tops/bottoms	3/4" x 16" x 72"
G	4	Drawer box sides	3/4" x 7" x 16"
H	3	Storage/drawer box backs	1/2" x 7" x 70-1/2"
J	4	Toe-kick sides	3/4" x 4-1/2" x 87"
K	4	Toe-kick ends	3/4" x 4-1/2" x 9"
L	12	Toe-kick blocks	3/4" x 4-1/2" x 7-1/2"
M	1	Toe-kick stretcher	3/4" x 4-1/2" x 64-3/4"
N	4	Small drawer bottoms	1/2" x 14-1/4" x 17-1/4"
P	4	Small drawer backs	3/4" x 4-1/2" x 17-1/4"
Q	4	Small drawer fronts	3/4" x 6-3/4" x 17-1/4"
R	12	Drawer sides	3/4" x 4-1/2" x 13-3/4"
S	2	Large drawer bottoms	3/4" x 14-1/4" x 34-1/2"
T	2	Large drawer backs	3/4" x 4-1/2" x 34-1/2"
U	2	Large drawer fronts	3/4" x 6-3/4" x 34-1/2"
V	1	Toe-kick drawer bottom	1/2" x 45-7/8" x 72"
W	1	Toe-kick drawer back	3/4" x 3-1/2" x 45-7/8"
X	2	Toe-kick drawer sides	3/4" x 3-1/2" x 70-1/2"
Y	1	Toe-kick drawer front	3/4" x 4-1/2" x 45-7/8"
Z	2	Aluminum drawer runners	1-1/2" x 1-1/2" x 72"
AA	2	Slat cleats	3/4" x 2" x 72"
BB	11	Mattress slats	3/4" x 3-1/2" x 39-3/4"

Figure B
Large Drawer



Materials List

ITEM	QTY.
3/4" x 4' x 8' MDO	4
1/2" x 4' x 8' MDO	2
1-1/2" x 4' x 8' rigid foam	1
1-1/16" x 72" piano hinge	1
3/4" wood screws	
1" wood screws	
1-1/4" wood screws	
2" wood screws	
Brad nails	
Glue	
Wood filler/grain filler	

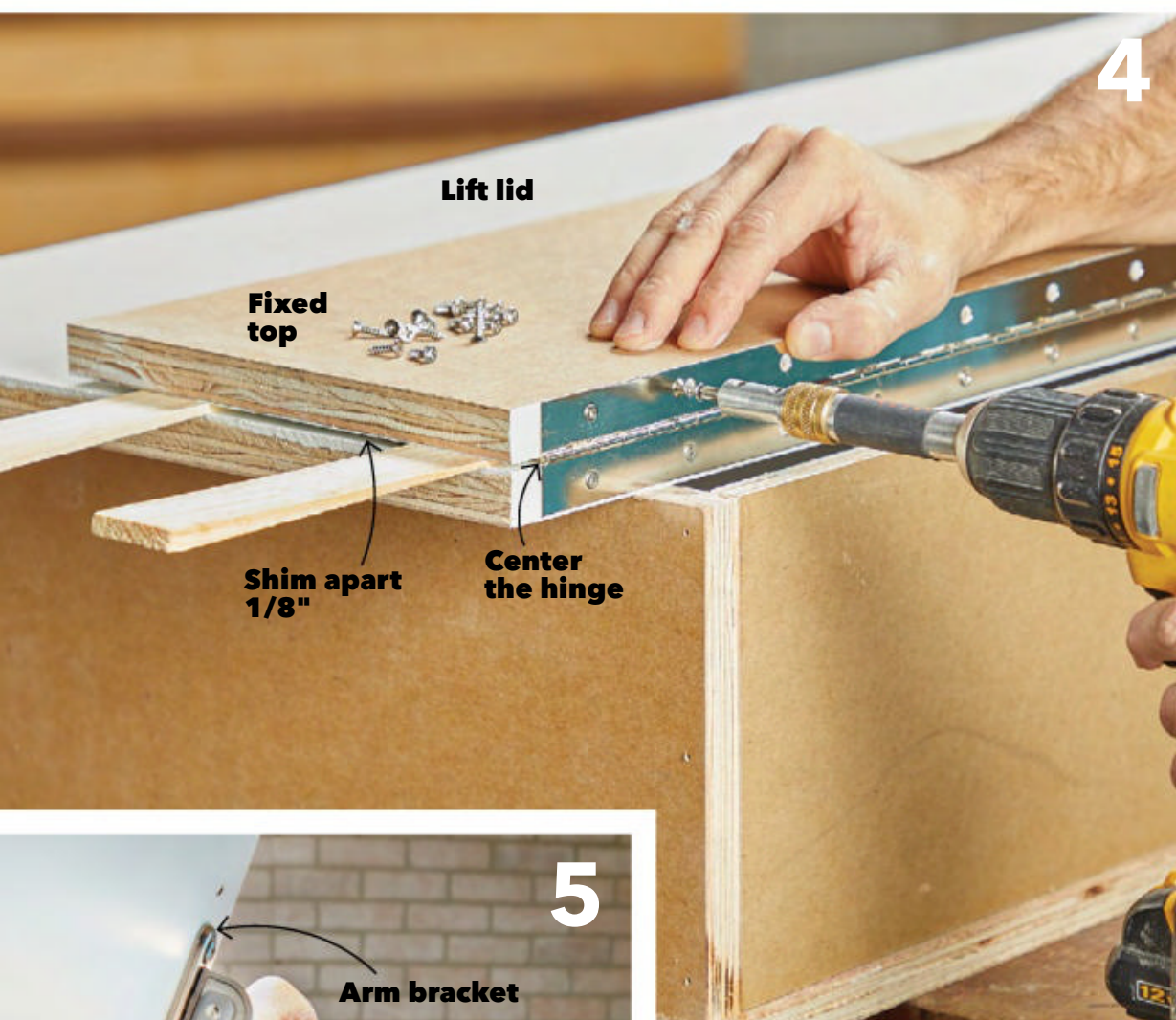


PAINTED PROJECT? USE MDO

Medium-density overlay (MDO) is just like regular plywood, but it has a smooth layer of resin on the faces that's perfect for painting. Also called "sign board," it's available at home centers for about \$60 for a 3/4-in., 4 x 8-ft. sheet.

3 PAINT THE INSIDE

Painting the inside of the boxes is much easier before the tops are added. Use a brush on the corners and roll the flat areas. Apply a coat of primer and one or two coats of latex paint. When the paint has dried, fasten the tops to the drawer boxes with glue and brad nails.

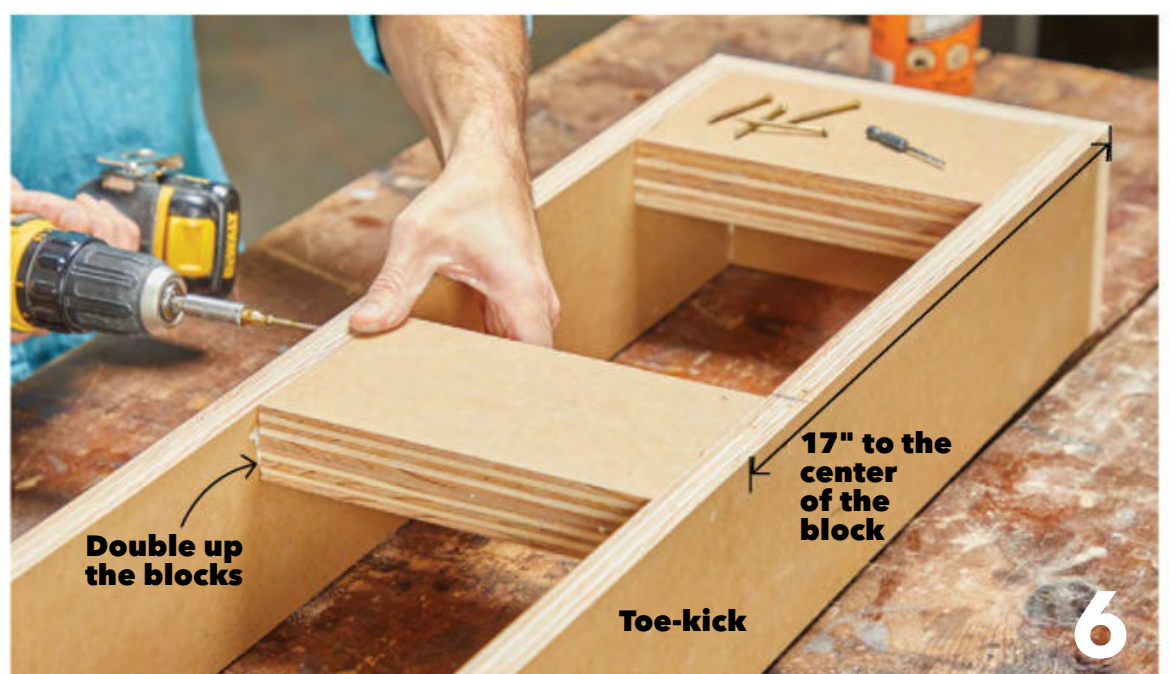


4 FASTEN THE HINGE, INSTALL THE LID

Stack the lift lid (part B) and the fixed top (part C), flush up one of the long edges, and shim the edges apart about 1/8 in. Center the piano hinge between the two parts, then predrill and screw it to both edges.

5 INSTALL THE LID STAY

The soft-close lid stays hold the lid up while you grab pillows and blankets from inside and keep it from slamming when you close it. Attach the pivot bracket to the side, then open the lid and extend the arm. Fasten the arm bracket where the arm lands on the lid. Do the same on the opposite side.



Brush the corners

3

Lift lid

Fixed top

Shim apart 1/8"

Center the hinge

4

5

Arm bracket

Pivot bracket

Double up the blocks

17" to the center of the block

Toe-kick

6



6 BUILD TOE-KICKS

The toe-kicks raise the boxes off the floor and keep you from stubbing your toes as you get into bed. Simply glue and screw the ends to the sides. Then attach three blocks flush to the top of the toe-kicks: one at each end and a third centered 17 in. from the front.

7 BUILD THE DRAWERS

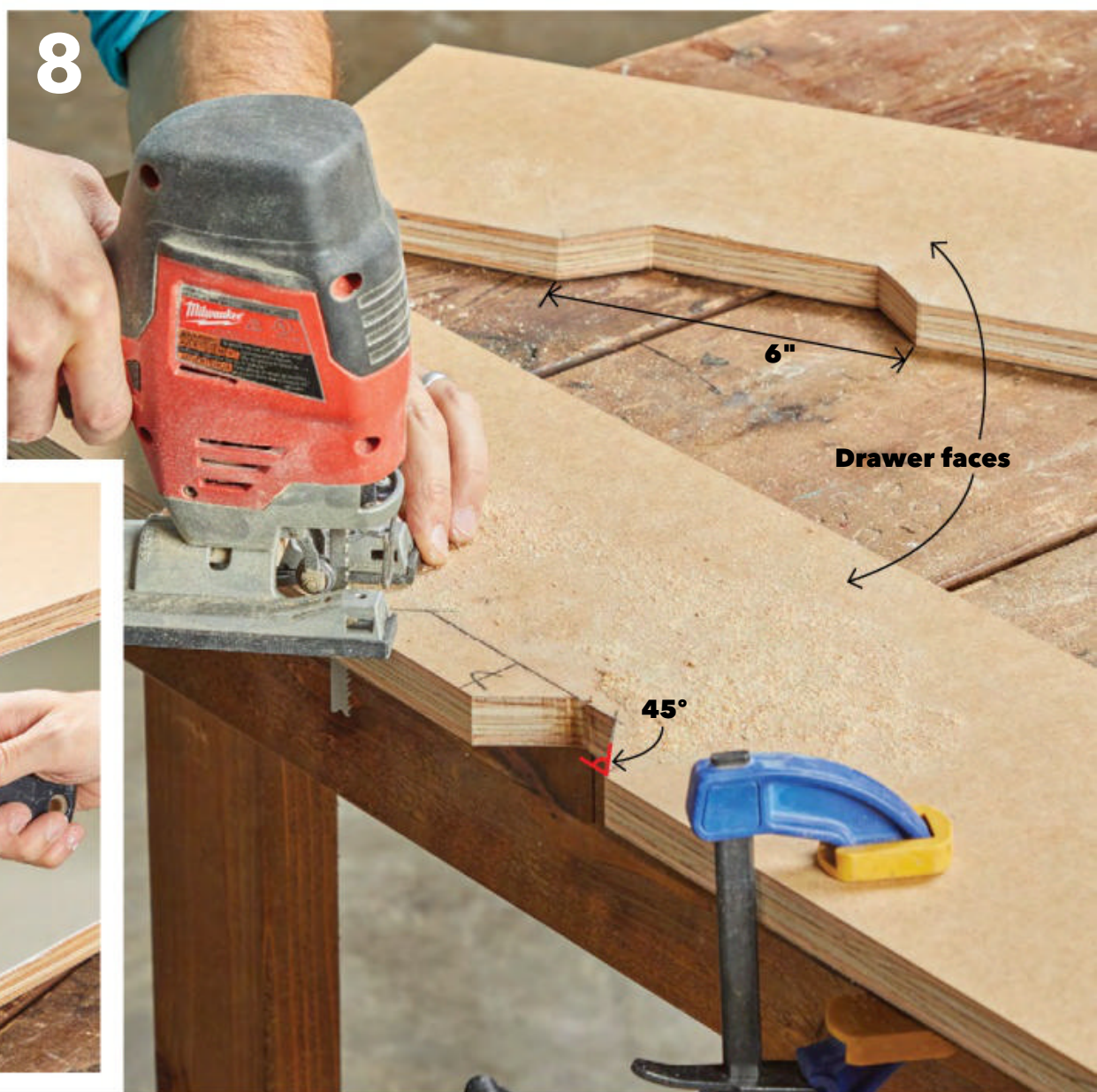
Cut the bottoms of the drawers to size from 1/2-in. plywood and fasten the drawer backs through the bottoms with glue and brad nails. Then fasten the sides the same way.

8 CUT DRAWER PULLS

Instead of using knobs, I cut out a handle for each drawer. I found the center of each drawer and measured a 6-in. opening. I traced the shape and cut it out with a jigsaw. Then I attached the face to the drawer.

9 FILL THE EDGES

To prep the plywood edges for paint, apply a sandable filler with a putty knife. Let it dry, sand it down, then prime and paint all the parts.





10 ATTACH THE RUNNERS

Drill pilot holes in the aluminum angle every 12 in. At each hole, bore a countersink so the screw heads won't protrude. Screw the angle to the inside of the toe-kick.

11 ATTACH THE TOE-KICKS

Flip the drawer boxes upside down and center the toe-kicks, which should overhang the front by 17 in. Screw the toe-kicks to the bottoms of the boxes with 2-in. screws through the blocks.

12 ASSEMBLE THE BED

Flip the boxes upright and space them apart. Place the storage bench on top of the overhanging toe-kicks, and then line up the sides of the bench with the drawer boxes. Screw them together from the inside with 1-in. screws and into the blocks in the toe-kicks with 2-in. screws. Then connect the back of the toe-kicks with the stretcher (part M).

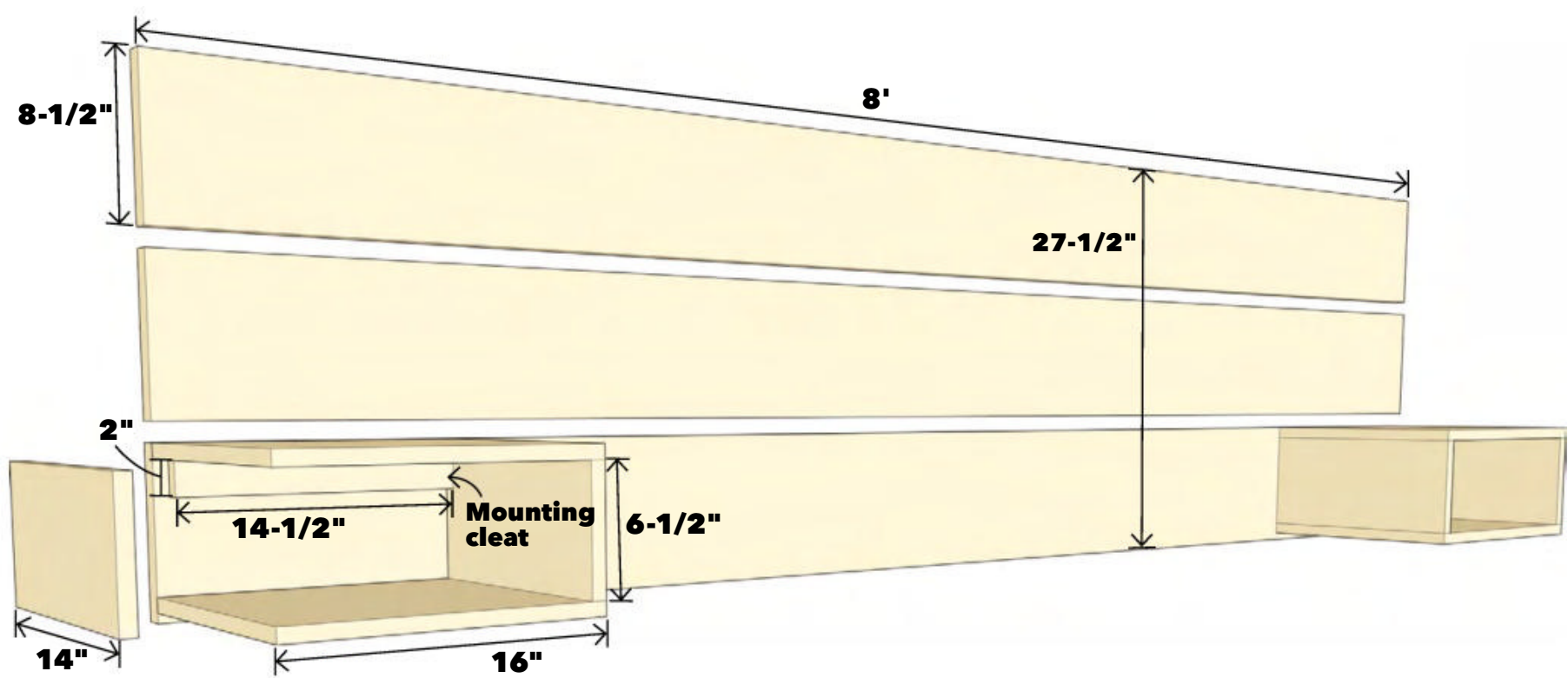
13 FASTEN SLATS

Position the cleats on the inside of the bed assembly 3/4 in. below the top of the boxes and use 1-1/4-in. screws to fasten them. Cut slats from standard 1x4 boards to fit between the side boxes and fasten them to the cleats with two screws on each side. Use one of the slats as a spacer to position them evenly. You could use a sheet of plywood instead of slats, but I found the standard pine boards or furring strips to be much cheaper. Once the slats are on, the bed is ready for your mattress!



SLEEK & SIMPLE HEADBOARD

I designed this headboard and nightstand combination to match my storage bed, but it would work well with other beds too. All you need is one sheet of plywood and a few hours to put it together.



1 SCREW PLANKS TO THE WALL

Fill the edges and paint three 8-ft. lengths of plywood cut at 8-1/2 in. wide. Center the first strip 3 in. above the bed and attach it to studs with trim screws. Use a few 1-in. spacer blocks to evenly space the next two strips above the bed.

2 HANG THE NIGHTSTANDS

Screw the nightstands to a plank. I positioned them flush with the top of the lowest plank, but you could mount them at any height. Fill the screw holes, touch up the paint and you're done!

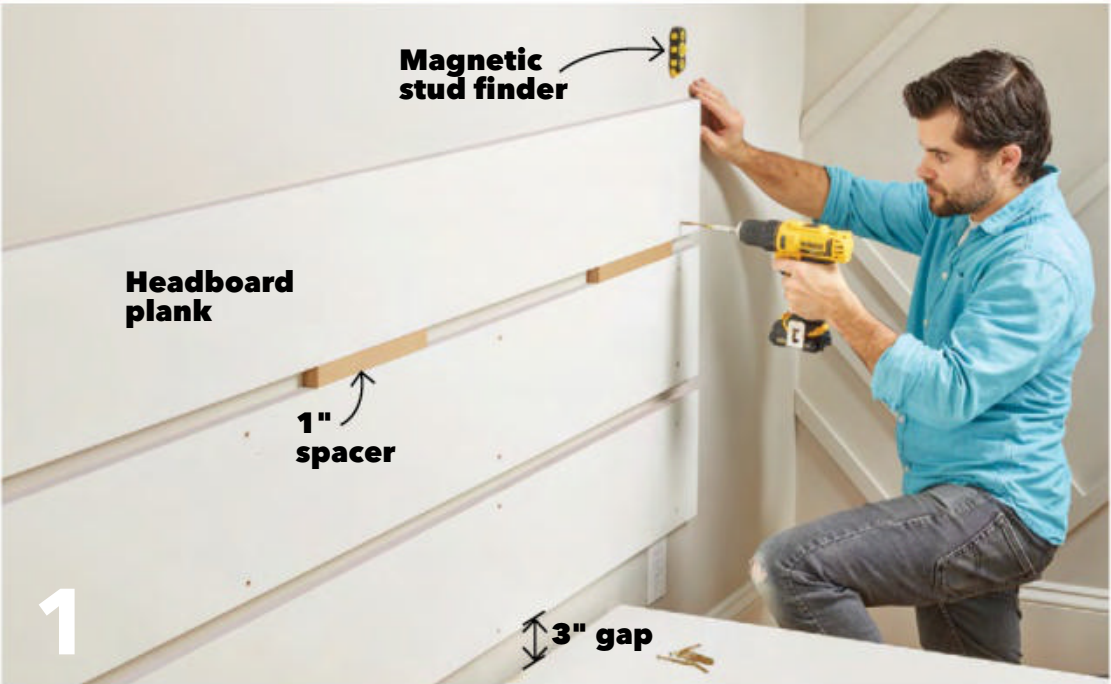
Materials List

ITEM	QTY.
1-3/4" x 4' x 8' MDO	1
1-1/2" x 4' x 8' rigid foam	1
3" trim screws	
2" wood screws	
Glue	
Brad nails	

WHAT IT TAKES

TIME	COST	SKILL LEVEL
2 to 3 hours	\$60	Beginner

TOOLS
Table saw; miter saw or circular saw; brad nailer; stud finder



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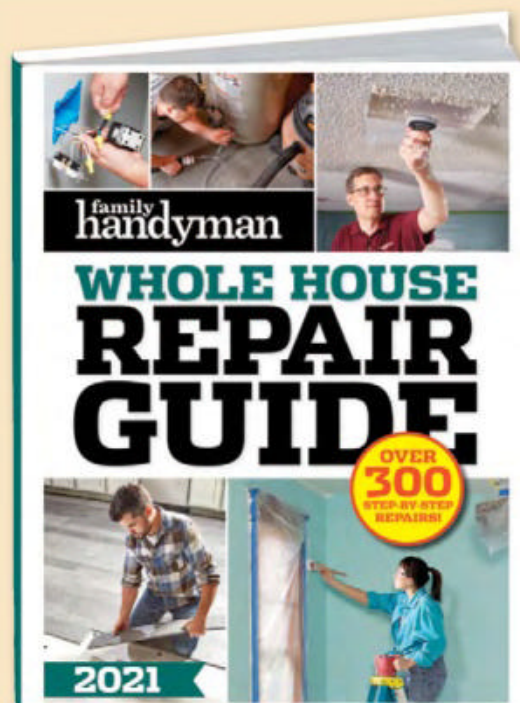
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Best ProTips

Expert advice from the job site. By Jay Cork

ELIMINATE WI-FI DEAD SPOTS

Get strong Wi-Fi everywhere in your home
—no expertise required!

It seems like almost everything is Wi-Fi enabled now. Computers, printers, home security systems, digital home assistants, even lightbulbs! While this can make life convenient, it's incredibly frustrating when things go wrong. I've discovered the solution usually isn't complicated or expensive. Here's a number of easy, low-tech tips for eliminating Wi-Fi dead spots and improving your home network.



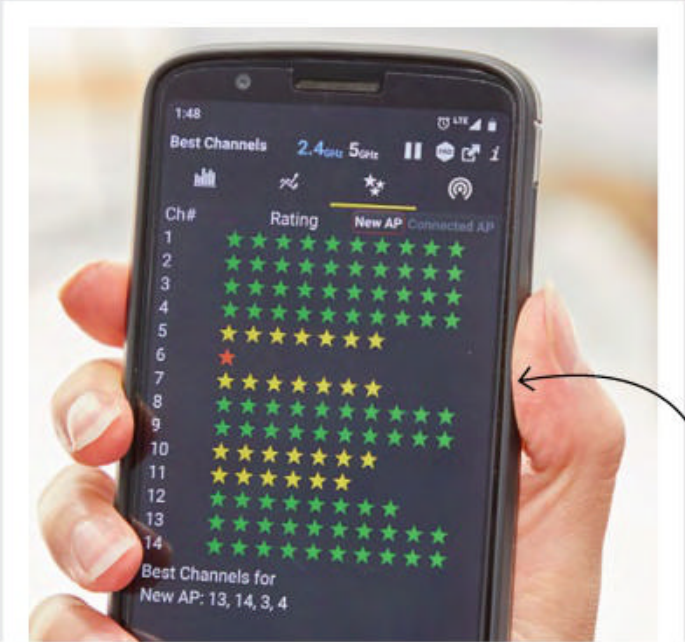
MEET THE EXPERT

Jay Cork is an associate editor at *Family Handyman*. One of his many past professions was installing home telecommunications, network and audio systems.

Netgear Nighthawk
AC1900 router (\$160)

TEST WI-FI STRENGTH WITH YOUR PHONE

With the help of a Wi-Fi analyzer app for your phone, you can determine the strength of the Wi-Fi signal throughout the house. I use a free one from olgor.com, and it's a really great tool. To use it, simply walk around your house and watch how the Wi-Fi signal changes. The higher the negative number, the better. For example, negative 40 is better than negative 70. Make some corrective changes, then walk around the house again to see if the signal has improved.



Fine-tune your Wi-Fi signal by switching to a less congested channel

UPGRADE YOUR ROUTER ANTENNA

If your router has an external antenna, you should be able to swap it out for a more powerful one. They're available online for about \$25 and are very easy to change—simply unscrew the old one and attach the new one. For best results, choose an antenna that provides at least 9 dB of boost.



MOVE THE ROUTER

One of the simplest fixes to improve Wi-Fi coverage is to simply move the router to a new location in your home. I know it doesn't seem logical, but a router placed in an upper floor broadcasts to the lower floors better than a router in the basement broadcasting upward. You might have to experiment, but start with a central location and go from there. Avoid locations with obvious barriers like under a stairway or in a closet.



PLUG IN WHEN POSSIBLE

A router can handle only so many wireless devices competing for the available bandwidth. Whenever possible, plug into your router with an ethernet cable. This frees up more bandwidth for other Wi-Fi devices.



Change your router settings and boost your Wi-Fi

Changing some of your router settings can greatly improve Wi-Fi performance. You have to log in to the “admin console,” which is easier than it sounds. You can access the admin console by typing a series of numbers, called an IP address, into your internet browser. The default IP address of most routers is usually 192.168.1.1. It’s typically printed on a label on the router or found in the user manual along with the default username and password.

1. Avoid congested Wi-Fi channels

Cordless phones, baby monitors, smart devices and even microwave ovens all operate on the 2.4-GHz frequency band. Even your neighbor’s wireless network can add to the confusion. But the way to improve performance is to log in to your router and change the channel. Each frequency band has multiple channels to choose from, and the Wi-Fi analyzer app has a function that helps determine what channels are congested.

2. Set priorities

Most modern routers have Quality of Service (QoS) tools to limit the amount of bandwidth that apps use. After logging in to your router’s admin console, you can prioritize which apps and devices get the highest speed. This can free up bandwidth.

3. Don’t skimp on security

Don’t let anyone piggyback on your Wi-Fi, or worse yet, gain access to your computers! If your firewall is turned off or you are not using encryption, anybody within range can access your Wi-Fi network. Log in to your router’s admin console and make sure the firewall is turned on. Also, double-check that your router’s encryption mode is set to WPA2-AES. Older encryption modes like WEP can be easily hacked.

4. Upgrade your router firmware

Log in to your router’s admin console and look for a software update button. Just like the operating system on your home computer or smartphones, a router’s firmware needs to be updated occasionally to fix bugs or provide security updates.



ADD A WI-FI RANGE EXTENDER

If some areas of your house are getting weak coverage, like the basement workshop or the garage, a Wi-Fi range extender may be a good solution. They’re relatively inexpensive (\$50 to \$150) and very easy to set up; all you need to do is plug it into an open outlet.



UNPLUG YOUR ROUTER

If you’re having problems with devices connecting to the internet at home, the first thing you should do is unplug the power cable from your router, wait about a minute, and plug it back in. Often this simple step, called rebooting, will get things back up and running just like magic. Even if you’re not having problems, reboot once a week to keep your router operating smoothly. In fact, some routers are programmable to automatically reboot at a scheduled time.

BEST PRO TIPS



UPGRADE TO A MESH NETWORK

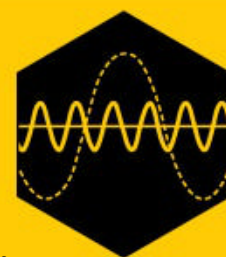
Mesh networks are great solutions for large houses and houses with multiple levels. Instead of purchasing individual extenders, you buy them as a complete system with a dedicated router and multiple satellite extenders. This means they can't be used with your current wireless router. Mesh networks typically cost a little more, so expect to pay at least \$300 for a system.



DON'T CROWD YOUR ROUTER

If your router is tucked into a crowded bookshelf or behind a piece of furniture, the airflow may not be adequate to keep it cool. This is bad. When a router overheats, it will start to perform poorly; eventually it will just shut down. Put the router in a place that allows sufficient airflow.

Smart devices use the 2.4-GHz frequency



Smart locks, smart switches and hubs need a router that operates on the 2.4-GHz frequency band. Most modern routers can be set up to broadcast on either 2.4 GHz or 5 GHz. If you're having problems connecting your smart tech, make sure your router is set to broadcast on 2.4 GHz.

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drillmaster ★★★★★ (3297)

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FRANKLIN ★★★★★ (1051)

Heavy Duty Portable Scaffold

\$169.99 ~~\$219.99~~

Save \$50

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200 Lumen LED Super Bright Flip Light ★★★★★ (6432)

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Home Care

HEALTH | MAINTENANCE & REPAIR | STORAGE & ORGANIZATION

Is treated lumber safe for vegetable gardening?

Many articles online claim that it isn't safe to grow edible plants in containers made of treated lumber. But read closer, and you'll see that they're talking about wood treated with arsenic (CCA), which was banned for residential use back in 2003. The treated lumber sold today contains no arsenic and is considered safe for food contact and growing food. Some common types of treated lumber are ACO, CA and MCQ.

PHOTO: CJP/GETTY IMAGES

AN EXTINGUISHER CAN SAVE YOUR HOME

A fire extinguisher can make the difference between no damage and total destruction and loss of life. Experts recommend that you have an extinguisher on each level of your home, and in your garage. Just remember that household extinguishers are meant for small fires. With a larger or fast spreading fire, forget the extinguisher and get out of the house.

Choosing is easy

Don't get bogged down in the details of the fire extinguisher classification system. Most extinguishers sold at home centers are labeled "ABC"—and that's exactly what you need to put out the most common types of home fires. You'll find several models that fit nicely in a drawer or under the sink, and even smaller spray-can versions.

The basic technique

- Stand a few feet from the fire and start spraying as you move toward the fire. The instructions will tell you how far away to start.
- Use a sweeping motion to direct the chemical stream.
- Aim at the base of the fire. Spraying the flames does no good.

They empty fast

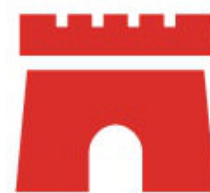
Most extinguishers have a very short discharge time before they run out of fire suppressant (10 seconds is typical). That means you can't waste time or suppressant. Aim carefully before you pull the trigger.

They make a mess

Extinguishers blast the area with chemicals. So don't use one unless it's necessary. If you have a small stovetop fire, for example, a pot lid will usually smother the flames—and won't leave you with cleanup chores.

They don't last forever

If you've had your extinguisher for a while, check the expiration date on the label. Also make sure the pressure gauge reads "full."

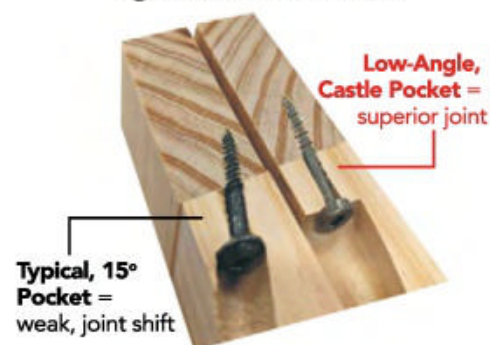


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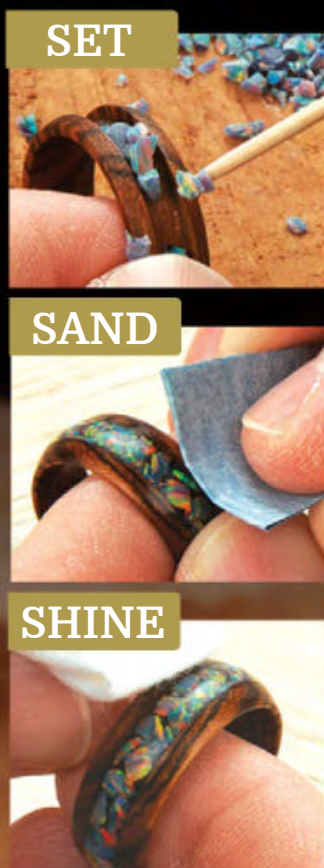
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HOME CARE

WORK SAFELY ON YOUR ELECTRICAL PANEL

Even some savvy DIYers consider working on their electrical panel a step beyond their comfort zone. But even if you're comfortable getting elbow deep in wires, breakers and bus bars, no amount of caution is too much. Here are a few rules that master electrician John Williamson always follows:

- Be alert and attentive (no distractions).
- Don't reach into areas you cannot see clearly.
- Make sure you have good light, including a nonconductive headlamp.
- Clear the work area of clutter and combustible materials.
- Clear the area of tripping hazards.
- Clear a path for an easy escape from the electrical equipment in case of arcing or sparking.
- Don't wear jewelry, watches, rings or anything metallic.
- Use only insulated, nonconductive tools.
- Wear nonconductive head, face, neck and chin protection made from natural fibers (no synthetic materials).
- Wear nonconductive long-sleeve clothing made from natural fibers (no synthetic materials).
- Wear nonconductive eye protection (Z87-rated safety glasses are readily available at home centers).
- Wear nonconductive hearing protection.
- Wear leather gloves.
- Wear leather footwear.



MEET THE EXPERT
John Williamson is the
State of Minnesota
Electrical Operations
Supervisor.



Do plants improve indoor air quality?

Awhile back, a study by NASA said that houseplants improved indoor air quality by removing volatile organic compounds (VOCs). The idea makes sense. But the NASA study was done in sealed chambers under controlled conditions, not real-life conditions.

In late 2019, the journal *Nature* published a study that reviewed this claim. According to the review, the benefit of houseplants to indoor air quality is insignificant; estimates suggest you'd need up to 10,000 plants per square meter to remove the same amount of VOCs as would be removed through normal building air exchanges.

To improve indoor air quality, it's better to focus on ventilation and source control, including low-VOC paints, furnishings and building materials.



MEET THE EXPERT
Kelly Smeltzer
is an indoor air
specialist.



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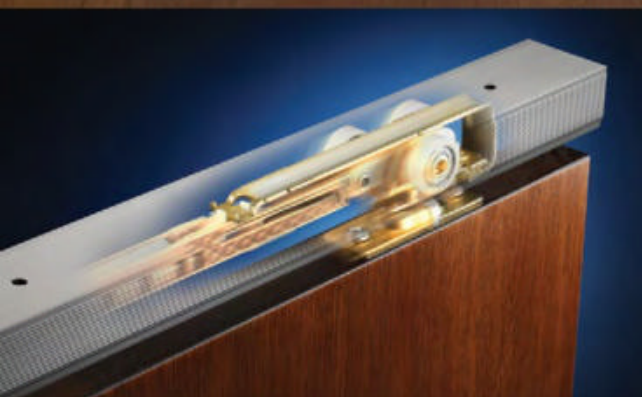
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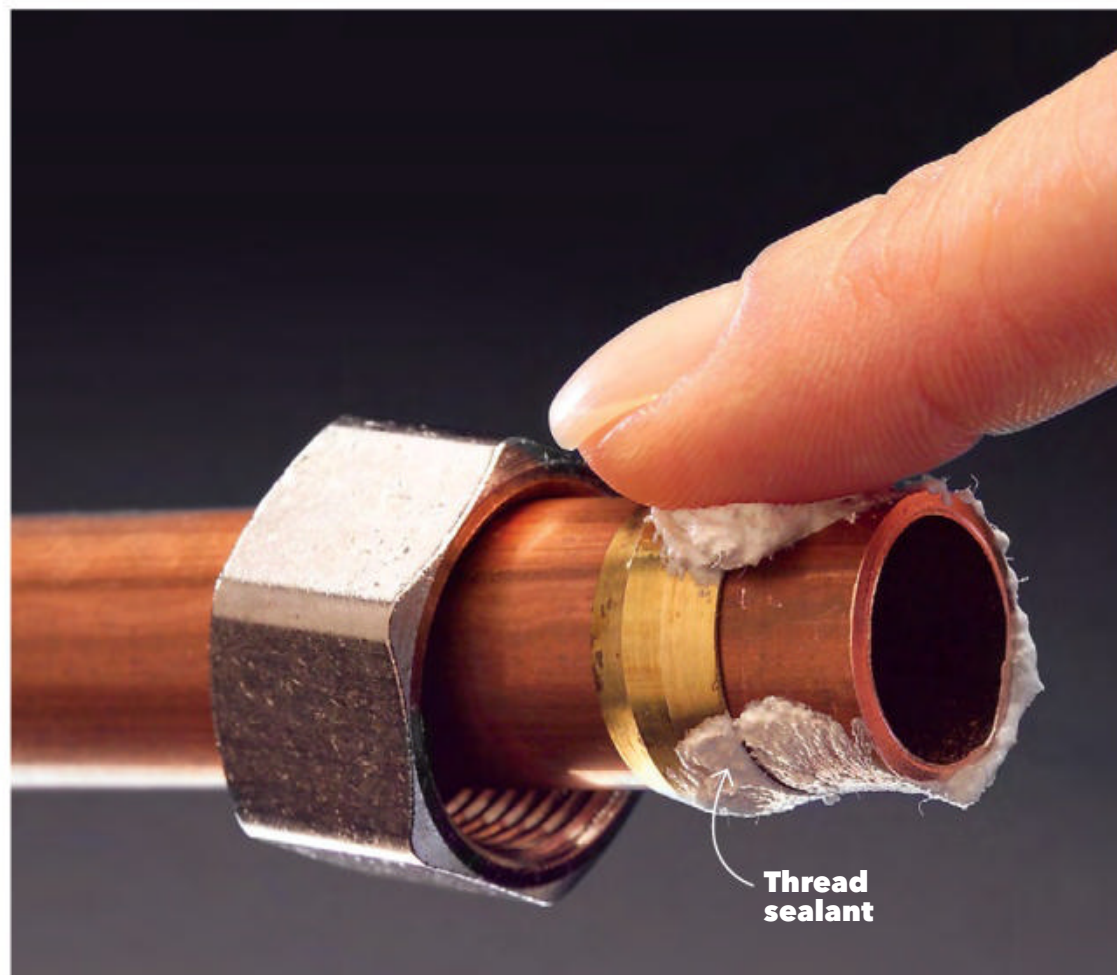
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HOME CARE



PREVENT PLUMBING LEAKS

Here's a trick I learned from a master plumber: Before tightening the nut on a compression fitting, coat the joint with thread sealant (aka "pipe dope"). It's formulated to seal threads, but it's great for almost any connection, even if the seal isn't formed by the threads. Use it on compression fittings, ground fittings and rubber seals, on both pressurized lines and drains (shown below). Because it's slippery, it allows connections to slide together correctly for a good seal. And, if you choose a type that doesn't harden, disassembly and repair years later will be easier. Some types of sealant harm plastic parts, so check the label.

TOM DVORAK





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1 CUTS WATER BILLS AND MOWING BY AS MUCH AS 2/3

Would you believe a lawn could look perfect when watered just once? In Iowa, the state's biggest Men's Garden club picked a Zoysia lawn as "top lawn – nearly perfect." Yet, this lawn had been watered only once all summer to August!

In PA, Mrs. M.R. Mitter wrote, "I've never watered it, only when I put the plugs in...Last summer we had it mowed 2 times...When everybody's lawns here are brown from drought, ours stays as green as ever." *That's how Amazoy Zoysia lawns cut water bills and mowing! Now read on!*

2 NO NEED TO DIG UP OLD GRASS

Plant Amazoy *your way* in an old lawn or new ground. Set plugs into holes in the soil checkerboard style. Plugs spread to create a lush, thick lawn, driving out weeds and unwanted growth. Easy instructions included with every order.

3 ENVIRONMENTALLY FRIENDLY

No weeding means no costly chemicals. Since Amazoy Zoysia lawns naturally resist insects, you'll save money, while helping to protect the environment. You'll never have to expose your family and pets to the risk of weed killers and pesticide poisons.

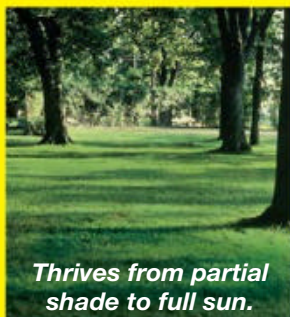
4 FOR SLOPES, PLAY AREAS, BARE SPOTS AND PARTIAL SHADE

You can't beat Amazoy Zoysia as the low-cost answer for hard-to-cover spots, play-worn areas, places that have partial shade and erosion on slopes.

Meyer Zoysia Grass was perfected by the U.S. Gov't, released in cooperation with the U.S. Golf Association as a superior grass.

5 IT STAYS GREEN IN SPITE OF HEAT AND DROUGHT

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Thrives from partial
shade to full sun.



Plant it from
plugs.

6 CHOKES OUT CRABGRASS AND WEEDS ALL SUMMER

Your established Amazoy Zoysia lawn grows so thick, it simply stops crabgrass and most summer weeds from germinating!

7 NOW 3 WAYS TO START YOUR AMAZOY ZOYSIA LAWN!

1) **Freestyle plugs** come in uncut sheets containing a maximum of 150 - 1" plugs that can be planted up to 1 ft. apart. Freestyle plugs allow you to make each plug bigger and plant further apart – less cutting and planting – you decide.

2) **New Super Plugs** come precut into individual 3"x3" plugs ready-to-plant (minimum 1 per 4 sq. ft.). They arrive in easy to handle trays of 15 Super Plugs. Save more time and get your new lawn even faster!

3) **Amazoy Approved Seed-As** The Zoysia Specialists for 60+years, we finally have a Zoysia seed available that meets our standards and homeowners expectations.

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500	+100	4	\$50.00	\$18.00	25%
750	+150	6	\$66.00	\$22.00	36%
1100	+400	10	\$95.00	\$33.00	44%
2000	+1000	20	\$165.00	\$54.00	52%

Super Plugs Precut plugs 3 inches by 3 inches READY TO PLANT Packed in trays of 15 Super Plugs. Plant minimum 1 plug per 4 sq. ft.

Super Plugs	Free Plugs	Tray	Your PRICE	+ Shipping	SAVINGS
15	—	1	\$24.95	\$12.00	—
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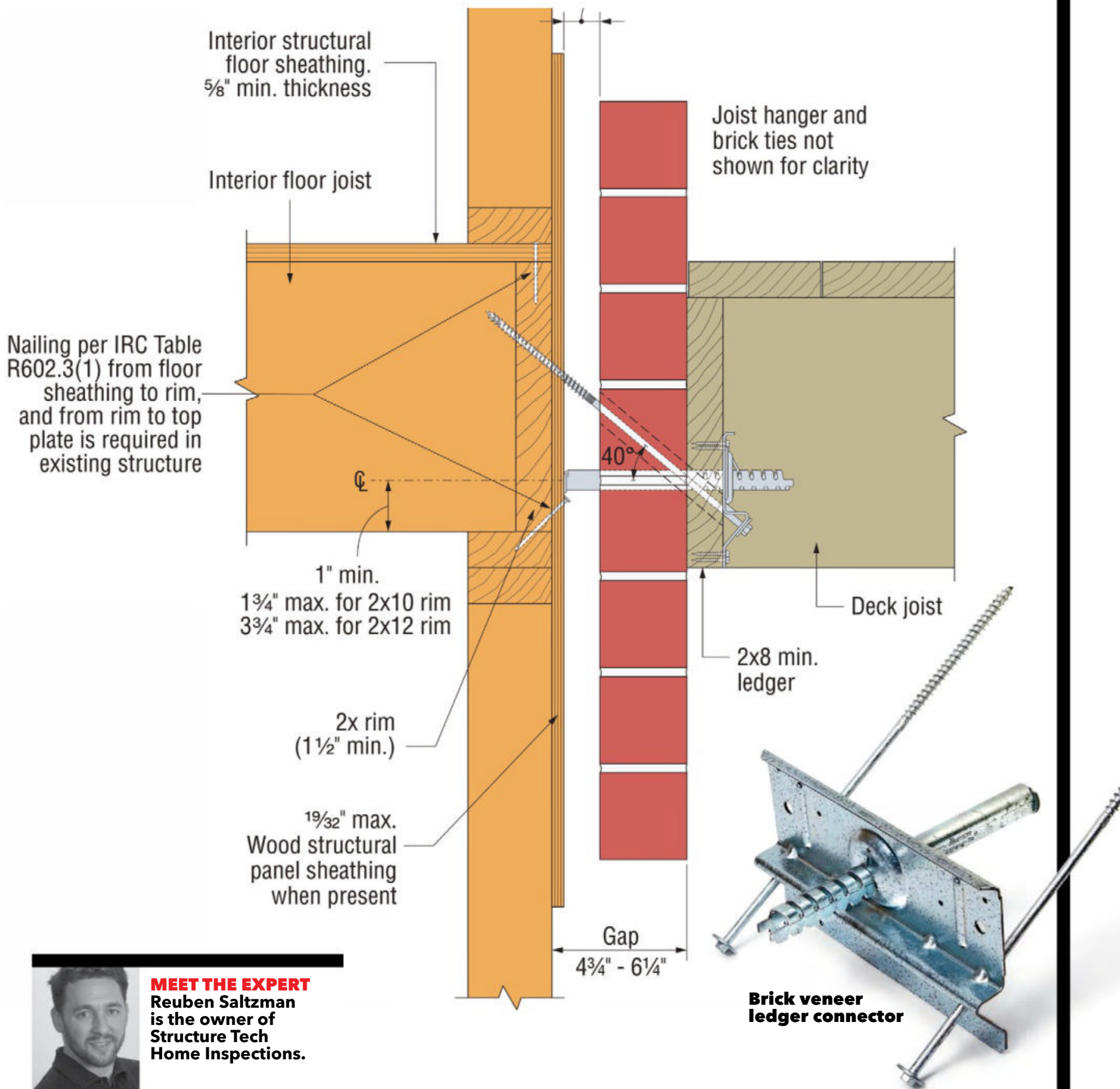
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MEET THE EXPERT
Reuben Saltzman
is the owner of
Structure Tech
Home Inspections.

Attach a deck ledger to brick, the right way

When I'm inspecting homes, I sometimes find a deck ledger attached to brick, and it's always a red flag. Chances are, it's not a solid brick wall, but instead a standard wood-frame wall with a layer of brick on the outside called "brick veneer."

Brick veneer isn't structural, so you can't attach a ledger to it. Here's why: Bricks absorb water, and as they dry, the water escapes on the back side of the bricks as

condensation. So, to allow that condensation to drain through "weep holes," there's an air gap behind the brick. Because of that gap, you can't just run lag screws through the bricks and into the house's rim joist. Doing so would suck the brick veneer in toward the house, potentially causing the veneer to crumble.

You could chisel out the bricks to attach the ledger directly to the rim joist, but that's a lot of work.

Simpson Strong-Tie offers a brick veneer ledger connector (BVLZ; \$120 for a four-pack) specifically for this situation. BVLZs work for new ledgers, or as a retrofit to correct a ledger that was attached improperly. Long lag screws driven at an angle suspend the ledger from the rim joist. An adjustable post threads through a steel plate, maintaining the gap behind the brick veneer, so there's actually no weight or force on the brick veneer.

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- David Weber, AMAC Chief Operating Officer

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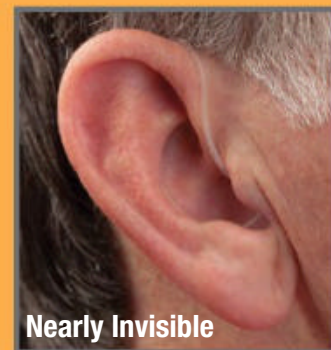
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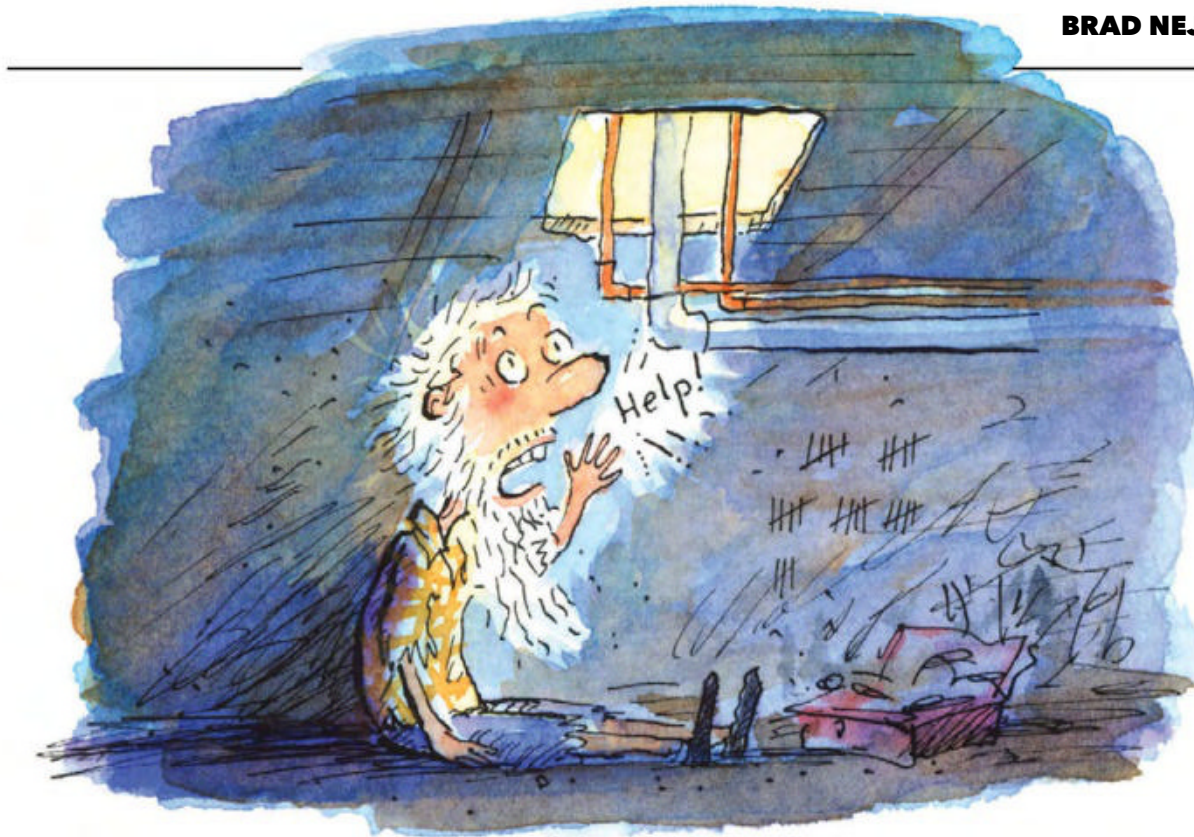


SAD TO SAY, A TOOL GIVEAWAY

One winter, my wife wanted to borrow my pickup to make the three-hour drive to her mother's house. She loves the four-wheel drive on snowy roads. I told her I wanted to take my power tools and drywall lift out of the truck bed first. But I couldn't get the frozen tailgate open, which also meant I couldn't peel back the tonneau cover to get at the tools. So I left my tools in the truck, and my wife set off on her trip.

Once she was on the road, the sun came out and nudged the temperature above freezing. It turns out I had released the latch but hadn't relatched it. So when everything thawed, the tailgate fell open and my tools slid out the back. My wife never noticed. But somewhere along the 150 miles between our house and my mother-in-law's, there's part of a drywall lift, a screw gun, a reciprocating saw and a few other hand tools.

BRAD NEJEDLY



NO WAY OUT

I was relocating the shower in a bathroom that was built over a crawl space. To gain access, I cut a hole in the subfloor and slithered down between the joists with all my materials and tools. The floor would be an easy patch since I was retiling anyway. After I spent a few hours down there soldering copper pipes and gluing ABS drain lines, the new plumbing setup was perfect. Then it dawned on me that my beautiful new plumbing job blocked my way out through the opening. I was trapped! I didn't have the heart to rip it all out, so I used my cell phone to call my son. I cooled my heels down there for an hour until he showed up and cut another hole in the floor to let me out.

JIM BIANCHINI

THE \$200.89 LIGHTBULB

One night, our old hanging porch light went dark, so my husband ran to the hardware store for a replacement bulb. He came home with a nice \$12 amber bulb guaranteed to last for years. He screwed it in, flipped the switch ...nothing. I suggested trying another bulb, but since the bulb was new, he was convinced the problem was with the 60-year-old light fixture. The following week he installed a new \$185 fixture, screwed in the \$12 lightbulb, flipped the switch...nothing. Then he ran to the store for a new (\$3) switch...still nothing. Fuming, he crawled up into the attic to see if a mouse had chewed through the wiring. While he was up there, I screwed in an 89¢ lightbulb we had lying around. Hmm—the new \$12 lightbulb had been the problem all along.

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