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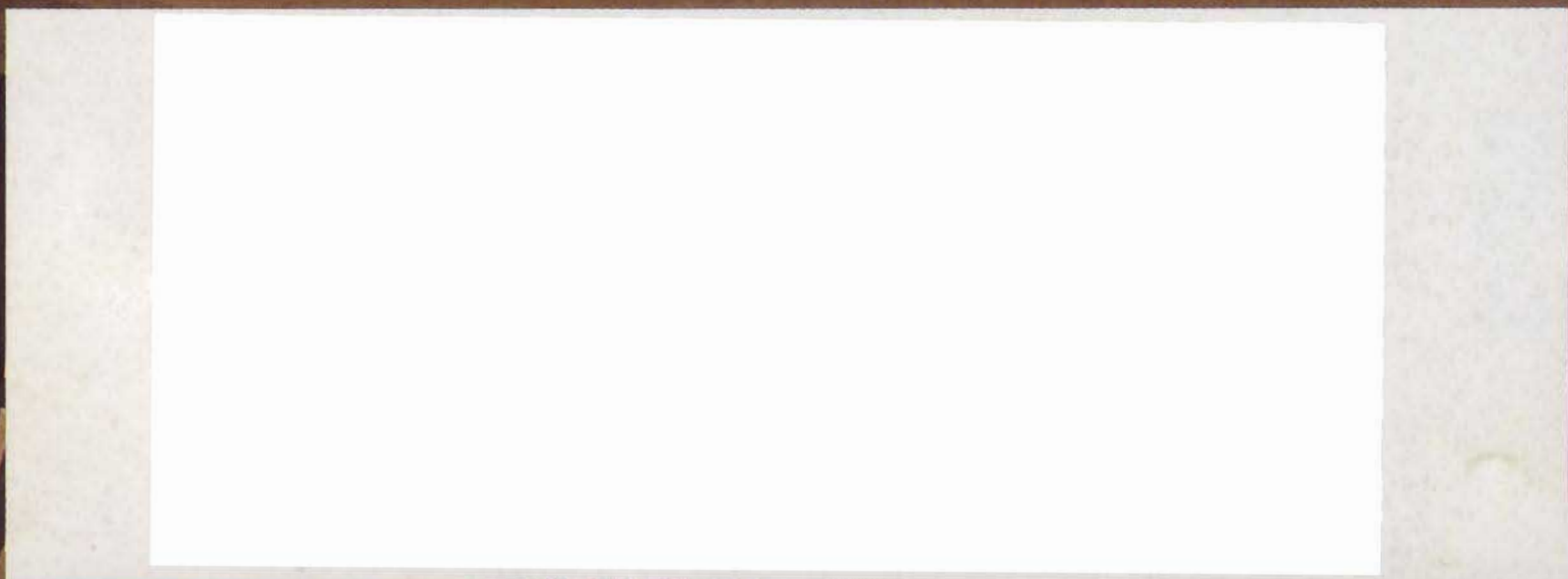
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CONTRIBUTING ILLUSTRATOR John Hartman

GRAPHIC DESIGN INTERNS Shelley Cronin, Katie Rodemyer

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SENIOR PROJECT DESIGNERS James R. Downing,
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PROJECT DESIGNERS/BUILDERS Mike Donovan, John Doyle

SHOP CRAFTSMEN Steve Curtis, Steve Johnson

ADVERTISING

ADVERTISING SALES MANAGERS George A. Clark, Mary K. Day

ADVERTISING PRODUCTION COORDINATOR Minniette Johnson

ADVERTISING COORDINATOR Kelsey Davis
(515) 875-7135

AUGUST HOME PUBLISHING

EDITORIAL DIRECTOR Terry J. Strohman

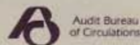
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SENIOR PHOTOGRAPHERS Crayola England, Dennis Kennedy

ASSOCIATE STYLE DIRECTOR Rebecca Cunningham

MERCHANDISING COORDINATOR Stefanie Swanson

ELECTRONIC IMAGE SPECIALIST Allan Ruhnke



WORKBENCH (ISSN 0043-8057) is published bimonthly (Feb., April, June, Aug., Oct., Dec.) by August Home Publishing Company, 2200 Grand Ave., Des Moines, IA 50312. *Workbench* is a trademark of August Home Publishing. Copyright ©2006 August Home Publishing Company. All rights reserved.

Subscription rates: Single copy, \$4.99. One-year subscription (6 issues), \$22; two-year subscription, \$33; three-year subscription, \$44. Canadian/Intl., add \$10 per year. Periodicals postage paid at Des Moines, Iowa, and at additional offices. Postmaster: Send address changes to *Workbench*, PO Box 37272, Boone, IA 50037-0272. Canadian Subscriptions: Canada Post Agreement No. 40038201. Send change of address information to: PO Box 881, Station Main, Markham, ON L3P 8M6, Canada BN 84597 5473 RT. Printed in U.S.A.

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Workbench Magazine
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email: Editor@Workbenchmag.com



KITCHENS: THEN & NOW

1958



No-drip, plastic vinyl
countertops typified
this '50s-era kitchen.

1992



As kitchens evolved,
islands made meal
prep more efficient.

2007



Today's kitchen also
serves as a family's
social center.

Kitchens have changed. Okay, so that's not exactly breaking news. But sometimes it's easy to overlook the extent of that change. Recently, however, as I was going through the *Workbench* archives, this sampling of covers reminded me of the truly dramatic evolution kitchens have undergone — both in their appearance and, more importantly, in how they function.

Our first kitchen remodel was the no-frills version shown at left. Note the dated "water-fall-edge" countertops and dark cabinets with slab-style plywood doors. The workflow of this kitchen has now become dated, too. Just like many '50s kitchens, it was designed to be largely a solitary workpiece, a one-woman show, if you will.

Fast-forward to the kitchen remodel shown at center. Dark is out; bright is in. Kitchens got larger, and many incorporated central work islands. Combine those improvements with built-in cooktops, stacking ovens, and spacious countertops, and these kitchens made preparing meals easier and more enjoyable than ever — not just for the woman of the house, but the whole family.

Today's kitchens have taken on an even broader role. They still satisfy the cooking, cleaning, and storage requirements, of course, but they've also become the place for family members to connect and friends to socialize. Add to that the fact that many kitchens act, in whole or in part, as a home office, and it's easy to see why kitchens have become the hub of today's busy homes.

To see how the kitchen featured in this issue (*right*) accommodates those assorted needs, be sure to check out the series of articles beginning on page 42.

Tim



50th Anniversary Specials!

Kitchens: Then & Now (page 2)

50-Year Cover Retrospective (WorkbenchMagazine.com)

easy weekend projects

"Paying a pro to install kitchen cabinets can cost nearly as much as the cabinets themselves. Based on that, our homeowner quickly gained confidence in his problem-solving skills."

—page 54



High-Capacity Truck Rack

Increase your truck's capacity and save \$100s over store-bought models. This truck rack looks great and hauls anything you need for work or play.

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Decorative Display Niche

Transform an ordinary room with this decorative display niche. Its curved shelf, accent lighting, and tile back create a stunning focal point.

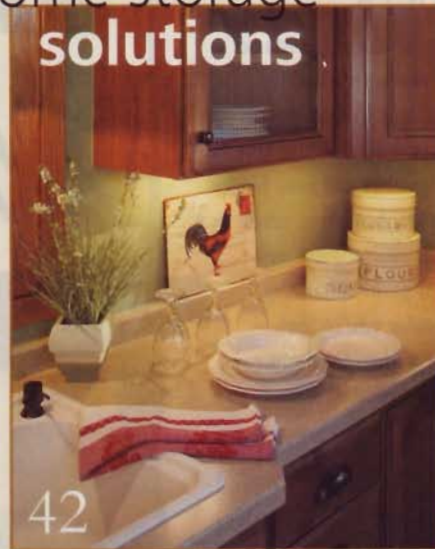
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Modern Kitchen Makeover

A modern kitchen isn't just the place you prepare meals—it's "mission control" for the family. Here are the tips, insights, and strategies for your own kitchen makeover.

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- Full-Size Patterns: Truck Rack Uprights and Display Niche Shelf
- Slide Shows: Powder Coating & Raised Stenciling
- Bonus: Raised Stenciling Examples

stylish home
makeovers



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ADD SOME GREEN TO YOUR PROPERTY WITH THESE

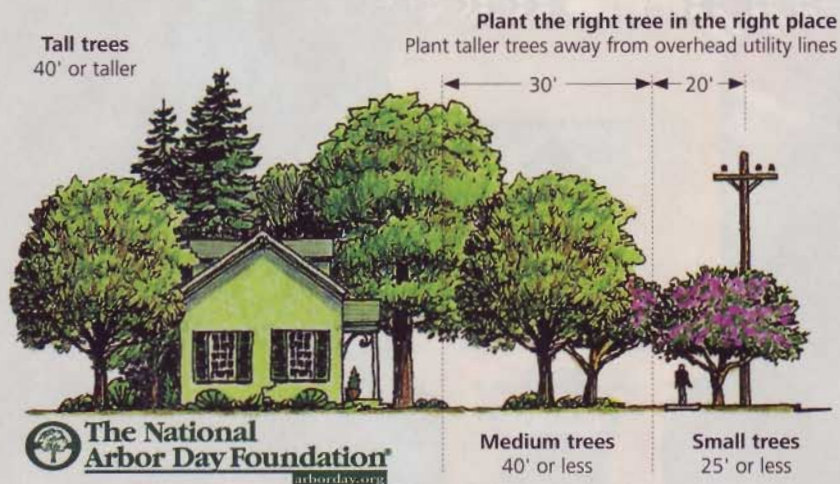
Tree Planting Tips

The National Arbor Day Foundation offers a wealth of information and educational programs to help you plant, preserve, and care for trees.

Planting a tree is one small way anyone can improve both the environment and the appearance of their yard. And we get reminded of that every spring, thanks in large part to the efforts of the National Arbor Day Foundation.

But this organization does a lot more than just encourage us to plant a tree on one day each year. It also offers a wealth of educational information and programs designed to help even the least green-thumbed find success with their tree-planting efforts. You can learn about the programs offered and access a huge amount of information just by visiting ArborDay.org.

Plant in the Right Place—One example of this valuable information is the tree-placement guide shown here.



It serves as a great reminder that those little trees you bring home will eventually grow large, and you need to take that into consideration when you plant them. Not only do these guidelines

ensure a balanced-looking landscape, they also help prevent an all-too-common tree planting error: Placing tall or broadly spreading trees too close to power lines.

COMPANIES TEAM UP TO BUILD Homes for Vets

Members of our armed forces prove their bravery every day by serving our country in combat zones around the world. But for some of these men and women, even the bravery needed on the battlefield can't compare to the mettle they'll need to return home and rebuild life after suffering amputation or paralysis.

Thankfully, an organization called Homes for Our Troops is dedicated to building homes that are customized to suit disabled veterans. The organization, with the help of its corporate partners, has worked on homes in 15 states.

Custom touches in the home are incorporated in a variety of ways depending on the needs of the veteran. Some are obvious, such as providing barrier-free entries, accessible kitchens and bathrooms, and open floor plans. Others are less obvious but equally important. For example, homes for veterans with prosthetic limbs are



Homes for Our Troops built this home in Springhill, Louisiana, and filled it with features to meet the needs of SPC Kyle Burselon, who was paralyzed while serving with the U.S. Army in Iraq.

equipped with casement windows that can be cranked open easily. One home was outfitted with a backup generator to keep the homeowner's ventilator running if a storm knocked out the home's power.

To learn more about this organization and how you can help, visit HomesForOurTroops.org or call 866-787-6677.

BENJAMIN MOORE & POTTERY BARN MAKE IT EASY TO
Pick Perfect Paint Colors

The Pottery Barn catalog is a great place to shop for home furnishings, but for many folks it does more.

That's because a large number of people look at the stylish room scenes shown on its pages to get ideas for

furnishing and decorating their own rooms. The folks at Pottery Barn are well aware of this, too, if for no other reason than the number of requests they get for the names of the paint colors used in the scenes.

That's why Pottery Barn has teamed up with Benjamin Moore to make paint information available in every catalog. With each room shown, you'll find a small swatch of paint and a listing of the Benjamin Moore paint code for that color.

If that's not enough, you can order a fan deck of the colors for that catalog online for \$2, or simply pick one up at your local Pottery Barn store.

For more help with choosing paint colors, you can visit PotteryBarn.com or BenjaminMoore.com.



TURN YOUR YARD INTO A WILDLIFE HABITAT

Wide-open expanses of lush green lawn look inviting to some people. But to birds, squirrels, and other urban wildlife, these green-carpet yards offer little in the way of habitat.

But you can make your landscape appealing to wildlife by following the guidelines of the National Wildlife Federation's Backyard Wildlife Habitat program. Over 70,000 yards, schoolgrounds, and even corporate campuses have been certified so far.

To learn more about backyard wildlife habitats, visit NWF.org/Backyard.

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CHOOSE THE RIGHT SAW TO

Miter Crown Molding

Q: I've decided to install some crown molding, so I need to buy a saw. One salesman told me I'd need a compound miter saw. Another said I could use a standard miter saw. Can you tell me which I need?

Jason Parker
Kansas City, MO

A: To install crown molding, you have to fit the pieces together at the corners. This is usually done by mitering the ends. And you can use either a standard or a compound saw. The techniques for cutting crown are different for each saw, though, so you have to understand how each one works.

Miter Saw—On a standard miter saw, the blade and motor are mounted to a table that can be rotated to the left or right. If the table is set in the middle, the blade cuts straight across the workpiece. Rotate the table, and the blade cuts the workpiece at an angle. This is a miter cut.

Compound Miter Saw—A compound miter saw works the same way. But the blade assembly can also be tilted so that instead of coming down vertically, the blade comes down at an angle. This is called a bevel cut.

Cutting Crown Molding—When you cut a miter and bevel together, this is called a compound miter. And that's the type of cut needed for cutting the ends of crown molding.



The rotating table and a pivoting head on a compound miter saw allow you to easily cut the compound miter that's necessary where molding pieces meet at a corner.

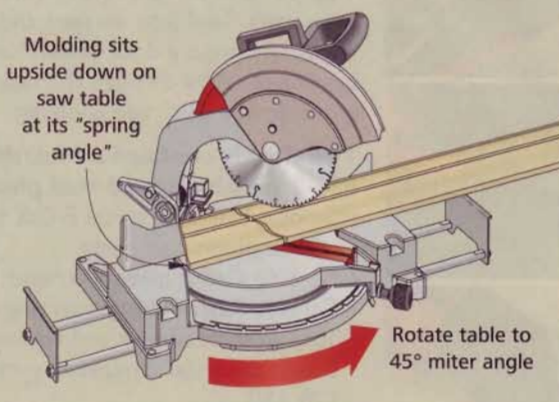
This is because crown molding sits at an angle between the wall and ceiling. This is called the "spring angle," and it's not 45°. That means you can't lay the molding flat on the miter saw table, set the miter angle at 45°, and get an accurate cut.

With a standard miter saw, the solution is to stand the molding on the saw table at its spring angle, as shown *below left*. This works very well, but it's a little fussy to set up.

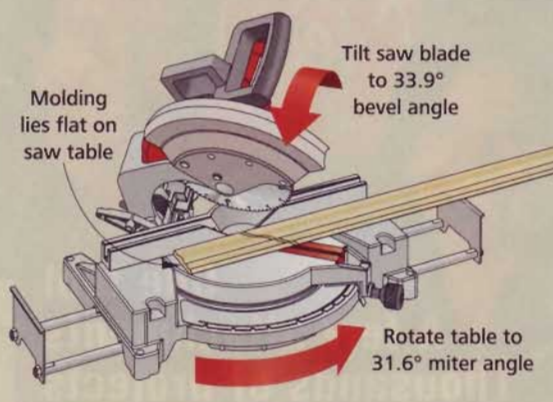
With a compound miter saw, you rotate the table to the proper miter angle, and then tilt the head to the corresponding bevel angle. Then you can lay the molding flat on the table to make the correct compound-miter cut (*below right*).

For a complete guide to installing crown molding, check out the free article at WorkbenchMagazine.com.

STANDARD MITER SAW



COMPOUND MITER SAW



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IT'S ALL IN A NAME WITH

Selecting Cabinet Doors

Q: I'm shopping for new kitchen cabinets, and I'm a little overwhelmed by all the choices. For instance, the designer told me I had three choices in door styles: full-overlay, half-overlay, and inset. What are the differences between these three styles?

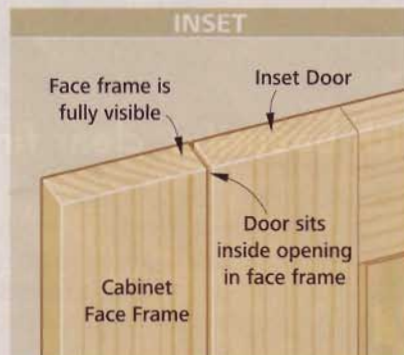
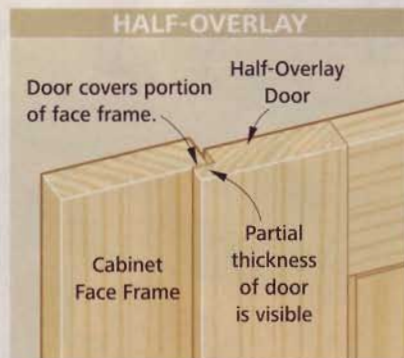
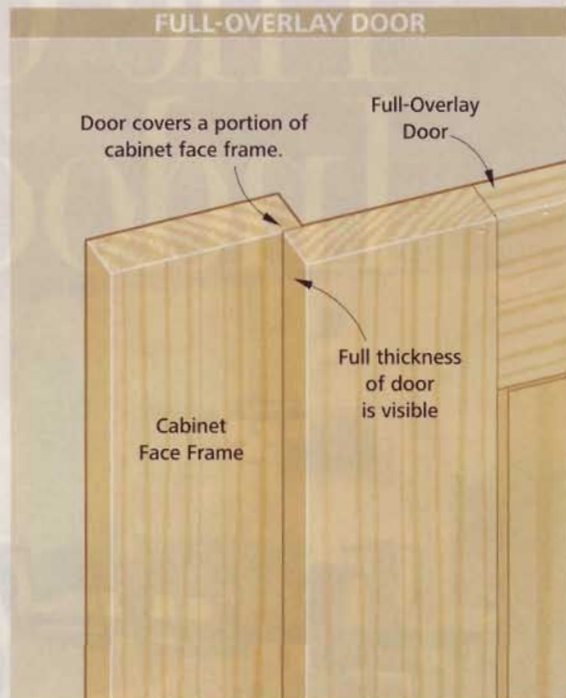
Kelly Mason
Colorado Springs, CO

A: Conventional cabinets with face frames can use any of these types of doors. And many manufacturers will offer each type on different cabinet models in their line. So the type of door is just part of what determines the appearance of the cabinet.

Full-Overlay—The most common type of cabinet door is the full-overlay. With this type, the door is actually larger than the opening in the cabinet face frame. That means the door overlaps the opening on all sides, and the full thickness of the door protrudes beyond the frame (*top right*).

Half-Overlay—Half-overlay doors are also built larger than the opening in the cabinet frame. But on this type of door, there's a rabbet cut around the perimeter of the door's inside face that forms a lip. The door still overlaps the frame opening, but because the rabbeted portion of the door fits within the opening in the frame, only a portion of the door's thickness (usually half) protrudes beyond the face frame (*middle right*).

Inset—An inset door is made just slightly smaller than the opening in the cabinet frame. As a result, the door fits into the opening in the cabinet face frame so that the face of the door is flush with the face frame (*bottom right*). Inset doors are the least common in manufactured cabinets. They're also usually priced the highest of the three types. That's because inset doors must be sized precisely to ensure a consistent, good-looking gap between the door and the face frame on all sides.



EASY-TO-INSTALL FITTINGS PUT AN END TO Banging Water Pipes

Q: When my washing machine finishes filling with water, the water pipes bang loudly. I'm concerned that this will damage the pipes or the machine. What's causing this, and is there a way to stop it?

Jason Morrison
Ann Arbor, MI

A: This is called "water hammer" or "pipe shock." It happens when the water-shutoff valves in the washing machine close rapidly. The flowing water slams into the valves, creating back pressure and a shock wave inside the pipes. As a result, the pipes rattle and bang.

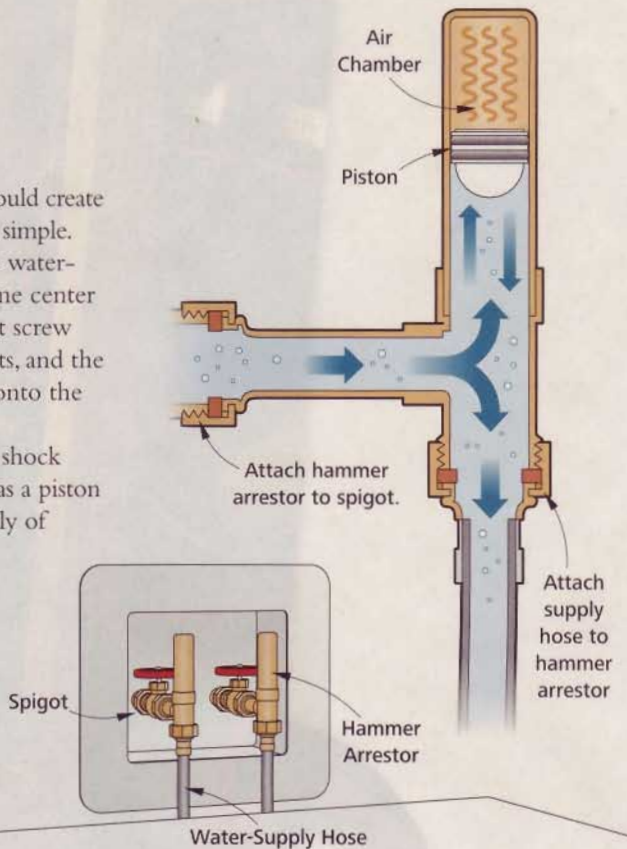
Aside from being annoying, the banging could eventually cause a pipe to crack, work loose at a joint, or get

worn from rubbing, which could create a leak. Luckily, the solution is simple.

You can buy inexpensive water-hammer arrestors at the home center or appliance store. These just screw onto the water supply spigots, and the hoses for the washer screw onto the arrestors (below).

The arrestors work like a shock absorber. The tall chamber has a piston inside that holds back a supply of air above it (Illustration).

The chamber below the piston fills up with water. When the water flow shuts down, back pressure pushes the piston up, absorbing the shock and preventing the shock wave in the pipe.



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ONE HOT WAY TO Strip Paint

Q: I'm repainting the exterior of my old house, and the trim and doors have many coats of paint. Scraping them is difficult, and paint stripper is slow and messy. Is there a better way?

Matt Conrad
Batavia, IL

A: The best tool I've found for removing paint from exterior trim is a heat gun. It's like a high-performance hair dryer that heats the paint enough to partially melt it and loosen its grip on the wood. Then you can scrape multiple layers of paint off easily with a putty knife (Photo). This makes a heat gun fast and effective, but using one requires precautions.

First, the paint on an old home often contains lead. And lead fumes are more harmful than lead dust. So you need to wear a respirator when using a heat gun, *not* just a dust mask.

Second, the gun and the paint both get quite hot. So don't touch either until they've cooled for a moment or two.

Finally, you can char the paint or wood if you overheat it. So keep a spray bottle of water close by to cool things off.



A heat gun quickly softens multiple layers of paint, allowing them to peel up easily in large strips. Just be sure to wear a respirator when removing paint that may contain lead.

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Drywall "Lift"

The preferred method for hanging drywall is to install the upper sheet first, then work down. But how do you support those heavy sheets if you're working alone?

When Matt Bohan of Lansing, Michigan, found himself without any help to hang drywall, he built a pair of adjustable "lifts" to be his second set of hands (*Photo*).

Each lift consists of two parts: an adjustable support and a mounting arm (*Assembly View*). The support holds the sheet of drywall. It also has an angled adjustment slot that fits over a carriage bolt installed in the mounting arm. When you tap the support to the side, the slot lets it move up, which raises the drywall.

The support is made up of two wedge-shaped rails and three cleats. The two side cleats connect the rails. These cleats, as well as the top cleat that fits between them, extend above the upper rail. This forms a lip that prevents the drywall from slipping off the supports (*Section View*).

Before attaching any cleats, though, set the rails on a flat surface, and space

them $\frac{3}{8}$ " apart to form the adjustment slot. Now clamp the side cleats in place, and fasten them with screws. As for the top cleat, cut it to fit, and then fasten with screws.

The mounting arm is next. It's just a scrap 2x4 with a counterbored shank hole drilled in it to house the carriage bolt. After installing the bolt, fit the adjustment slot over it, and then "snug" the parts together with a fender washer and wing nut.

To hang a sheet of drywall, start by clamping each lift to a wall stud, 48 $\frac{1}{2}$ " down from the ceiling ($\frac{1}{2}$ " more than the width of a sheet of drywall).

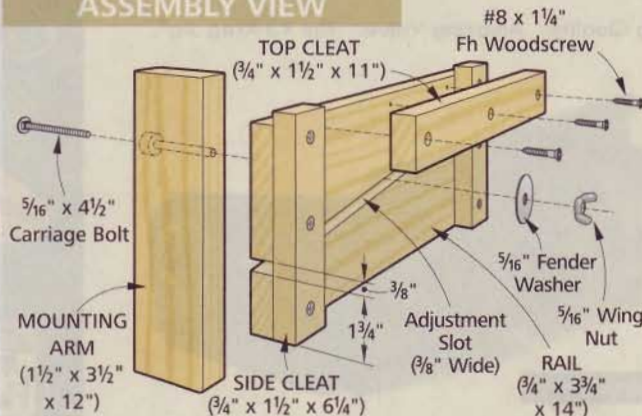


Clamping two "lifts" to the wall studs makes it easy to support a sheet of drywall. Tap the lifts sideways to raise the sheet to the ceiling, freeing your hands to drive screws.

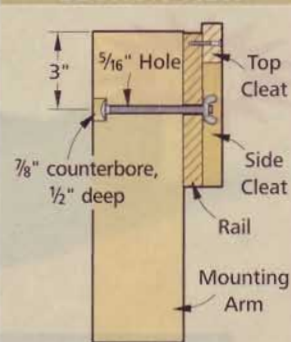
After lifting the drywall up onto the supports, back off the the wing nut on one support. Then tap the support as shown above to raise the sheet up against

the ceiling. At that point, tighten the wing nut on that support, and repeat the process for the second support. You can now drive screws to secure the sheet.

ASSEMBLY VIEW



SECTION VIEW



BEST TIP WINNER!

For this issue's winning tip, Matt Bohan wins a new Ridgid XLi 24-volt Lithium-ion Hammer Drill Kit in a soft-sided contractor's bag — a \$300 value!

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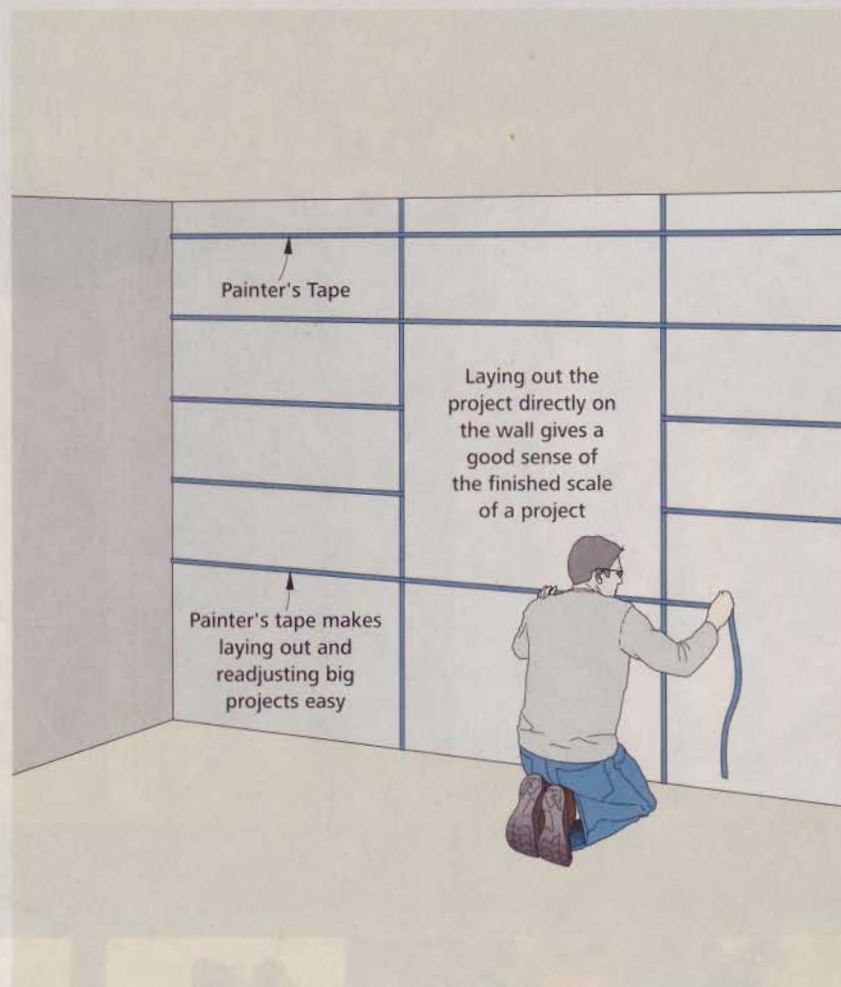
VISUALIZE DESIGN WITH A

Simple Tape Template

To help visualize how his built-in entertainment center would look in its designated space, Bob Kelland of St John's, Newfoundland, Canada, laid out the project directly on the wall using painter's masking tape (*Illustration*). Each strip of tape represented a shelf, divider, cabinet top, or run of molding.

Bob touts this technique as a great way to "see" the project before you build it to get a realistic sense of scale and to help estimate the materials required to build it.

And, if after examining the "template" you don't care for the design, simply reposition the tape to create a plan that better suits your needs. When you're satisfied with the design, transfer the details to a paper plan that you can build from while in the shop.



Foam Carving

Dennis Orchard of Milton, Vermont, found that cutting upholstery foam was more challenging than it seems. He tried various knives and saws, but all left rough edges that were often visible even after covering the foam with fabric.

While carving a holiday turkey, however, it occurred to Dennis that his electric carving knife would be just the ticket to make quick, clean cuts in the foam.



FURNITURE FLOSS

Karen Fowler of Culver, Oregon, makes a hobby of repairing old furniture. One of the primary challenges she faces in her pastime is re-gluing veneer that is separating from its substrate.

Getting enough glue between the loose veneer and the substrate is often difficult, and she has broken off enough pieces of brittle veneer to know that lifting the thin material to make space is rarely the answer.

Karen's solution is to use dental floss to drag glue into the area being repaired. She first dips the floss into a puddle of glue, and then uses a seesawing motion to spread the glue between the veneer and substrate.

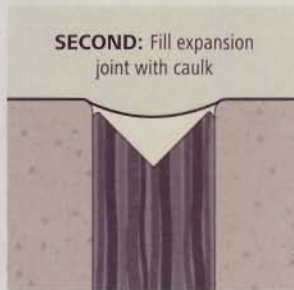
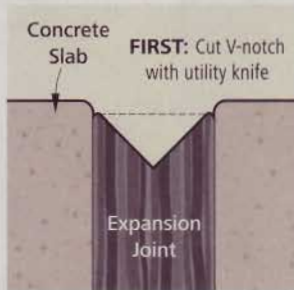


Aside from cleaning between teeth, dental floss is also a perfect way to spread glue between loose veneer and a substrate when making repairs.

AVOID "UPHEAVAL" BY CAULKING Driveway Joints

Heaving concrete — or concrete that seems to rise up out of the ground every winter — is a common problem in colder climates. It's often caused by water underneath the concrete freezing and pushing upward on the concrete slab.

To avoid this, Earl Lamb of Brainerd, Minnesota, caulks expansion joints to make them waterproof. He uses a self-leveling caulk like Vulkem 245. To get enough caulk into the joint, first cut a V-shaped wedge into the expansion material using a sharp utility knife.



PLANE-TO-FIT RIGID FOAM

Dale Sims of Leesburg, Virginia, found that the best way to fine-tune a piece of rigid foam insulation to fit into a stud cavity was to use his hand-held power planer.

The planer leaves a clean edge on the foam (*Inset Photo*) and allows you to make finer adjustments than you could otherwise. Be prepared to clean up a lot of foam shavings, though.

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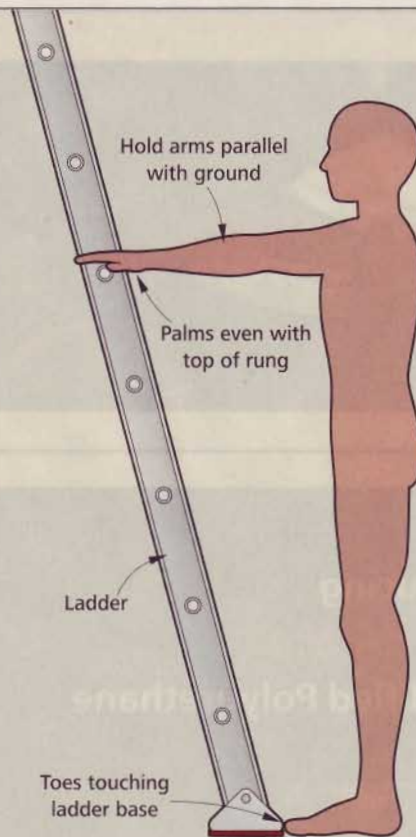
Rebate offer good on purchases made Jan. 1–Apr. 30, 2007. Rebate cannot be combined with any other offer from manufacturer.



TRIANGULATE FOR A SAFE Ladder Angle

Marcus Clewett of Tempe, Arizona, spends a lot of time going up and down a ladder while working on his home. So he knows that properly setting a ladder up can be the difference between an uneventful climb or a nasty fall.

One of the most critical elements of ladder safety is setting the ladder at the proper angle. Many ladders have alignment guides printed on the side to help you position the ladder. But if the guide is missing or obscured, you can always check the angle by placing your toes against the ladder rails and stretching out your arms, so they are parallel to the ground (*Illustration*). If your palms can rest on top of a rung, the ladder is at a safe angle.



BRUSH SAVER

Have you ever noticed how paint tends to wick up the bristles and clog near the ferrule when using a paint brush for a long period of time? Stanley Briggs, of Vancouver, Washington, did. And after having to throw away several brushes prematurely because cleaning that paint out of the bristles was nearly impossible, he discovered that simply by dipping a brush into the appropriate solvent *before* painting (water for latex paint, mineral spirits for oil-based), it made cleanup much easier and extended the life of his brushes.



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PERFECT-FITTING TRIM WITH Miter Saw Blade Stop

While installing new trim throughout his house, Tom Ericson of Denver, Colorado, found that he often had to trim a tiny amount off the length of a workpiece to make it fit perfectly.

After several frustrating occurrences of cutting off just a bit too much with his miter saw, he found that the best way to “sneak up” on the cut was to use the saw blade itself as a “stop” to position the workpiece.

With the cutting head in the “down” position and the saw not running, butt the end of the workpiece against the *body* of the blade (not the teeth), as in *Fig. 1*. Then hold the piece in position, and raise the blade. Now power up the saw and make the cut (*Fig. 2*) to remove just a sliver of material.

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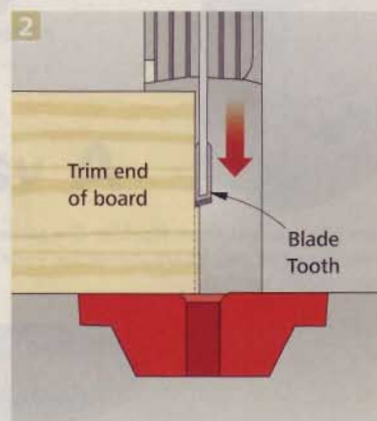
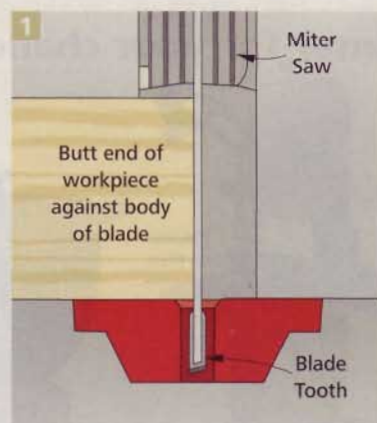
ZAR ULTRA Max comes in quart and gallon sizes. It is available in gloss, semi-gloss and satin sheens.

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GET THE MOST FROM YOUR

Water Heater

Ensure an adequate supply of hot water and make your water heater more efficient by cleaning it regularly. The process is quick and simple.

problem: Your water heater, which used to put out enough hot water to handle a couple of long showers, a load of laundry, and more, now just can't keep up with demand. But the water heater isn't that old, and shouldn't need to be replaced.

solution: There's usually nothing wrong with a water heater that no longer keeps up. It just needs to be cleaned to get rid of sediment that builds up in the tank. This sediment reduces capacity and makes the water heater less efficient. To see why, you first need to understand how a water heater works.

A water heater is really just a big tank in an insulated shell. A burner (in a gas-fired heater) warms the water to a specified temperature (Illustration).

Because the water sits in the tank until needed,

minerals and other solids in the water have ample time to settle and collect at the bottom of the tank. As this sediment builds up, it reduces tank capacity.

The sediment also creates a barrier between the water in the tank and the burner below. That means the burner has to run longer to heat the water, which has a big impact on utility bills.

Getting rid of the sediment is easy, though. Every six months, you simply need to drain off the water and sediment (Photo). The procedures are detailed in the Box at left.

If there's no floor drain near the water heater, you can simply use a bucket, or hook up a hose to the valve and direct it to a drain. Either way, just be careful. The water will be very hot.

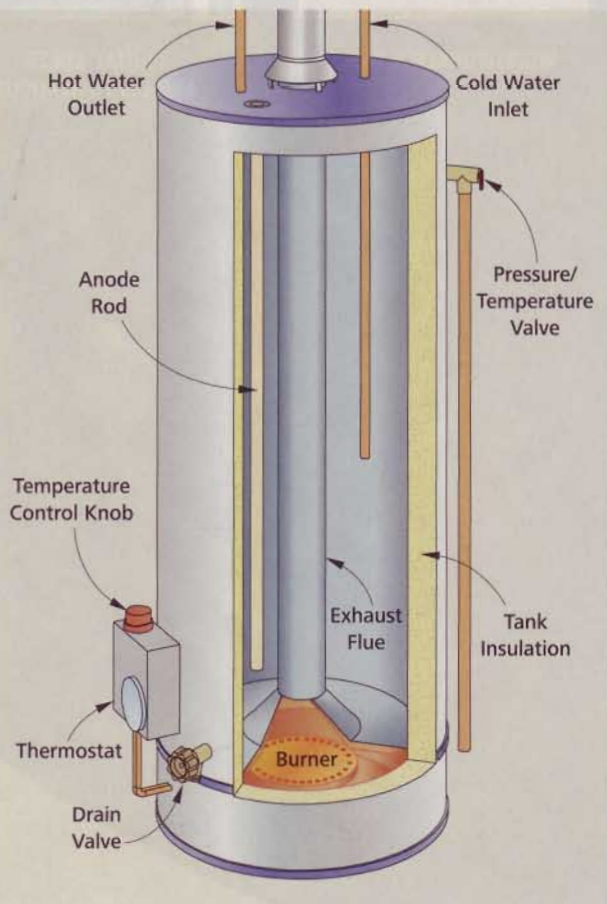
By the way, the drain valve on most water heaters is plastic, and it can crack if you overtighten it. But this is easy to get around. Just drain the tank completely one time and install a quality valve like the one shown in the Photo.



To keep your water heater running efficiently, drain sediment from the tank regularly. Drain the tank until you've removed about 5 gallons or any milky color disappears.

Draining the Tank

- ✓ Turn thermostat to "pilot"
- ✓ Close water supply valve
- ✓ Open the hot water handle on a faucet
- ✓ Drain tank until water runs clear, then close drain valve
- ✓ Close the open faucet
- ✓ Turn the water supply on
- ✓ Go back to faucet and run hot water until all air is purged
- ✓ Reset thermostat on heater



MAKE A PROPER PATCH FOR A SEAMLESS Drywall Repair

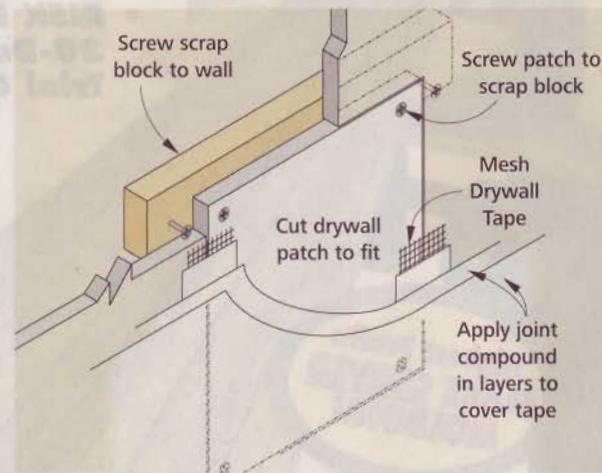
problem: You just found out two things the hard way: Door stops are important, and a doorknob can punch a hole right through drywall with surprising ease. Now you need to patch that hole, so it won't be noticeable.

solution: A doorknob can punch a remarkably clean-looking hole, but chances are the surrounding drywall will be cracked and weakened.

So the first thing to do is cut out the area using a drywall saw to make a 6"-square opening. This should remove the damaged drywall. Plus, it's much easier to cut a square patch than a round one.

Next, fit a couple of scraps into the opening, and drive screws through the drywall into the scraps to secure them so they span the opening (*Illustration*). Now cut a piece of drywall to fit, and then screw it to the scraps.

Now you can tape and fill the seams using the tips on pages 80 and 81. Spray on a bit of texture, and you're ready to paint.



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A FEW SIMPLE FIXES ENSURE A Properly Tuned Door

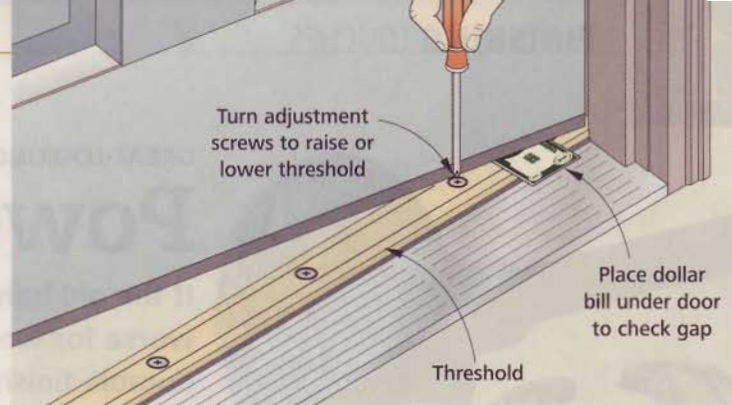
problem: *There's a gap under your exterior door that allows so much air through that you can feel it anytime you're close by. And because the door sags and drags, the air is about the only thing that gets through the door easily. You need to tune up the door, but there aren't any obvious adjustments.*

solution: The space under the door is a notorious spot for air infiltration. Thankfully, many doors have an adjustable threshold for achieving a tight seal (*Illustration*). But first you need to tighten the door hinges.

Start by making sure the screws that attach the hinges to the door are tight. Then check the screws that attach

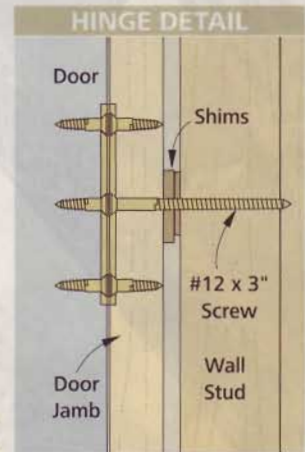
the hinges to the door jamb. At least one screw in each hinge should be a long one that passes through the jamb and into the wall stud (*Hinge Detail*). If none is, replace one of the existing screws in each hinge with a #12 x 3" screw.

Now you can adjust the threshold. To do this, lay a couple of dollar bills on the threshold, and then



close the door. You should be able to pull the bills out with moderate resistance. If they slide out easily, turn the screws in the face of the threshold to raise it. You may have to repeat this several times to get the right fit.

To make an entry door secure and work smoothly, install one extra-long screw in each hinge.



Auriou Rasps Feel the Difference

Hand forged in France, Auriou rasps have hand-stitched teeth in irregular patterns. Each hardened tooth cuts its own path, removing wood evenly, efficiently, and without scratches – a key distinction from machine-cut rasps that have a consistent tooth pattern that invariably leaves grooves as it wears down the same spot over and over. The half-round rasps have cambered sides to prevent digging in. Right- and left-handed models have slightly biased teeth to cut in line with the arm's natural stroke. Round rasps give precise control for working into tight radiuses, and turners find them ideal for shaping spirals. Left-handed models available.

Modeller's Rasps

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- B. 62W30.12 175mm (7"), grain 13 \$71.50

Cabinetmaker's Rasps

- C. 62W30.14 200mm (8"), grain 11 \$76.50
- D. 62W30.18 250mm (10"), grain 9 \$81.50
- E. 62W30.20 300mm (12"), grain 6 \$87.50

Round Rasps

- F. 62W30.03 250mm (10"), grain 9 \$71.50
- G. 62W30.02 200mm (8"), grain 11 \$61.00
- H. 62W30.01 150mm (6"), grain 15 \$57.50

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GREAT-LOOKING, DURABLE FINISHES WITH A HOME

Powder Coater

If the old hardware around your home is looking a little worse for wear, don't replace it. Instead, revive it with a durable finishing technique known as powder coating.

When it comes to dressing up hinges, handles, and other hardware around the home, paint is often the choice. But painting metal is problematic. First off, it's tough to get a consistently smooth finish. Paint also has a tendency to run and drip, and it isn't very durable. Now there's a better alternative to paint—powder coating.

Just as it sounds, powder coating is a process that consists of spraying a colored powder onto metal and then baking it to a durable finish.

What makes it work is a small electrical charge that gets applied to the metal, so that the powder sticks like static cling. Heat from an oven causes the powder to "melt." (This can be a stan-

dard oven or an inexpensive toaster oven—just don't plan on using it for food.) The result is consistent, even color and a finish that's more chip- and fade-resistant than paint.

Powder-coating systems used to be quite expensive, but recent advances have allowed DIYers to create their own coatings using an inexpensive powder-coating tool from Craftsman (Photo, below). The powders that can be used with this tool are available in many different colors, textures, and sheens (Sidebar, below right). Craftsman offers 20 different colors on their website (Craftsman.com), and there are dozens of powders available from other suppliers (such as CaswellPlating.com).

Clean It—Before the powder can be applied, it's critical that you remove any rust, dirt, or pre-applied

HOME POWDER-COATING KIT



Powder coating at home is possible thanks to this \$190 kit from Craftsman, plus a special colored powder.

To give this antique door hardware a classic look, we applied a Vanilla powder coating. Note the special green tape, which keeps operating parts from fusing together.

finish on the hardware. The best way to do that is to soak the piece in lacquer thinner overnight. Then scrub it with a wire bristle brush to get down to bare metal (Fig. 1).

Charge It—To get the powder to cling to the hardware, you need to apply an electrical charge to it. With the Craftsman system, this is accomplished with a ground wire that runs from the power pack of the tool and gets clipped to the hardware.

If you want to coat multiple parts, just connect the ground wire to a metal tray, thereby charging the entire surface. Then set all the items to be coated on it. It's also a good idea to cover the tray with aluminum foil, so you can reuse it. And this way, the tray won't get powder-coated, which could interfere with the electrical charge.

Be aware that once you coat the parts, the powder will get knocked off if you touch them, so handle the tray carefully. If you do touch a part, though, just recoat the area you touched.

If you have any parts that you want to leave uncoated (such as on the door hardware on page 30), you'll need to wrap them with a special high-temperature masking tape. This tape is available from any powder-coating supplier.

Coat It—To apply the powder coating, start by loading the removable cartridge of the tool with powder (Fig. 2). Then reconnect the cartridge, and press the trigger to release a



1] To get the powder to adhere properly, scrub all the finish off the hardware using lacquer thinner and a wire brush.



2] Remove the cartridge from the tool, and load it with the colored powder. Any powder that's not used is reusable.




3] After charging the tray, spray the powder across the pieces until they're completely covered.



4] Bake the hardware at the desired time and temperature to get the powder to melt and fuse to the metal.

fine mist onto the hardware (Fig. 3). Keep spraying until the hardware is completely coated, and any additional powder sheds off the surface.

Bake It—To cure the powder, set the oven (usually at around 400°

for 20 to 30 minutes), and carefully place the tray inside. As the powder "bakes," you'll see it gradually melt to produce a smooth coating (Fig. 4). After baking, just allow the hardware to cool, and it's ready to use. 

COLORFUL POWDER-COATING OPTIONS



A number of classic and antique colors and sheens are available, such as this glossy Pearlescent White.



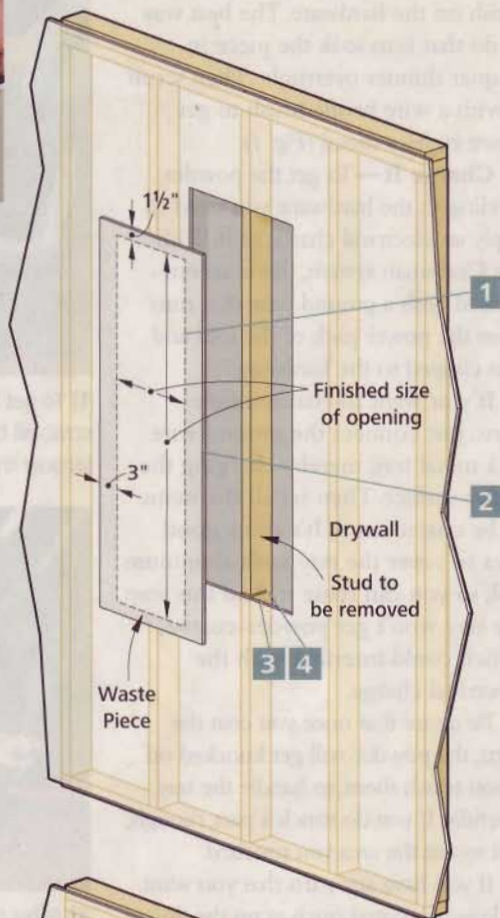
A Transparent Red finish allows a hint of the brass beneath to show through the vivid color.



Gold Vein powder produces a crackled, textured finish with hints of gold fleck mixed with glossy black.



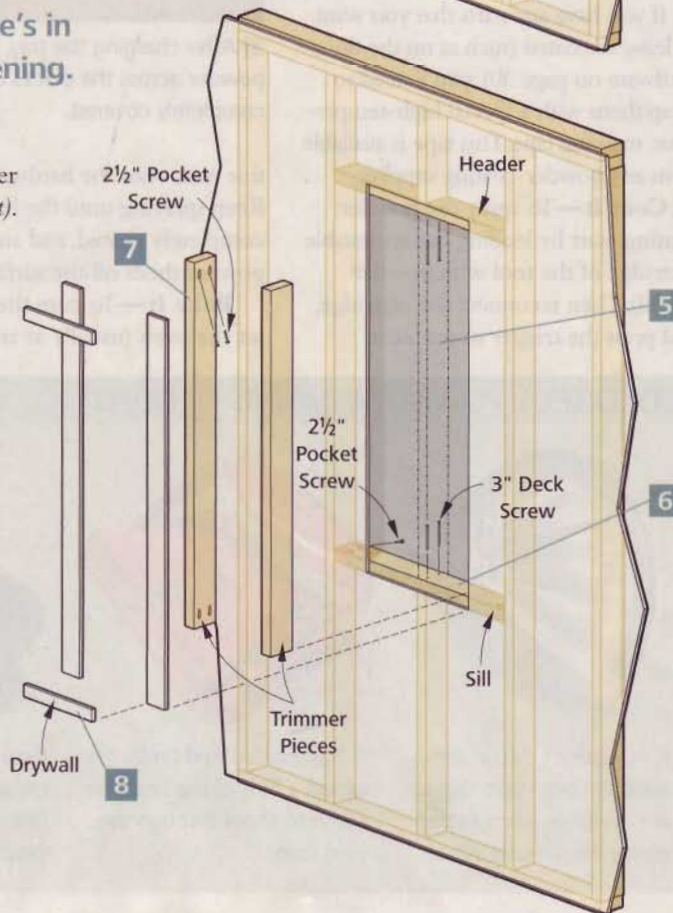
Another eye-catching finish is Sparkling Granny Smith. Its bold green color is enhanced with silver flecks.


NO-FAIL APPROACH TO

Removing a Wall Stud

Don't let wall studs dictate where a built-in like the display niche (pg. 66) goes. If one's in the way, remove it and reinforce the opening.

- 1] Lay out the location of the niche on the wall.
- 2] Cut an opening in the drywall 3" taller and 6" wider than the niche using a utility knife (Illustration, top right).
- 3] Set your circular saw for a full-depth cut. Cut carefully across the stud near the top and bottom of the opening (Photo, above).
- 4] Use a hand saw to complete each cut (Inset).
- 5] Carefully pull the stud free. **Note:** This may pull some screws through the drywall on the backside of the stud. You'll need to patch these holes with joint compound.
- 6] Cut 2x4 "header" and "sill" pieces to fit between the studs adjacent to the opening. Screw them to the two exposed ends of the cut-off stud, and to the adjacent studs with pocket screws (Illustration, bottom right).
- 7] Cut two "trimmer" pieces to fit between the header and sill. Screw them in place with pocket screws on either side of where the display niche will be mounted.
- 8] Install the display niche (page 68). Then patch in drywall, and mud and tape the drywall joints to create a smooth, flat surface around the niche. (For more on this, see page 80.)





PAINT POWER

This pear motif is just one example of how you can add intricate details to any paintable surface with a technique called raised stenciling. All it takes is some paint, glaze, stencils, and a special product called Wood Icing. Here, optional gilt cream (*shown above*) is used to highlight the design. To learn more, turn to page 38.



add easy
elegance

with RAISED Stenciling

Paint and glaze are a great way to add color to an otherwise ordinary piece of furniture. This sideboard is a perfect example. But you also can take it a step further and add a simple motif like this pear design.

This is possible with a unique faux-finishing product known as Wood Icing, a creamy, water-based product with the consistency (and look) of peanut butter. By applying the icing over stencils that are attached to the piece, you can create the decorative details you see here.

This pear design requires three stencils: a grid stencil to create a back-drop, and two overlapping stencils for the pears. (See the *Buyer's Guide* on page 40 for sources of stencils and supplies you'll need for this and other Wood Icing projects.)

Paint Base Coat—The first step of this, or any Wood Icing project, is to apply a base coat of paint. We sanded the sideboard first with 220-grit sandpaper and then brushed on a coat of the white base paint that's included with the Wood Icing kit.

Optional Crackle—After the paint dries, you may choose to add a "fissure medium," or crackle medium, as it's sometimes called (Fig. 1). (This product is also included with the Wood Icing kit.) It causes the icing to develop small cracks and fissures, producing an antique look.

Background Grid—Once the crackle skins over (in about an hour),

it's time to use the grid stencil to create the background design. To do that, first spread on the Wood Icing (Fig. 2). Now lightly mist the icing with a spray bottle of water to prevent the grid from sticking. Next, press the

grid into the wet icing (Fig. 3), and carefully lift it off to leave the grid pattern behind (Fig. 4). Let the icing dry overnight, and then sand it lightly with a 220-grit sanding block to remove any imperfections.

start with a base, add a grid



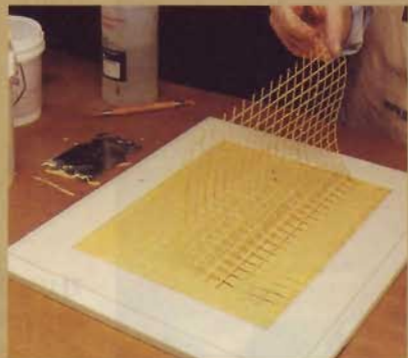
1] If you want a "crackled" appearance, roll "fissure medium" onto the door panel. This will cause cracks to form in the icing.



2] Use a putty knife to apply a thin ($\frac{1}{8}$ ") layer of Wood Icing. You can leave some of the ridges to add interest.



3] To imprint the background design, use the putty knife to press the grid stencil into the icing.



4] Carefully peel up the stencil, and remove it from the door panel. Let the icing dry overnight before proceeding.

make the pear motif

With the grid pattern complete, you can get started on the pear motif. It's created with two overlapping stencils that come together in a set. The first stencil creates the pears, stem, and leaves (*Photo, left*), and the second adds overlapping leaves (*Photo, below*).

Mirror Images—One other important note about this particular project: We wanted the motifs on the doors to be mirror images. That's easily accomplished by flipping the stencils from one door to the next. Of course, you'll need to make sure the stencils are oriented correctly to start off. For this project, that meant positioning the pear stems so they pointed in toward the sideboard's drawers (*Photo, page 38*).

Attach the First Stencil—With that in mind, go ahead and set the first stencil on one of the doors. We

positioned the stencil so the pear design was centered on the door panel and then taped it in place. The tape prevents the stencil from shifting around, which would ruin the design.

It's also important to transfer the registration marks (found on most multi-layer stencils) to the door. That way, you'll be able to locate the second stencil accurately.

Now you're ready to apply the Wood Icing. As you can see in *Fig. 5*, this is just like icing a cake. Use a knife to spread the icing across the stencil, filling in the cutouts. Here again, don't worry about getting it absolutely smooth. Ridges and ripples add texture to the design.

Once that's done, carefully remove the stencil (*Fig. 6*). You may notice a few rough edges around the design, but don't worry. Just let the icing dry overnight, and then use 220-grit sandpaper to "knock down" the rough edges.

Second Stencil—Now it's just a matter of positioning the second stencil on the door and adding more Wood Icing to complete the motif (*Fig. 7*).

Second Door—When you get ready to repeat the process on the second door, remember to flip the stencils. And don't forget to clean the icing off the stencils before you use them again.

5] Use a knife to spread a thin layer of icing over the stencil, just like icing a cake. As you work your way across, leave some of the ridges and ripples to add depth and texture.

BUYER'S GUIDE

Wood Icing Medium Kit (includes base paint, fissure medium, and icing), and Plastic Grid Stencil
WoodIcing.com
 866-966-3423

"Nature's Harvest" Pear Set and "Chantilly" Gilt Cream
RoyalDesignStudio.com
 619-377-3559

White AquaGlaze and Earth Green AquaColor
FauxStore.com
 800-270-8871

Other Tools: 4" putty knife, 4" rollers, brushes, sandpaper



6] Once you have applied the icing, peel up the stencil. Then let the icing dry.



7] Use the registration marks on the stencils to ensure alignment when positioning the second stencil. Then apply the icing and peel up the stencil just as before.


highlight with color

A few final touches—paint, glaze, and, if you want, some gilt cream—are all that's needed to complete your raised-stencil masterpiece.

Start with Paint—We started by painting the door panels with the same base color paint used on the sideboard. We did this so the glaze, which is semi-transparent, would have the same “old-world” effect across the entire piece of furniture. Start by brushing the door (Fig. 8), and then switch to a small roller to smooth the paint before applying the glaze.

Add Glaze—Now you're ready to add the glaze. We used the two AquaGlaze products shown in the *Buyer's Guide* on page 40. After mixing them together in the proper ratio, brush the glaze onto the door (Fig. 9). Then switch to cheesecloth to remove some of the glaze, as shown in Figs. 10 & 11.

Gilt Cream—One final detail you may want to try is to highlight the edges of the pears with metallic gilt cream (Photo, page 37). This adds a hint of gold color, and it creates the illusion of shadows around the edges of the pears, adding further depth to the design.

To apply the gilt cream, start by putting a small dab of it on your finger. Then just rub it along the edges of the pears and leaves. 



8] With the design complete, coat it with the same paint used for the base coat. A brush helps fill small cracks and crevices.



9] Mix 4 parts white glaze with 1 part Earth Green colorant, and use a brush to dab the mixture over the entire door.



10] Wad up a ball of cheesecloth, and dab the glaze lightly to remove brush strokes and create a mottled appearance.



11] To make the pears stand out, use the cheesecloth to dab a little more glaze from their surface.

EXPLORE THE OPTIONS

By experimenting with different stencils, paints, and glazes, you can use this technique to create all kinds of interesting designs. The motifs on these panels, as well as others on our website, show just a few of the endless possibilities.

As far as the stencils go, any standard paint stencils will work. To produce thicker texture, simply use thicker stencils, which are specially made for this technique.



better design



better KITCHEN

Old appliances, dated cabinets, and crumbling countertops may be *why* you've chosen to remodel your kitchen, but *how* you remodel your kitchen is a question of design.

To truly remodel your kitchen is to reshape the space to conform to the way you live. And to do that, you will need a plan.





"The key to creating a kitchen that fits everyone in the household is flexibility. It requires meeting the needs of the entire family while making the room easy on the eyes."

A HOMEOWNER'S GUIDE TO

kitchen DESIGNERS



Elaborate, formal meals are occasionally prepared here. Modest meals are regularly prepared *and* eaten here. Friends gather here for coffee and conversation. This is where the mail gets sorted, the phone gets answered, and the bills get paid.

And if you know where to look, you can find Band-Aids, pain relievers, and other of life's remedies inside one of the cabinets. It is the figurative and literal center of this home. It is the kitchen. This kitchen belongs to Scott and Nancy Schroeder, of Adel, Iowa, and it's newly remodeled.

Consult a Professional — A kitchen that meets the unique needs of a busy family as well as this one does is no accident. It's the product of good design. And good design is, more often than not, the product of a good designer.

The Schroeders connected with kitchen designer Marcine Cameron through Consolidated Kitchens & Fireplaces in Urbandale, Iowa. During a series of meetings, both in the home and at the company's showroom, Marcine helped the couple prioritize their wish list and identify which wishes would be fulfilled, which would require some compromise, and which just couldn't be accomplished within the scale and budget of this project.

As you might expect, many of the Schroeders' wishes were easy to fulfill, like a casual dining area, a way to

display their prized dinnerware, and a family organizational center. Other, more complicated items, such as removing the bulkheads and creating a doorway between the kitchen and front room, required the help of a contractor.

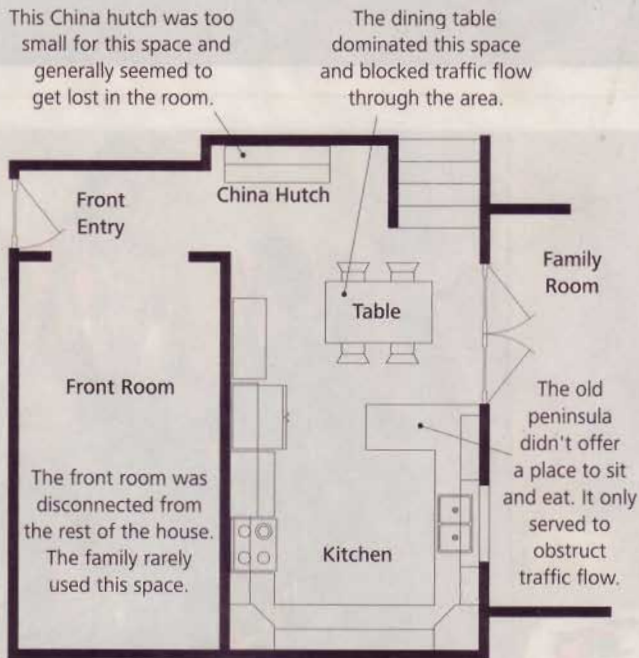
Break the Rules — Of course, granting wishes is just one job of a designer. Another important role is to find the balance between conventional wisdom and the wants and needs of the homeowner.

A great example of that is the location of the sink in this kitchen—it remains unchanged from the old kitchen. This despite the fact that it violates the "work triangle" rule of kitchen design (which dictates the locations and distances between the sink, range, and refrigerator) and ignores the tradition of locating the sink in front of a window.

However, it was important to Nancy to leave the sink where it was to maintain a visual connection to the family room. While standing at the sink, Nancy can still interact with Scott at his desk, watch television, or enjoy the fire burning in the fireplace.

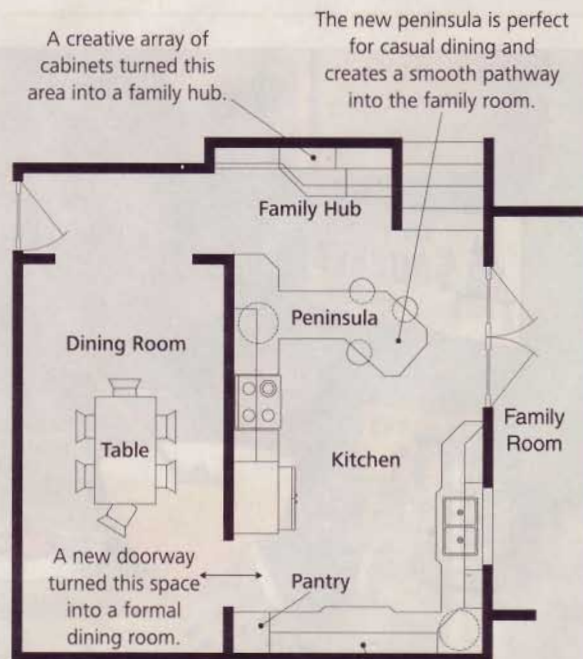
Of course, your wish list won't be the same as the Schroeders', and your kitchen won't include the same challenges. But by taking a look at how the designer and homeowner collaborated on five key areas of the this kitchen (detailed over the next four pages), you'll get a sense of what a designer can bring to your project.

REDESIGNED KITCHEN



OLD FLOOR PLAN

NEW FLOOR PLAN



With the bulkhead removed, larger cabinets could be installed to triple the storage space. This included the addition of a new pantry.

1

TWO-TIERED DINING

An eat-in kitchen was a must-have for the Schroeders. They knew that most of their meals would be quick and casual, so using the dining room would be overkill. The peninsula is the perfect solution. Its adjacency to the refrigerator, range, microwave, and workspace makes it the ideal place to prepare and enjoy a quick meal or snack (*Photo, right*).

A less obvious benefit of the peninsula is the way it funnels traffic from the front entry hallway, past the kitchen, and into the family room (*Floor Plan, page 45*). And since these are the main living spaces in the home, having them so logically connected makes moving around the house very efficient and comfortable for the family.

It also became much easier to move between the kitchen and the formal dining room (formerly an under-used, undefined "front room") thanks to a new opening installed by the Schroeders' contractor (*Photo, below*). This accommodates more elaborate dining and is an excellent example of how good kitchen design can impact the entire home.

"The peninsula's adjacency to the refrigerator, range, microwave, and workspace makes it the ideal place to prepare and enjoy a quick meal or snack."





TRIPLE-CAPACITY CABINETS

Removing the bulkheads (a job the Schroeders left to their contractor) opened up space for 36"-tall wall cabinets (rather than the 24"-tall versions that were there before). It also allowed Marcine to include two floor-to-ceiling pantries in the kitchen: one for canned and dry goods storage, the other as part of the family hub. All told, the available storage space more than tripled that of the old kitchen.

"All told, the available storage space more than tripled that of the old kitchen."

STORE CREATIVELY

Adding storage space is one thing; organizing it is something else altogether. Fortunately, the cabinets they selected from Aristokraft have several organizational options available, including drawer dividers, slide-out trays, and lazy Susans to maximize the space.

Of course, you can also choose from a huge selection of add-on organizers that are readily available on store shelves (see page 72 for more).





BEFORE



THE FAMILY HUB

Probably the most unique feature of this kitchen is the “family hub” (Photo, left). This area was previously occupied by a China hutch, which was neither the best use of the space nor the best location for the hutch. So the hutch was moved into the dining room, and the family hub took shape.

The hub is really a variation on the mini office that’s now common in modern kitchens. There’s no desk and no computer, but this is still the home’s nerve center. And it was easily accomplished using ordinary kitchen cabinets.

An “appliance garage” is the perfect place to centralize the home phone, along with cell phones and chargers. It lets you store them out of sight to avoid visual clutter (Photo, below).

Inside a full-height pantry, Nancy uses baskets to sort mail and other personal items for the family.

And, fittingly, a bank of apothecary drawers serves as a family-health and first-aid station with vitamins, bandages, aspirins, and other comforts.

“There’s no desk and no computer, but this is still the home’s nerve center.”



"A dimmer switch for each type of lighting offers complete control over how brightly, or intimately, the kitchen is lit at any given time."

ENHANCED LIGHTING

Along with removing bulkheads and cutting in a new doorway, the homeowners enlisted their contractor to install new lighting in the kitchen. This was actually at the urging of friends who expressed regret at not adding more lights during their own kitchen remodel.

To spare Scott and Nancy the same disappointment, their contractor added recessed lights in the ceiling, puck lights underneath the wall cabinets, and pendant lights above the peninsula. Dimmer switches let the homeowners control how brightly, or intimately, the kitchen is lit at any given time. ■

— *Written by Bill Link, illustrated by Kim Downing*



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Consolidated Kitchens & Fireplaces
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COUNTERTOPS
Wilsonart International
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Moen
800.289.6636
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Edge Flooring
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Floating Floor Tile

Installing a tile floor is a sizable undertaking. And our homeowners, with their limited experience and busy lifestyle, weren't sure it was a job they could take on. A "floating" tile floor, though, meant this project was well within the range of this family's abilities.

If you're not familiar with a floating floor, it's simply a finished floor that isn't attached to the subfloor (see *The Floating "Edge,"* page 51).

In the case of tile, that means no mastic or thinset adhesive. The advantages of that are many. First, no mastic or thinset means no sticky mess. And

it also means no time pressure to lay tiles before the adhesive sets up. Maybe more meaningful, though, is that a floating floor lets you work in short bursts if that's what your schedule demands. If you only have a couple hours each night to work on the floor, you don't lose time mixing thinset before you can lay tile, and there's no cleanup at the end of the night when you're ready to call it quits.

Of course, it's also worth mentioning that floating floors can be installed directly on top of existing vinyl or linoleum flooring, which can save a lot of work tearing out old floor covering.



THE FLOATING "EDGE"

Floating floors, or floors that are not nailed, screwed, or glued to the subfloor, are nothing new. Laminate floors have been installed this way for decades. But only in the last three years has tile been available for floating installations.

Edge Flooring led the way with their system of interlocking tile "panels." Each panel consists of two granite or porcelain tiles adhered to a backer board. The backer board is made from engineered lumber similar to hardboard. The panels lock together with tongue and groove connections (*Photos, below*).

Two other key components in the system are flexible grout and a rubberized underlayment (*Cutaway View, below*). These combine to allow the floor system to flex, bend, and move. This movement is virtually imperceptible as you walk on the tile, but makes it less likely that the tile or grout will crack from heavy traffic or from the natural shifting and settling that occurs in all buildings.



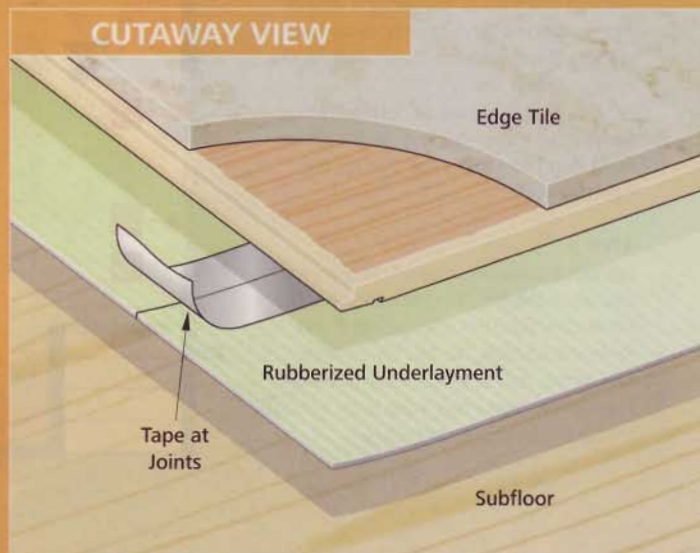
The tongue and groove connections serve as hinges to let the tile flex without breaking.



Engineered wood backer boards are durable while maintaining some flexibility.

All of that notwithstanding, installing a floating tile floor is not necessarily foolproof. And we can't completely agree with Edge Flooring's assertion that this system is remarkably faster than conventional tile. But it does make for a great-looking floor without a lot of the hassle and mess of a more traditional tile floor installation.

The next two pages provide an overview of our floating tile floor installation. Your installation will certainly differ from ours, but this should provide an idea of the steps involved to help you decide if a floating tile floor is the right choice for you.



Plan, Prep, & Install

Any floor installation, whether fixed or floating, wood or tile, requires a floor plan. Some key functions of floor planning are to select a starting point, determine a pattern, and avoid courses that end in very small slivers of tile.

The easiest way to create a plan is to work literally right on the floor. Simply lay out two dry courses of tile (one lengthwise, one widthwise in the room) to see how the tile will fit between fixed points (see *Illustration*).

To get started, you need to decide what area of the room you are *most* concerned with having a symmetrical tile pattern in. I know you want the entire room to be perfectly balanced, but that can be very difficult, if not impossible to achieve.

The trick is to focus on the areas where the tile arrangement is most noticeable, like the front entry hallway in this house. If the tile in this hallway looks bad, it's the first thing people will notice when they walk in the door.



First Course—With the front door (A) as the starting point, we extended our first dry course down the hallway and to the far wall (B). We learned two things by doing this. First, we'd need to start with a half-width tile at the door to avoid having a very narrow course along the opposite wall. This would have been especially noticeable in the doorway (C) between the kitchen and the family room, another important focal point in this room.

Second, we established that centering tiles down the length of the hallway (rather than centering a grout line) would create the most attractive pattern in this area (D).

Second Course—Now, with the dry hallway course still laid out, we ran a second course perpendicular to this one.

As luck would have it, the tile ended nicely at both ends of the room (E and F). We would still have to cut tiles at the ends of these runs, but we wouldn't be cutting any

STEP 1

Choose a starting point based on which area of the room requires the best-looking installation. We chose the front door, so we could establish a balanced installation down the long front entry hallway—an important first impression to anyone coming through the door.

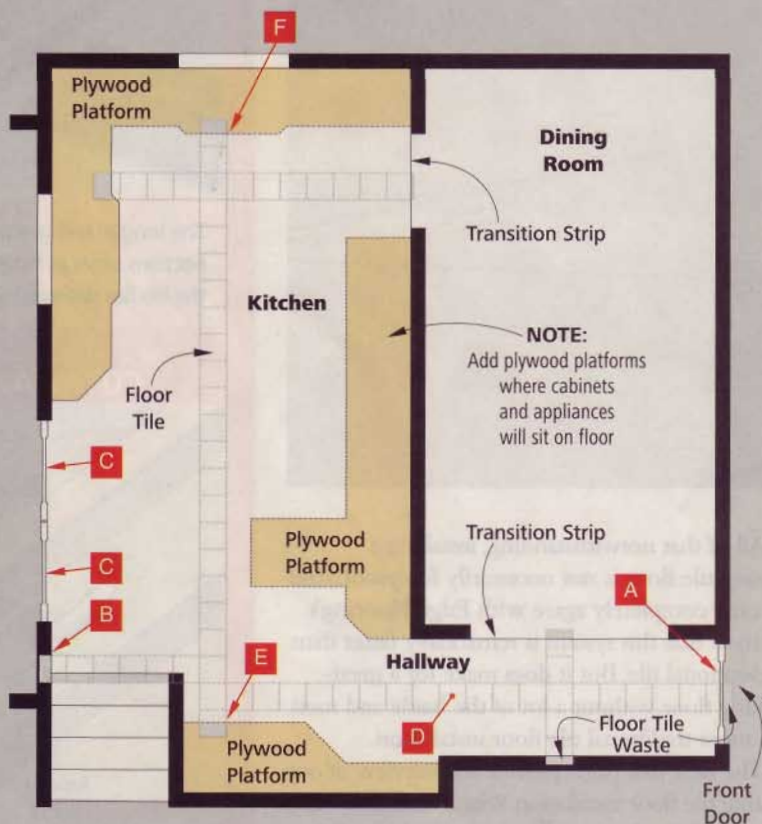
STEP 2

Lay out the first course of tile from your starting point (A) to the farthest wall or stopping point (B). Notice how we had to stagger this dry course to get around the knee wall and stairs.

This course helped us determine that we needed to cut the first tile (near the front door) to avoid small tiles on the opposite wall.

STEP 3

Lay out a second course of tile, perpendicular to the first, to check the fit in the other direction (between points E and F). In this kitchen, the last tile at each end of this course would have to be cut. Fortunately, these tiles were large enough that they still looked attractive.



slivers. Had it not worked out this well, we would've had to reconsider centering the tile in the hallway.

That really is the nature of a floor plan. In order for the tile to look perfect in one area, another area may have to suffer. But as long as you plan carefully and look for compromises, you should be able to create a balanced installation, and that always looks better than perfection in any single area.

Floor Prep—After planning comes floor prep. You'll need a relatively flat and sound floor to install the new tile on top of. As I mentioned before, there's no need to remove old vinyl or linoleum flooring. You can just install the floating floor right over the top of it. However, our existing vinyl floor did present one problem that we had to deal with before we could install the new tile.

When we removed the old kitchen cabinets, we uncovered bare floor. There was no vinyl flooring in these areas, and the new cabinets weren't being installed in the same locations. We had to fill these spots, so they were level with the rest of the floor. We accomplished that by filling these areas with inexpensive, peel-and-stick vinyl tiles that we purchased at a home center for this very purpose (Fig. 1, above).

One final detail we added before beginning the tile installation was to install $\frac{3}{4}$ "-thick plywood platforms for the new cabinets to sit on (Fig. 2, above). This way, we could install tile right up to where the cabinets would be without having the cabinets in the way. And since a floating floor isn't meant to have cabinets mounted on top of it, the platforms solved that problem, as well. This also elevated the cabinets to the same height as the new floor.



1] Self-adhesive vinyl tiles were a simple way to fill the footprints left by the old cabinets.



2] With careful measurement and cutting, we built platforms for the new cabinets.

Installation—From here, our tile installation was largely by the book. The series of *Photos*, below, shows the basic steps of the installation. For a more detailed overview, you can visit EdgeFlooring.com to download the complete manual and watch videos of tile being installed.

All told, it took us three days, or about twenty-four working hours, to install 250 square feet of tile—a little slower than Edge Flooring would have you believe, but not unreasonable.

And it's worth noting that not all of our tile panels clicked together effortlessly. A few of them had to be "persuaded" with a mallet and a tapping block.

Nonetheless, when our floor was complete, we weren't exactly walking on air, but we were certainly floating! 🏠

—Written by Bill Link, illustrated by Kim Downing



3] Roll out the rubberized underlayment, foil side down, and tape the seams.



4] Use a tile panel as a guide as you cut door jambs, so the tile can fit underneath.



5] Cut tile using your circular saw or jig saw equipped with blades from Edge Flooring.



6] It's important to stagger the panels as you install them to avoid a continuous seam.



7] Install transitions in the doorways. Use the ones provided, or make your own.



8] Apply Edge Flooring grout using a caulk gun or from pressurized cans.



9] Use a sponge float to level the grout and ensure all of the joints are completely filled.



10] Clean up excess grout with a damp sponge and special wipes from Edge Flooring.



INSTALLING KITCHEN CABINETS: PROBLEMS & SOLUTIONS



Few DIY projects can match new kitchen cabinets for savings and satisfaction. Here's a guide to installing them.

There are three simple steps to installing kitchen cabinets:

Step 1: Arrange cabinets in room.

Step 2: Solve all problems.

Step 3: Attach cabinets to walls.

If Step 2 scares you a little, take heart. With even a modest amount of ingenuity and a decent measure of patience, most DIYers are capable of installing cabinets with outstanding results.

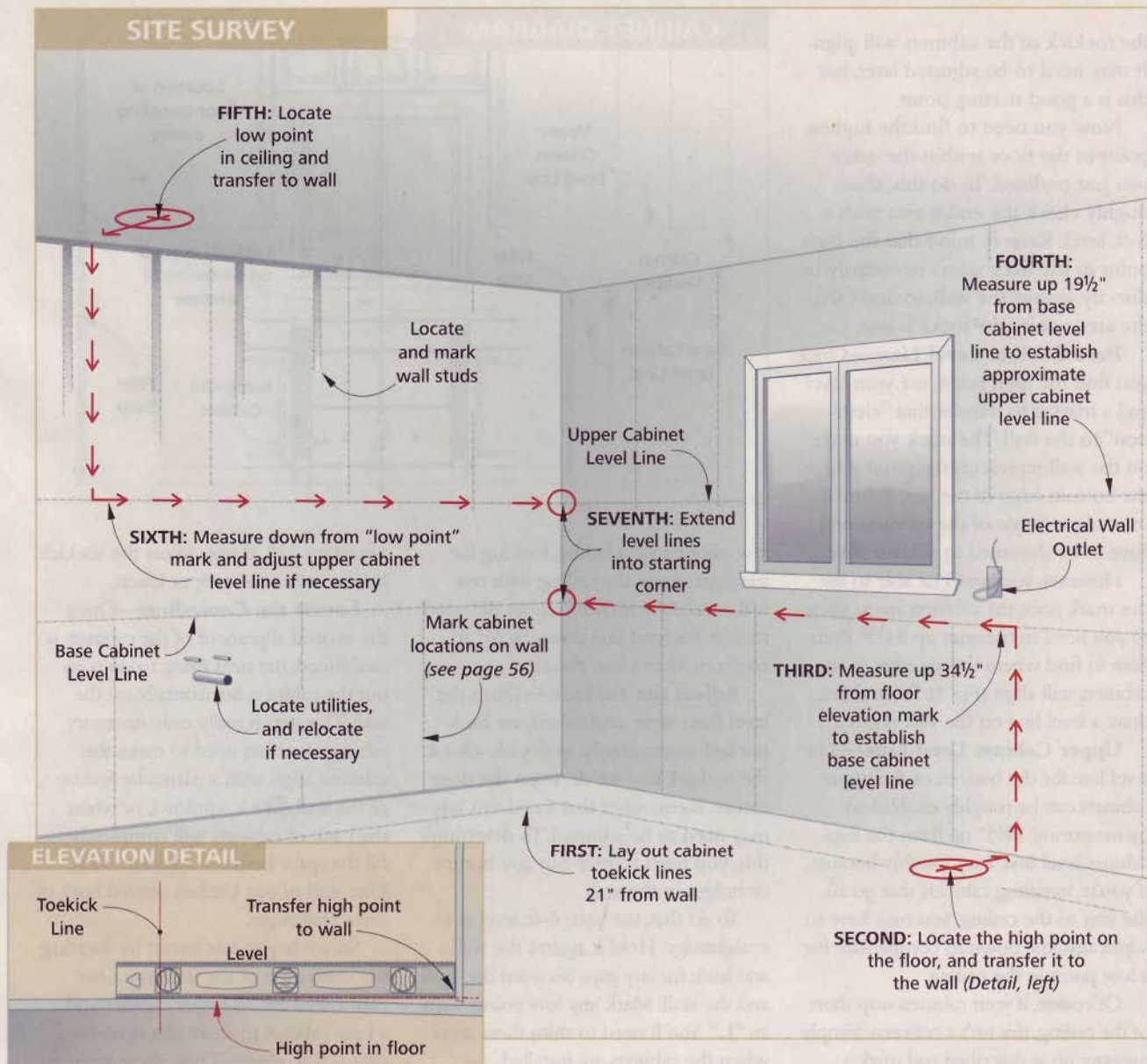
On the other hand, if you question whether the head-scratching and occasional frustration could possibly be worth it, consider this: Paying a professional to install your cabinets

can cost nearly as much as the cabinets themselves.

For example, the total bill for the cabinets in this kitchen came to just over \$10,000. To have them installed would have cost an additional \$7,000.

Based on that, our homeowner quickly gained confidence in his problem-solving skills.

What Problems?—Okay, so maybe it's not fair to ask you to decide which is the best option for you before you know the sort of problems you're likely to encounter. So we'll cover the most common



problems, and their corresponding solutions, over the next few pages.

You may not encounter all of these in your kitchen. And you'll almost certainly find some that aren't included here. So the goal of this article is to teach you to think critically about your project and how to identify potential complications.

SITE SURVEY

Conducting a thorough site survey is the surest way to avoid problems in the installation later. You have four goals to accomplish with your site survey. First,

take stock of utilities that fall within the cabinet area, and determine how they impact your installation. If any electrical outlets or plumbing connections need to be relocated, this must be done before you can start installing cabinets. Second, locate wall studs, so you can attach cabinets to them. Use a stud finder or a nail to locate these, and mark their locations on the wall. Third, find any irregularities in the floor, ceiling, and walls, so you can establish the "level lines" for aligning the cabinets. Finally, draw the outlines of the actual cabinets on the walls, and decide where, or if, to

use filler strips. The *Illustration*, above, is an overview of our kitchen and how our site survey played out.

Establish Level Lines—The most important alignment references in any cabinet installation are the level lines that represent the top of the base cabinets and the bottom of the upper cabinets. To establish these lines, you actually need to start on the floor.

To begin, measure out from the wall 21" (the standard depth of cabinets from the back edge to the toekick), and draw a line parallel to the wall. This line represents where

the toekick of the cabinets will align. It may need to be adjusted later, but this is a good starting point.

Now you need to find the highest point in the floor within the space you just outlined. To do this, thoroughly check the entire area with a 6-ft. level. Keep in mind that the high point in the floor won't necessarily be directly against the wall, so don't skip the area out by the toekick line.

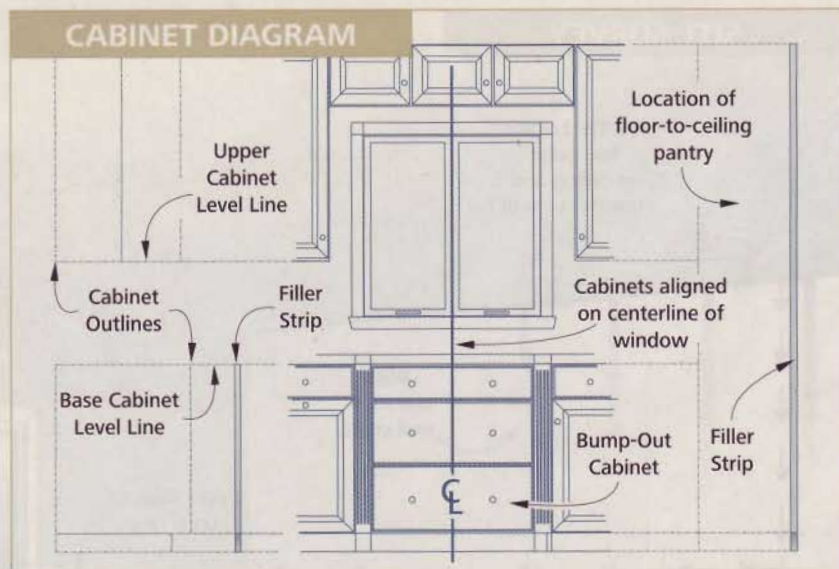
Base Cabinet Level Line—Once you find the high point, use your level and a marker to transfer that "elevation" to the wall. The mark you make on the wall represents the point where the bottom edge of the base cabinets must align. Some of the cabinets will have to be shimmed to achieve that.

However, you won't be able to see this mark once the cabinets are in place, so you need to measure up 34½" from here to find where the top edge of the cabinets will align (Fig. 1). From there, draw a level line on the wall (Fig. 2).

Upper Cabinet Level Line—The level line for the bottom of the upper cabinets can be roughly established by measuring 19½" up from the base cabinet level line. I say roughly because, if you're installing cabinets that go all the way to the ceiling, you may have to adjust this line down to compensate for a low point in the ceiling.

Of course, if your cabinets stop short of the ceiling, this isn't a concern. Simply measure up as described and mark a level line on the wall. This is where the bottom of the upper cabinets will align.

However, the cabinets in this kitchen do extend to the ceiling, so we spent a



few minutes on a ladder, looking for irregularities in the ceiling with our 6-ft. level. As it turned out, we did need to shift the level line down by ¼" to accommodate a low point.

Adjust the Toekick—Once the level lines were established, we backtracked momentarily to double-check the toekick line we drew on the floor earlier. Remember that I said this line may need to be adjusted. To determine this, you need to map out any bumps or bulges in the wall.

To do that, use your 6-ft. level as a straightedge. Hold it against the wall, and look for any gaps between the level and the wall. Mark any low points with an "L." You'll need to shim these areas when the cabinets are installed.

Also mark any high points with an "H." Then measure between each of these "bumps" on the wall and the toekick line to ensure you have the

necessary 21". If not, adjust the toekick line to create the proper space.

Locate the Centerline—Once the vertical alignment of the cabinets is established, the next thing to do is lay out the cabinets horizontally on the wall. This step is really only necessary when you either need to make the cabinets align with a particular feature of the wall (like a window), or when the bank of cabinets will completely fill the space between adjacent walls. One wall of our kitchen offered both of these challenges.

So we began our layout by locating the centerline of the window. Our plan called for an upper cabinet and a base cabinet to share this centerline (Illustration, above). Thus, those were the first cabinets we diagrammed on the wall. From there, we projected the cabinets out toward each corner and determined where we'd need to place



1] Locate the high point on the floor. Transfer that elevation to the wall, and then measure up 34½".



2] Draw the base cabinet level line on the wall, so you can align the top of the cabinets to this height.



3] Outline each cabinet and any filler strips on the wall, so you'll have a quick reference as you're installing cabinets.

and fit filler strips. All of this information, of course, was diagrammed on the wall (Fig. 3).

MOUNTING CABINETS

Now it's time to install the cabinets, and this is where all that planning will pay off.

Whether you start with the upper cabinets (uppers) or base cabinets is largely a matter of preference. Some people like to install the uppers first because the base cabinets won't be in the way. Others prefer to mount the base cabinets first and then use them as a foundation to support the uppers. Of course, it may come down to when you can arrange to have someone around to help. You can easily manage the base cabinets alone, but the uppers will require a second set of hands.

Regardless, you'll want to start in a corner. And if you have two walls of cabinets that come together, that's the corner to get started in. That way, by setting the very first cabinet, you've established a point of reference for both banks of cabinets.

The first cabinet we placed contained a lazy Susan (Fig. 4, above). This presented something of a challenge because the back of this cabinet is curved to fit around the turntable inside. That meant there was no way to fasten it to the walls.

The solution was to attach this cabinet to the adjoining cabinets, and then attach this three-cabinet assembly to the wall (Figs. 5, 6, 7).

Bump in the Road—With the first corner set, we immediately encountered our next challenge: a “bump-out” cabinet. This was the first of two such cabinets we needed to install.

There's really nothing special about these bump-out cabinets. They are simply standard base cabinets that sit 3" proud of the cabinets beside them (Illustrations, page 58). There's also a 3" gap between these cabinets and their neighbors. These gaps get covered with a special angled trim strip, which also serves



4] With the lazy Susan cabinet in place, we moved the adjoining cabinets into position to “capture” the corner unit.



5] Shim the cabinets to level them and align them with the level line on the wall. Also be sure to align the face frames.

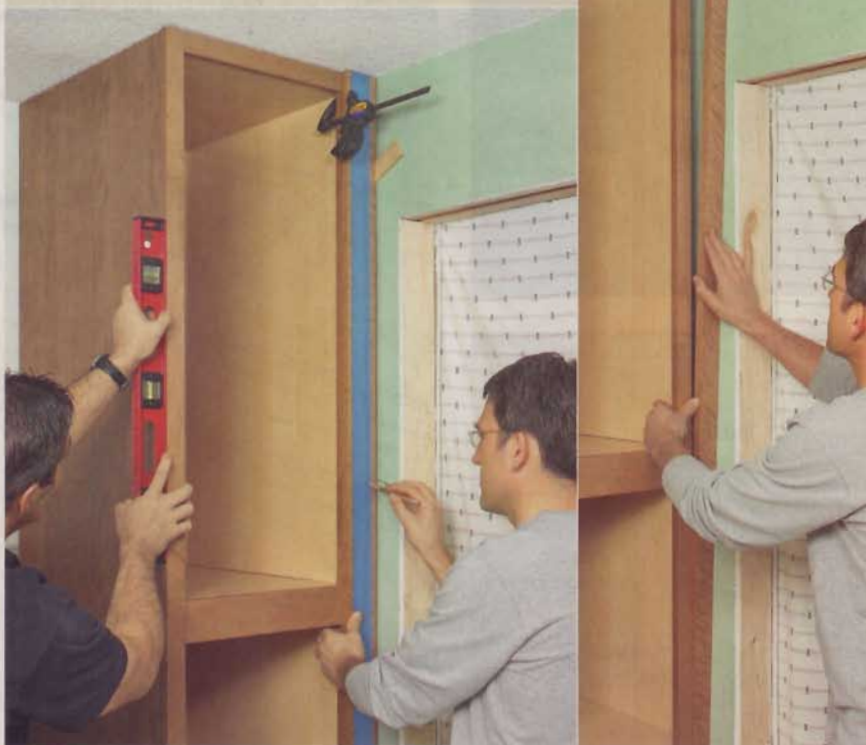


6] With the cabinets clamped securely together, drill pilot holes and then drive woodscrews through the face frames.



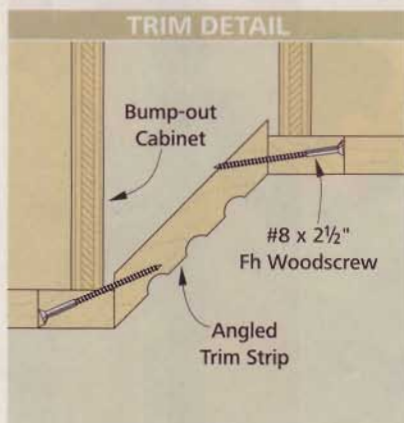
7] Now drive screws through the back of the cabinets at the shim locations to attach the cabinets to the wall.

8] Use a compass to transfer the contour of the wall onto the filler strip, then sand or cut the filler strip to fit between the cabinet and wall.





9] Slide the bump-out cabinet into place. Use the angled trim strips to fine-tune the fit.



as a means to attach the bump-out cabinet to the cabinets next to it.

The trouble with these cabinets, is that they sit away from the wall, so there's no way to anchor them until the cabinets on both sides of them are installed. And since we had only installed cabinets on one side of this bump-out, we decided to skip it for now and install the cabinets on the other side.

That quickly brought us to the next corner and a floor-to-ceiling pantry. As you may recall from the *Cabinet Diagram Illustration*, this is where we had planned for a filler strip. This filler strip not only enclosed the additional space on this wall, but also provided us with an opportunity to scribe this piece for a clean, gap-free installation (see Fig. 8, page 57).

Bring in the Bump-Out—With cabinets installed on both sides of the bump-out space, we were ready to install the bump-out cabinet itself. Aligning this cabinet in its oversize space was now easy. We just used the angled trim strips as alignment guides (Fig. 9, left).

Once the bump-out cabinet was in position, we had to secure it by driving screws into the trim piece from both

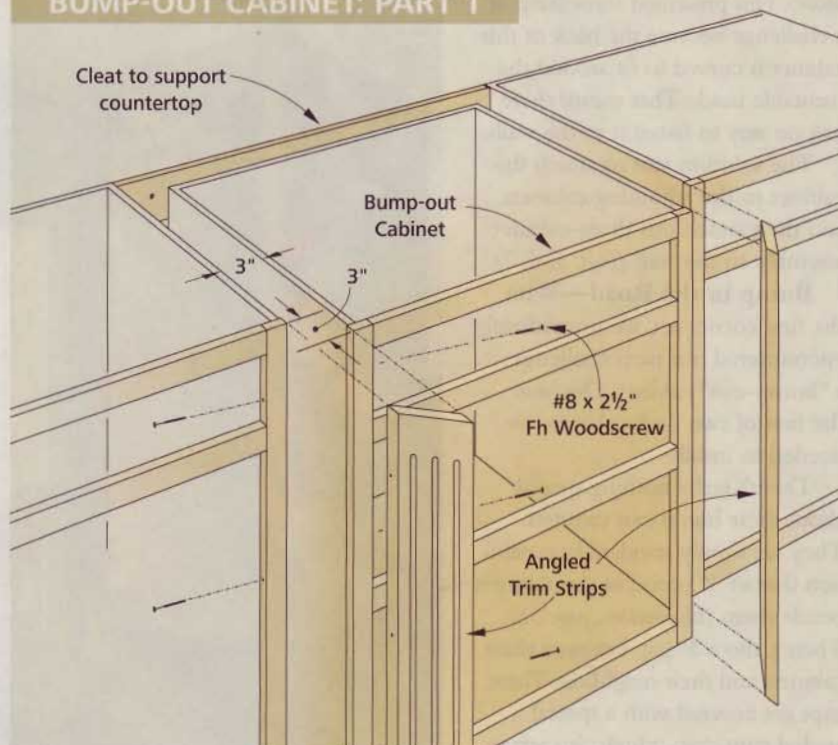
sides (*Illustration, below*). That sounds simple enough, but it proved to be trickier than we thought. Turns out there's not a lot of room for error when driving these screws. If you drive either of these screws at too steep of an angle, there's a good possibility that the point of the screw will pop through the front of the trim piece and ruin it.

After learning this the hard way, we decided to err on the side of caution when installing the subsequent pieces. So we drilled the pilot holes at a very shallow angle so that, when we drove the screws in, the point of the screws poked through the *back* face of the trim piece slightly. The screw still had plenty of grip, and it saved us wasting any more trim pieces.

Bump-out, Part 2—The second bump-out cabinet, right next to the dishwasher, presented its own difficulties. In fact, being right next to the dishwasher is what made this cabinet a problem. We couldn't attach the trim piece to the dishwasher, which meant that neither the trim piece nor the cabinet would be secure.

A couple of cleats on the side of the cabinet solved both problems. A

BUMP-OUT CABINET: PART 1



long, narrow cleat tied the cabinet to the wall behind it. And a wedge-shaped cleat added strength to the trim strip (*Illustration, right*).

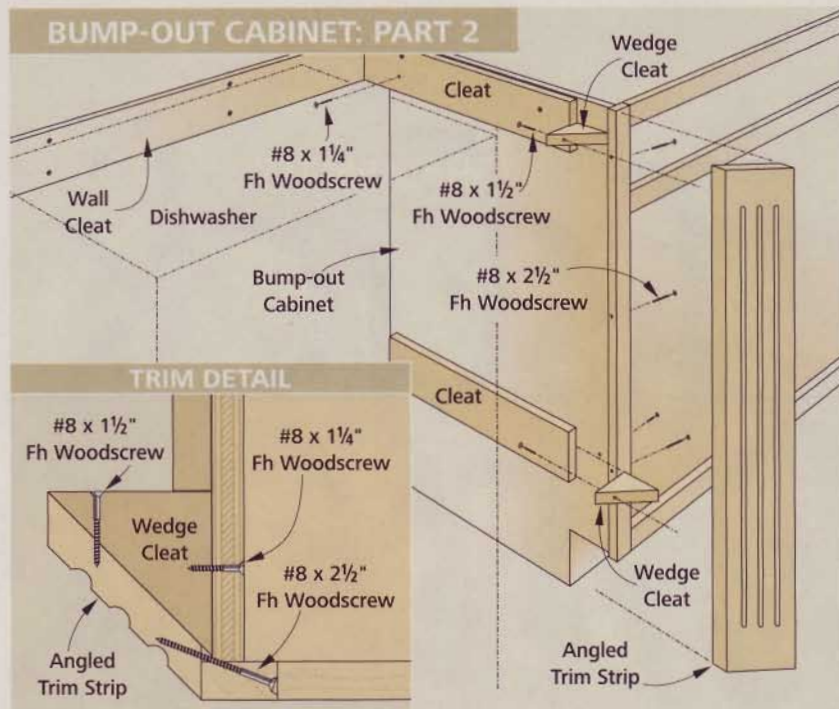
More Cleats—While we're on the subject of cleats, you may notice that, besides the cleats connected to the cabinets, there's also a cleat mounted on the wall.

This cleat is there to support the countertop. We had to install cleats like this in a couple of places where there's a break in the run of cabinets.

Here in the dishwasher opening is the first place. And this cleat also extends behind the bump-out cabinet beside the dishwasher. Likewise, we installed a cleat on the wall behind the bump-out cabinet on the adjacent wall. Finally, we mounted cleats in the corner behind the lazy Susan cabinet, as well.

All of the cleats are made by cutting 1x4s to fit and then screwing them to the wall. Try to attach each cleat to at least one wall stud.

Notes on Upper Cabinets—Apart from having to hold the cabinets over your head while installing them (we recommend recruiting a friend for this), the challenges to installing the upper



cabinets are very similar to installing the base units.

Just as before, start in a corner and work your way out (*Fig. 10*). Make some "kickers" to help hold the heavy cabinets up while you and your helper jockey them into plumb and level.


And remember that it's much more critical with these cabinets that you screw them to studs whenever possible. The cabinets are heavy already, so you can imagine how much more they will weigh when they're full of groceries and dishes.



10] Enlist a helper and use "kicker" boards to help support heavy upper cabinets. A corner cabinet like this may require shimming on both walls to true it up.

PROBLEMS: SOLVED

Ultimately, when your cabinets are at last installed, you may look back and realize that you spent just as much time planning the installation as actually installing the cabinets. What you may not realize is how much time all that up-front planning ultimately saved you by dealing with difficulties before they arose.

Of course, you can't foresee every problem, and we certainly weren't able to predict every possible variation in this article. But by understanding the fundamentals and being aware of some common challenges, you should be well on your way to a successful kitchen cabinet installation. And in the end, the satisfaction of completing a job of this magnitude may be worth nearly as much as the money you save by doing it yourself. 

—Written by Bill Link, illustrated by Erich Lage, project designed by Marcine Cameron

HIGH-CAPACITY Truck RACK



You can't beat a pickup for hauling home improvement supplies. But sometimes you need extra capacity to haul a ladder or a bundle of long boards. Contractors carry long items on ladder racks that elevate the load above the truck cab. But those racks, frankly, are overkill for even the most ardent do-it-yourselfer.

The rack we designed borrows ideas from those commercial racks but is built with the do-it-yourselfer in mind. For starters, the rack is built with everyday tools and materials, and it goes together in a weekend for less than \$100. Plus, it simply clamps on when you need it (*Photo, below*) and breaks down for compact storage when you don't.

With this rack, we also kept in mind that you don't use your truck just for work. So we've made this rack just as capable of hauling all the "tools" you use for play (*below right*).

CLAMP IT ON & GO

When designing the mounting system for the truck, we wanted it to be secure above all. But we also wanted to make sure it wouldn't scar up the truck or require drilling holes.

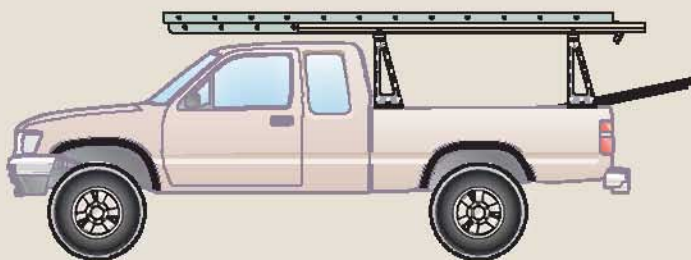
The solution was to use clamps that are designed for mounting a truck topper (*right*). These G-shaped clamps wrap under the truck's bed rails and then tighten with a bolt to grip the padded foot of the upright.

Topper clamps come in several styles to fit different trucks and are available at truck-supply stores or from online sources such as APIClamps.com.





PUT YOUR TRUCK TO WORK: The rack's elevated crossbars allow long items to ride over the truck's cab, so they don't have to hang off the back. That makes it easy to haul ladders, pipes, or long boards, and it leaves the bed open for other cargo.



TAKE YOUR TRUCK OUT TO PLAY: Add a set of brackets that hold sport bars (*page 64*), and you can carry bikes, canoes, cargo boxes, and other recreational gear. The clamp-on design means the uprights can be moved to match the accessory.

PROJECT AT A GLANCE

DIFFICULTY: Moderate Weekend Project

PROJECT COST: \$100

TOOLS:

Circular saw, jig saw, drill, router, clamps

SUPPLIES:

- (1) quarter-sheet 3/4" exterior-grade plywood
- (2) 2x4s, 8-ft. long
- (2) 1x4s, 8-ft. long
- (1) 1 1/2" x 1 1/2" x 12" angle iron
- (44) #14 x 1 1/4" Ph sheet-metal screws
- (32) 2" stainless-steel deck screws
- (10) 2 1/2" stainless-steel deck screws
- (8) 1/4" x 2" carriage bolts, nuts, 8 washers
- (8) 1/4" x 2 1/2" carriage bolts, nuts, 8 washers
- 48" soft rubber non-skid tape
- (4) 1/4" x 2 1/2" galvanized eye bolts
- (4) topper clamps

PAINT/FINISH: Hammerite black spray paint (uprights/brace); clear deck stain (crossbars)

HIGH-CAPACITY TRUCK RACK

GET THE RACK ON TRACK

To keep this rack simple, it consists of just a few parts (*Construction View*). There are four uprights that get grouped in pairs, plus a crossbar that spans between each pair.

The uprights are made from two layers of 3/4" plywood that get glued and screwed together. The T-shaped crossbars are made from 1x and 2x boards. Eye bolts mounted at each end help you tie down your load. (Learn more about this on page 65).

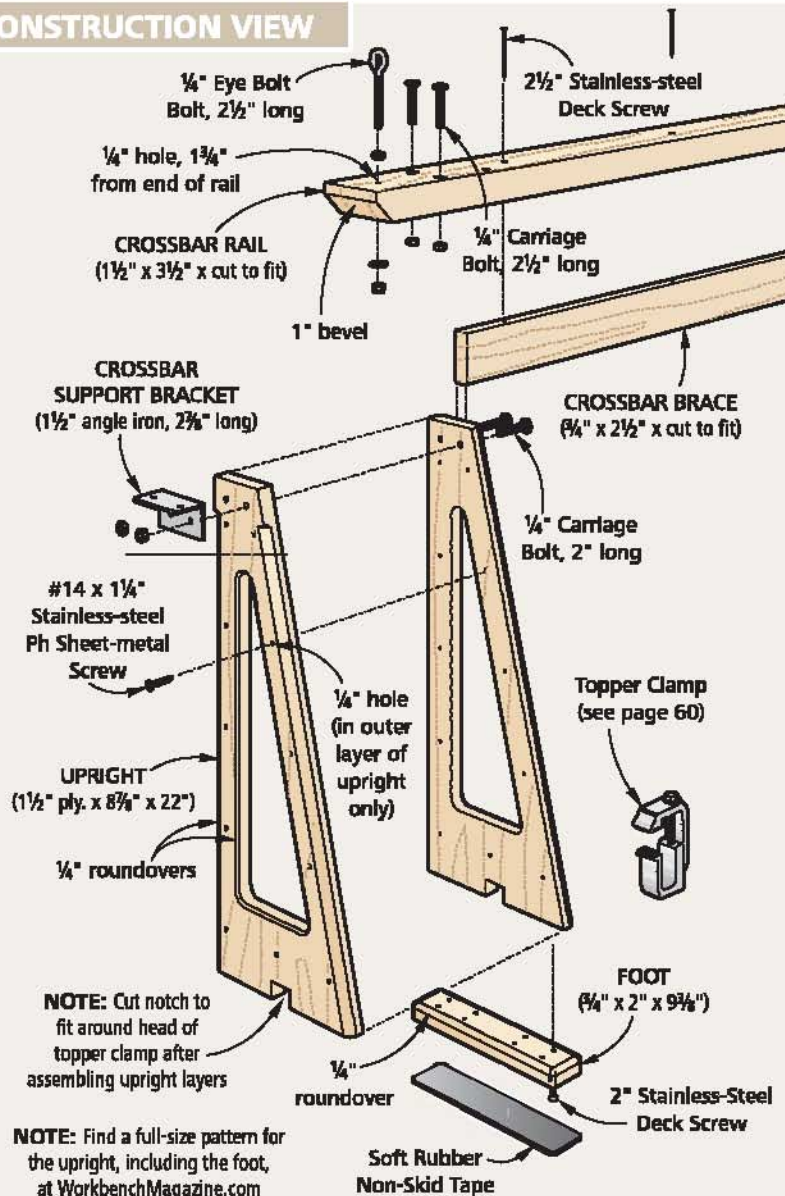
Size the Uprights—Now that you're familiar with the rack, you can build one for your truck. To make it easy,

download a full-size upright pattern from WorkbenchMagazine.com. Print the pattern, cut it out, and then make sure it clears your truck's cab.

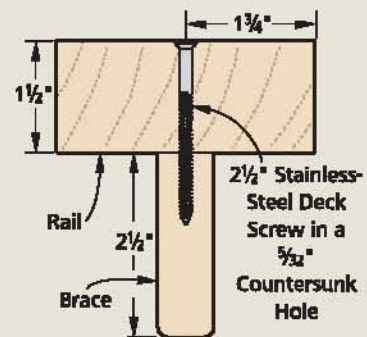
Note: If the upright is too short, you can make it taller. Just extend the vertical edge, draw the top end in again at the right height, and then redraw the angled edge.

Cut the Uprights Right—Next, lay out the uprights (*Upright Cutting Diagram*) using the pattern. Leave about 1/8" between each upright to allow for the saw kerf. Then cut the uprights using a circular saw.

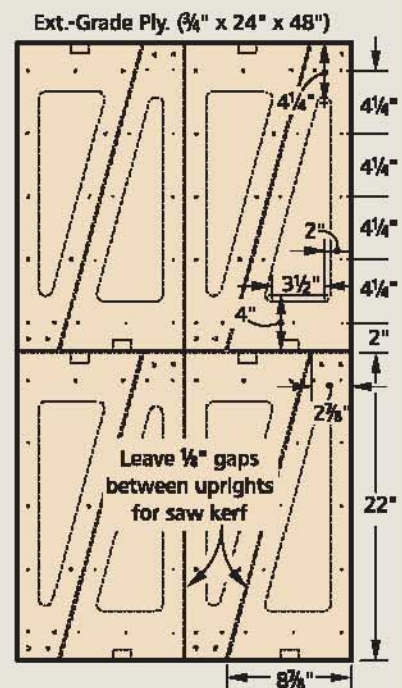
CONSTRUCTION VIEW



CROSSBAR DETAIL



UPRIGHT CUTTING DIAGRAM



Pair up the pieces to form four uprights, but don't glue them together. Now mark the location where each will be located (front-right, left-rear, etc.).

The layers get glued together later, and then reinforced with large panhead screws. But first you need to drill holes for those screws in only the *outer* layer.

Once again, use the pattern to lay out these screw holes. Then drill the holes in the outer layer of each upright.

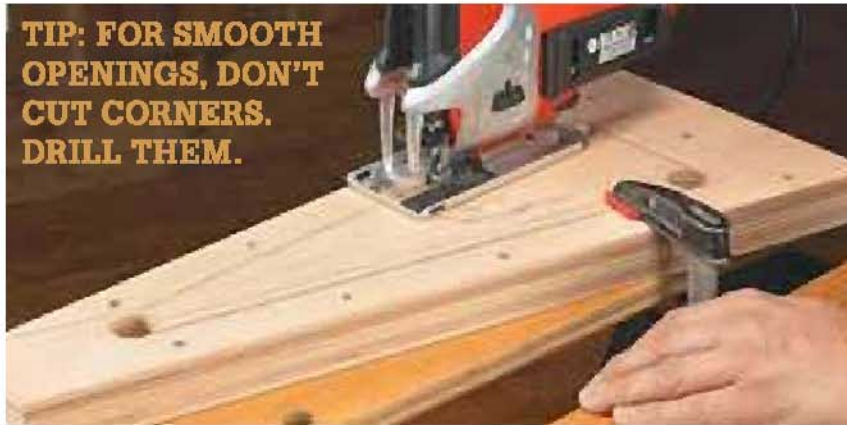
Now glue each upright together using water-resistant glue. To "clamp" the layers together, simply drive 1¼" drywall screws through several of the holes you just drilled (*Photo, right*). These screws will get removed after the uprights are fully shaped.

Create the Cutouts—With the uprights assembled, cut the center opening (*Photo, above*). Then round over the edges of the opening, as well as the front and back edges of the uprights, using a router and the tips on page 64.

After that, you'll need to cut a notch in the bottom edge of each upright for the topper clamp (*Photo, page 60*).

Add Feet & Bar Brackets—The feet come next. After cutting them to size, sand the corners and top edges of each foot to remove any sharp edges.

TIP: FOR SMOOTH OPENINGS, DON'T CUT CORNERS. DRILL THEM.



To build the uprights, start by gluing the two layers together. Use drywall screws to "clamp" the pieces. Then drill a hole at each corner with a 1" spade bit. Finally, cut between the holes with a jig saw, and sand the opening smooth.

Now clamp each foot to an upright, drill pilot holes for the screws, and then attach the feet.

While the glue dries, cut support brackets to length from 1½" angle-iron stock with a hacksaw. Then drill bolt holes through each bracket.

Use the holes in the brackets to mark the uprights. Drill the mounting holes, but don't attach the brackets.

First, you'll want to give the uprights a finished look. That starts with priming them and smoothing

out any imperfections (*page 64*). That done, you can remove the drywall screws used to "clamp" the layers.

Then paint the uprights (and the brackets) to complement your truck. I sprayed on a couple coats of a black "hammered" finish made by Hammerite (*Project at a Glance*).

When the paint dries, glue rubber pads to the bottom of each foot. Finally, install the crossbar support brackets and stainless-steel panhead screws.

Create the Crossbars—To make the crossbars, start by clamping the uprights to your truck, making sure each one stands plumb and parallel to its partner. Then determine the length of each crossbar by measuring from the outside face of one upright to the outside face of the other, and then adding 6". Cut the crossbars to length from 2x4 stock, and then bevel the ends.

Now clamp the crossbars in place, and then mark the position of their mounting bolts. Drill the bolt holes, and clamp the rails back in place.

To fit the brace, measure between the inside faces of the uprights. Then cut the brace to length, so it fits snugly.

The brace then gets painted to match the uprights. But since the crossbars are likely to get scratched up, I just applied a clear deck stain to them. After that, glue and screw these parts together, and then install the eye bolts.



MAKE IT A RECREATIONAL GEAR RACK

Haul a load or two of long lumber back from the home center or transport an extension ladder, and you'll quickly wonder how you ever got along without the rack. This thing turns any pickup into a serious work truck. But, as the old saying goes, "All work and no play makes Jack a dull boy." Thankfully, this rack can play just as hard as it works.

It does that by accommodating the tubular load bars from a Yakima-brand "sport rack" (Yakima.com). These bars, available in bike shops and sporting-goods stores, accept a variety of accessories to carry bikes, canoes, cargo boxes, and more, all without taking up space in the truck bed. And retrofitting them to the truck rack takes nothing more than a set of spacer blocks and four "J" bolts (*Sport-Bar Mount, right*).

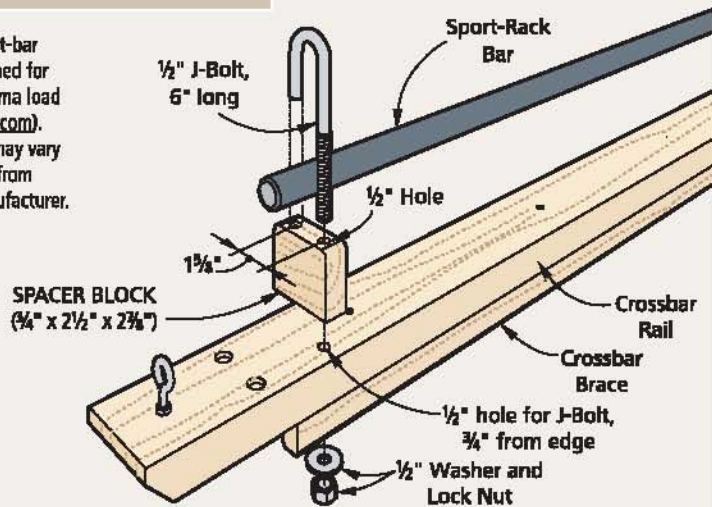
Making the spacer blocks just requires cutting them to size (from leftover $\frac{3}{4}$ " thick stock), and then

drilling two holes to align with the legs of the J-bolts. Then paint the blocks to match the uprights. Now you can position the blocks on the rack, and drill mounting holes through the crossbars. Then, when it's time to play, just bolt the sport bars in place and go.



SPORT-BAR MOUNT

NOTE: Sport-bar mount designed for use with Yakima load bars (Yakima.com). Dimensions may vary if using bars from another manufacturer.



how to shape & smooth plywood

Plywood isn't difficult to work with, but the edges aren't always pretty. First, the thin face veneers tend to tear out as you cut, so they need to be smoothed (*Fig. 1*). Also, the inner plies often have voids that don't look good and, on a project that may get exposed to rain, can collect moisture. Those need to be filled (*Figs. 2 & 3*).



1] To get rid of the rough edges left by the jig saw, rout a roundover ($\frac{3}{8}$ " in this case) on the exposed edges of the plywood.



2] Next, mix a two-part automotive or multipurpose filler to fill the voids. Mix it in small batches, as it hardens in just a couple minutes.




3] Use your finger (wear gloves) to press filler into voids in the plywood, and spread it over the edges. After the filler hardens, sand it smooth.

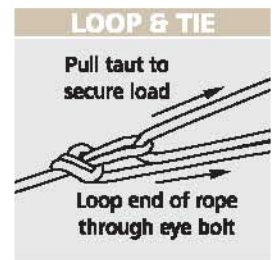
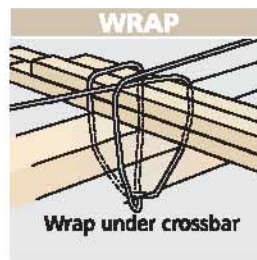
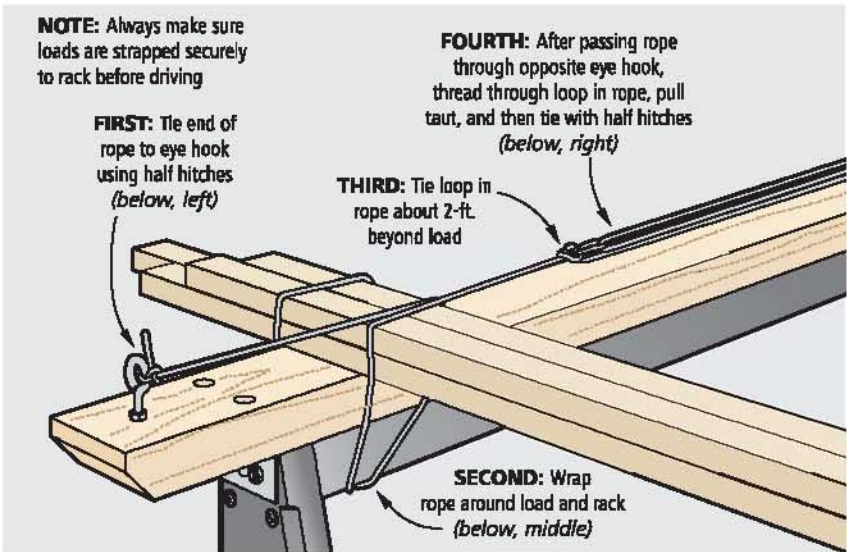
TIE-DOWN TIPS

To safely haul anything on the truck rack, you have to be able to tie it to the rack securely. Thankfully, all you need to know are a couple of basic knots that are simple to tie and untie.

The *Illustrations* at right show just such a setup. It starts off with tying one end of the rope to an eye bolt with a series of half hitches. Then the rope gets looped over the load and rack. The other end of the rope goes through the other eye bolt, and then comes back to a loop, which acts like a pulley to let you really tighten the rope. Half hitches secure that end of the rope once again.

If you're not confident in your knot-tying ability, you will find a number of great products, shown below, that you can buy to help secure your load. 

—Written by David Stone, illustrated by Erich Lage, project designed by James R. Downing



accessories that haul

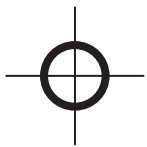
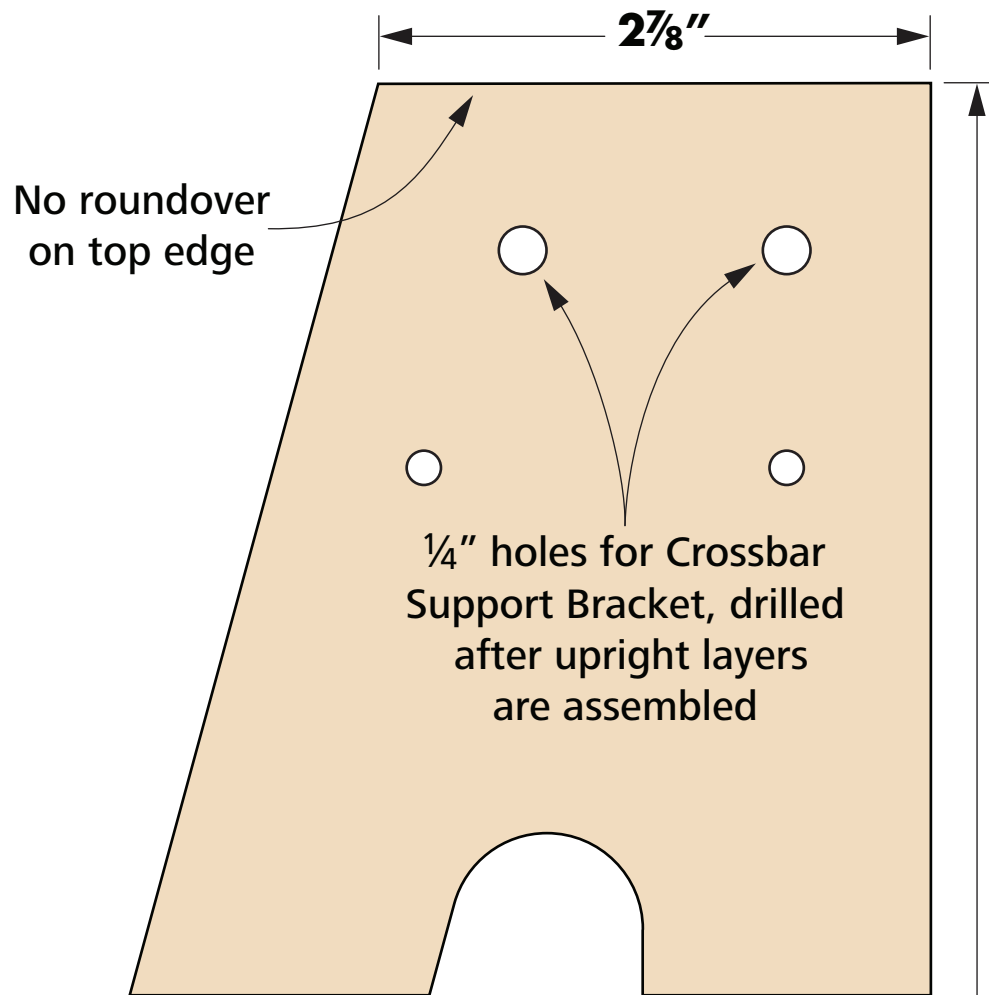
Ropes and secure knots can take care of many loads, but sometimes it's good to have a little extra help. Thankfully, there are a number of products available that can help you secure your load easily.

One of the more unique products I've seen is the Load-Helper, shown at left. Invented by a contractor, this sturdy bag slips over the end (or ends) of your load to keep items from sliding forward or backward. The bags are available in three sizes (the smallest is shown) direct from the manufacturer at Load-Helper.com.

Another way to keep bundles together is with plastic stretch wrap (below, middle). You can buy it in rolls where moving supplies are sold.

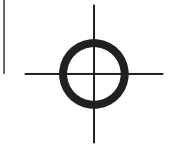
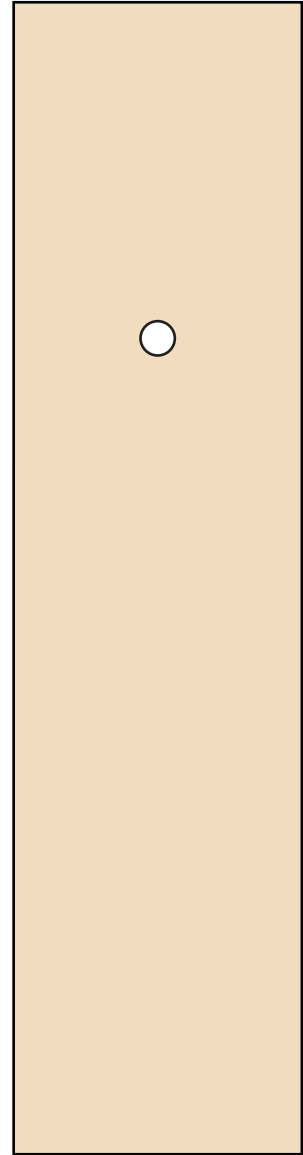
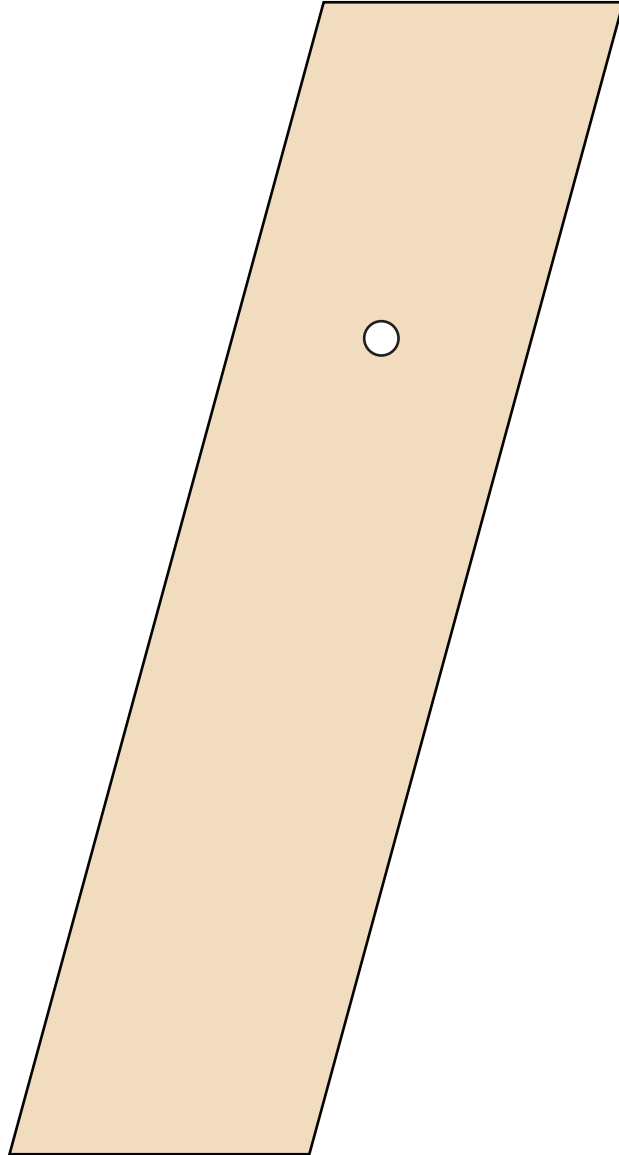
And if you're just plain knot-impaired, you can purchase ropes and straps with ratchets that pull them tight instead of knots (below, right).

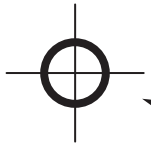




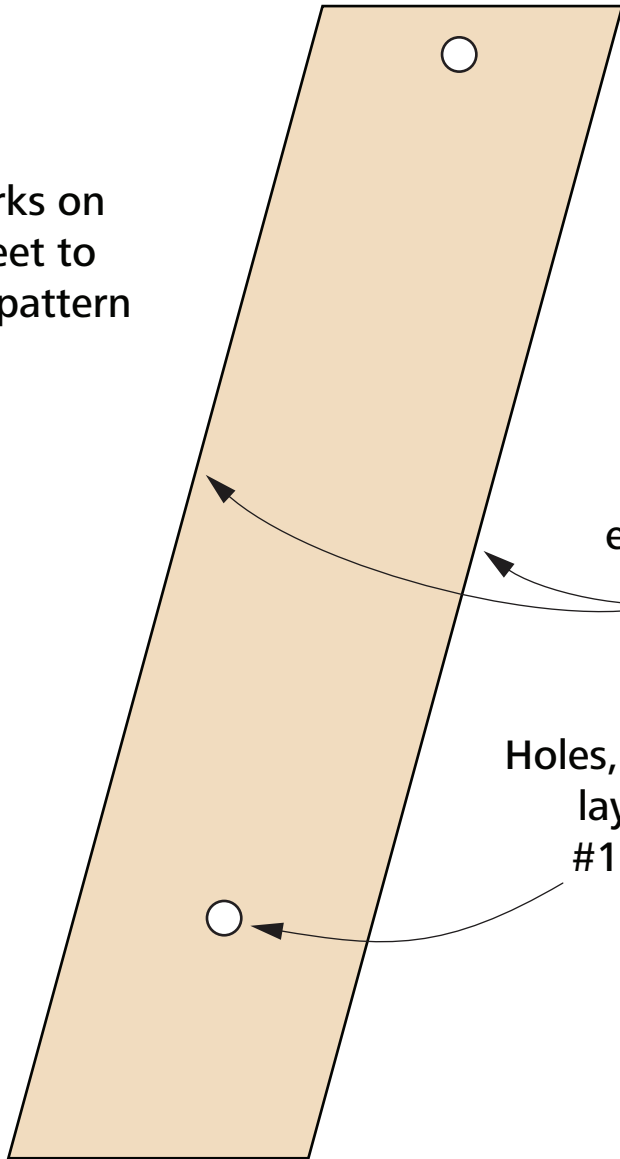


2 of 4





Align marks on each sheet to complete pattern



3 of 4



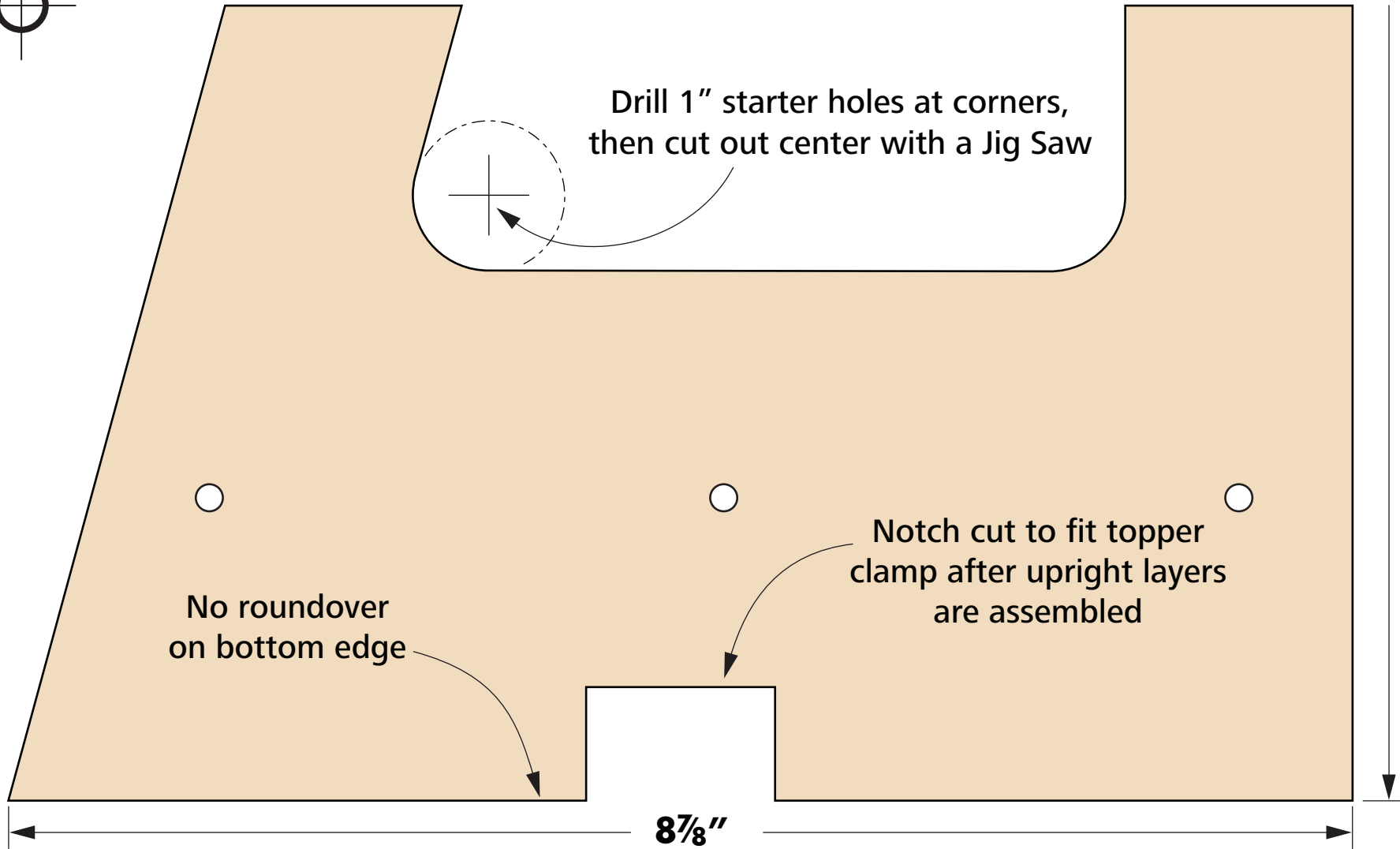
Rout $\frac{1}{4}$ " roundovers on inside and outside edges after upright layers are assembled

Holes, drilled in outer layer only, for #14 x $1\frac{1}{4}$ " Ph screws



22"







Display *Niche*

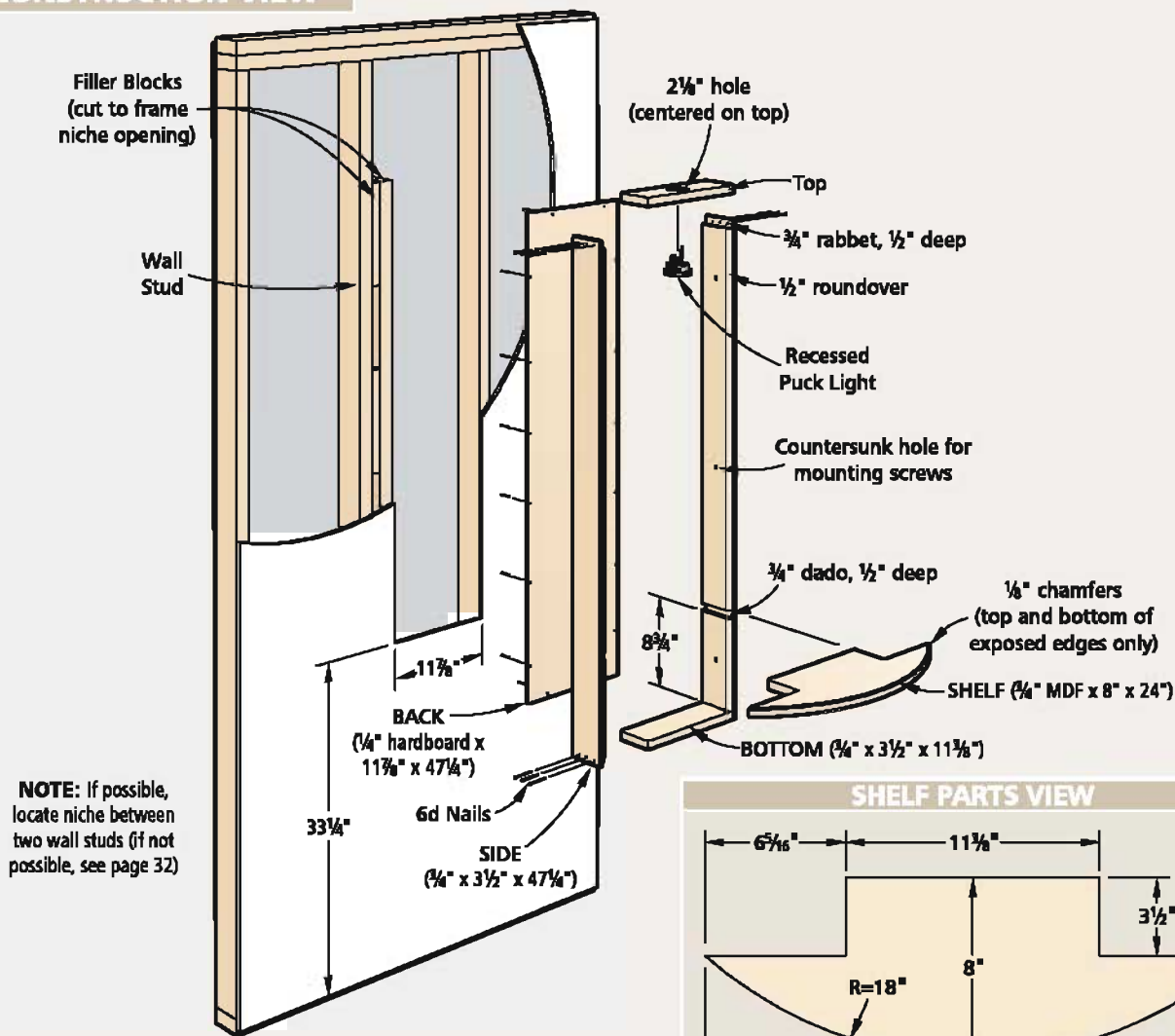
Only a display niche this bold could hold its own against these picante-colored walls. The black tile backdrop, the light overhead illuminating the vase below—this niche doesn't accent the wall; it *owns* the wall.

And take a look at that stylishly curved shelf—it juts almost defiantly into the room, as though the niche is resisting its status as a mere “recess in the wall.”

Even the outside corners of this display niche make a strong design statement: Notice there are no fancy trim pieces around it to steal attention. Instead, a simple rounded corner blends the niche seamlessly with the surrounding walls.

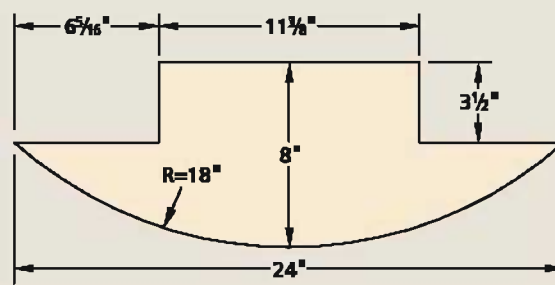


CONSTRUCTION VIEW



NOTE: If possible, locate niche between two wall studs (if not possible, see page 32)

SHELF PARTS VIEW



Building & Installing the Niche

This display niche starts out as a simple wood box. After it's built, installing it requires cutting an opening in the wall and inserting the box, as shown in the *Construction View* above. A bit of drywall "taping and mudding" creates the smooth transition between the box and the surrounding wall, and then the tile and shelf get installed.

Get Tile First—Before building the box, you'll want to have the tile on hand that you plan to use. The reason for this is simple: You want to be able to fit the tile widthwise into the box without having to cut it.

For our project, we bought 13"-square sheets of mosaic tile. That tile was too wide for the proportions of the niche we wanted, but trim-

ming three rows of tile off each sheet produced a more pleasing proportion. That meant we had to build the box with an inside dimension of 10³/₈".

Find a Location—The box is designed to fit between two wall studs with a little space on either side. If a stud lies within the space where you want to mount the box, however, you're not out of luck. You can remove the stud using the techniques shown on page 32.

Build the Box—As for the box itself, the top, bottom, and sides are made from 3/4"-thick pine, and the back is 1/4" hardboard. You'll need to cut a rabbet in both ends of each side to accept the top and bottom. Then, cut a dado in each side to hold the shelf.

To create a smooth transition between the box and the wall, the front edge of each box side also gets rounded over with a router. Then drill countersunk holes in the sides for mounting screws.

After cutting all the parts, assemble the box with glue and nails. If you plan on installing a puck light, cut a hole in the top for this light now. Then prime the box, and set it aside.

Make the Shelf—The display shelf is made from 3/4" MDF. Depending on the size of your niche, the size and shape of this shelf may vary, but you can use the dimensions shown in the *Parts View* above as a starting point. There's also a full-size pattern of the shelf available at WorkbenchMagazine.com.

It's easiest to cut the shelf to shape using a jig saw. After that, sand the edges smooth, and rout a small chamfer on the front edges. Now prime and paint the shelf. (We used glossy black spray paint.) Then set the shelf aside, too. It gets installed later on.

Install the Box—With the box complete, you can cut the opening in the wall to accept it. First, locate and mark the wall studs on either side of it (Fig. 1). You also need to make sure no pipes or wires are in the way. To do that, cut a small opening between the studs (Fig. 2). Then look and feel around inside to make sure you're in the clear.

If so, you can lay out the precise location of the box using a tape measure and a 4-ft. level (Fig. 3). Then use a utility knife to cut out the drywall to form the opening (Fig. 4).

As mentioned earlier, the niche is narrower than the space between the wall studs. That means you'll need to build out the sides of the opening with filler blocks. The thickness and number of these blocks will vary depending on the location and size of the niche, but the ultimate goal is to create a surface that's flush with the sides of the opening, as shown in Fig. 5.

Next, install the puck light in the top of the cabinet, if desired. We wired

this light into a junction box located in the attic of the home. (You may want to consult an electrician for this.) Now slide the box carefully into position to check the fit (Fig. 6), and make any necessary adjustments. Once the box fits, screw it to the filler blocks.



1] To determine the location of the studs, sweep a stud finder across the wall, and mark their positions.



2] Using a drywall saw, cut an opening between the studs, so you can make sure there are no pipes or wires in the way.



3] After measuring and marking the top, bottom, and sides of the opening, lay them out using a 4-ft. level and pencil.



4] Use a utility knife to cut a clean, smooth opening. It will take a few passes to cut through the drywall.



5] Frame the sides of the opening with 2x4s. You may need to add blocking to get the frame flush with the opening.



6] Slide the box into position to check the fit, and make any needed adjustments before screwing it in place.



Finishing the Rounded Corners

A big part of the appeal of this display niche is its clean, contemporary look. And a major element of that look is the rounded outside corners that blend the niche seamlessly into the wall (*Photo, above*).

While this rounded corner makes for a modern look, it does require a bit of drywall work to complete it. Specifically, that involves taping the seam (*Fig. 1*), applying drywall joint compound over this tape (*Fig. 2*), and then sanding the edge smooth (*Figs. 3 & 4*).

PROJECT AT A GLANCE

DIFFICULTY: Moderate Weekend Project

PROJECT COST: \$100

TOOLS:

Table saw, router, jig saw, drill, hammer, stud finder, utility knife, 6" putty knife, 220-grit sanding screens and block, 1/8" notched trowel, grout float, sponge

SUPPLIES:

(2) 1x4 pine, 72" long, (1) quarter-sheet of 1/4" hardboard, (1) quarter-sheet of 3/4" MDF, (6) #8 x 3" Fh woodscrews, (30) 6d nails, joint tape and compound, tile thinset, (4) sheets of 13" x 13" mosaic tiles (#KCB4; MosaicTileMarket.com), grey grout, (1) can of spray texture, (1) recessed puck light

PAINT:

Benjamin Moore: Picante (006)

If you're not experienced with taping and mudding, be assured that you don't have to be an expert to get good results. We've provided some tips and techniques on page 80 that walk you through the entire process.

Rounded Corners—These rounded corners do present one unique challenge, however. Typically, an outside corner has a corner bead, which acts as a guide for the drywall knife as you apply joint compound. Since these corners are rounded, however, we didn't use a corner bead. Instead, we did a little freehand mudding. And the best way to get a smooth surface on these rounded corners was to drag the knife across the joint *horizontally* (*Fig. 2*), not vertically as is typically done.

Smoothing compound across the joint like this tends to leave small ridges where the putty knife overlaps after each pass. But when the compound dries, you can sand these ridges smooth (*Figs. 3 and 4*).

After sanding the compound, you'll need to apply another coat or two of joint compound to achieve a smooth, flawless surface. For these additional coats, repeat the steps shown in *Figs. 2-4*.



1] Cover the seam between the box and the wall with self-adhesive mesh drywall joint tape.



2] After mudding over the tape, smooth it over the rounded corners using a 6" putty knife.



3] Let the compound dry for 24 hours, and then sand it smooth with a 220-grit sanding screen on a sanding block.



4] Now use the sanding block to smooth the rounded corners. Then apply another coat of joint compound.

Final Details: Tile & Shelf


What really gives this display niche its bold, distinctive flair are the mosaic tile backdrop and the display shelf.

The tiles we selected are 3/4" mosaic tiles that come in a sheet with paper on the front face. They're easy to cut and install as shown in Figs. 1-5.

Before grouting the tiles, mask off the sides, top, and bottom of the niche to keep any excess grout off the project (Fig. 6).

Then, when the grout dries, slip the shelf into the dadoes to see if the back edges of the shelf fit tightly against the wall (Fig. 7). If necessary, sand them to fit. If any small gaps still remain, you can fill them with a dab of caulk later.

Before installing the shelf permanently, mask off the tile so that you can texture and paint the wall and sides of the niche (Fig. 8). Once the paint

dries, complete the niche by applying glue to the dadoes and shelf sides, and sliding the shelf in place. ⁷

—Written by Wyatt Myers, illustrated by Matt Scott, project designed by James R. Downing



1] To cut a sheet of tile to size, flip it upside down, and use a utility knife to slice through the paper facing.



2] To adhere the tile, start by raking a thin bed of mortar across the back of the niche with a 1/8" notched trowel.



3] Align the sheets of tile in the opening, with an equal space between each sheet, and press them into place.



4] Using a hammer and a scrap block, lightly tap the surface of the tiles to seat them securely in the mortar.



5] After 24 hours, sponge warm water over the paper facing, and carefully peel it off the tiles.



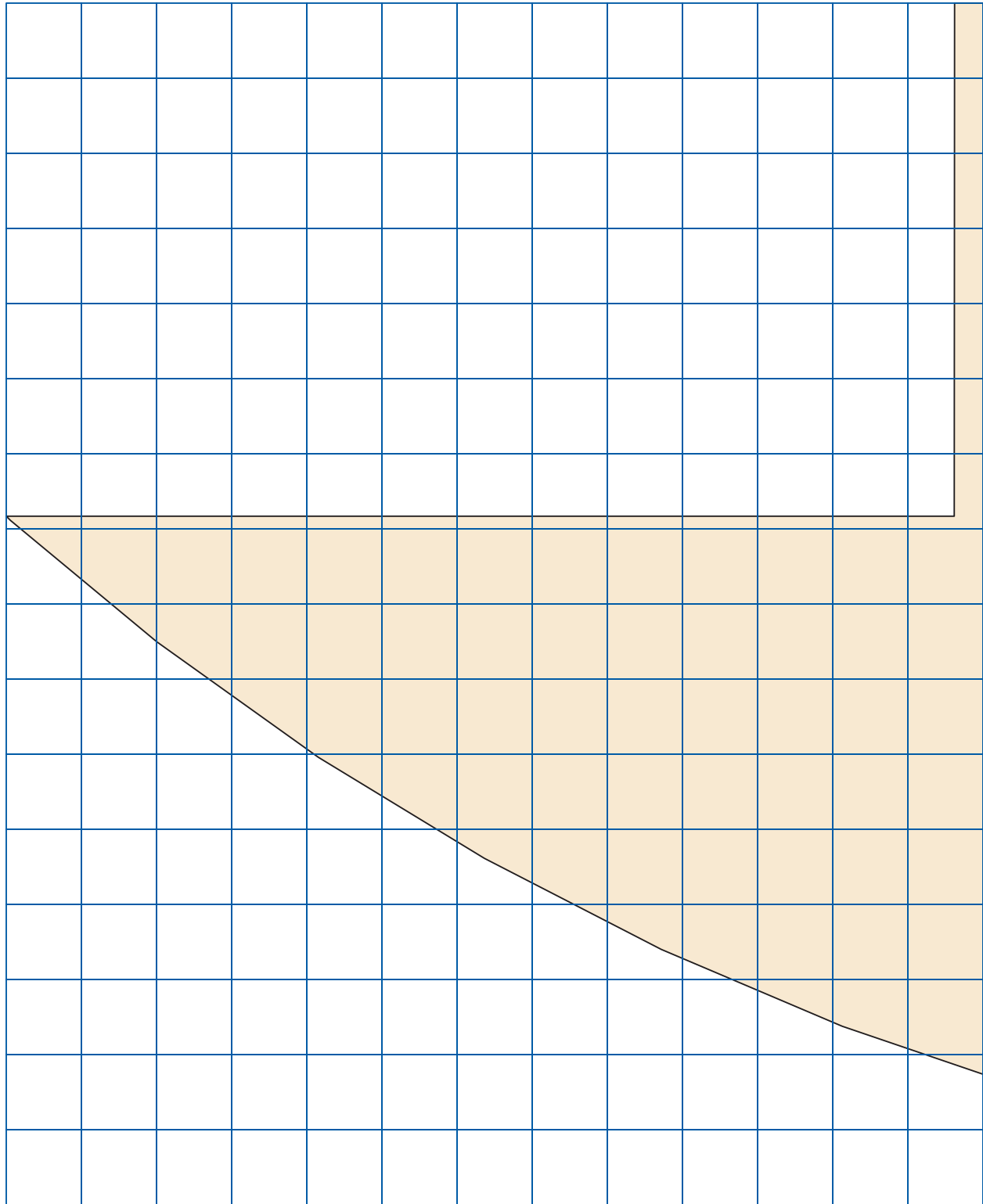
6] Mask the opening, and use a grout float to press grout between the tiles. Sponge off excess, then buff off any haze.

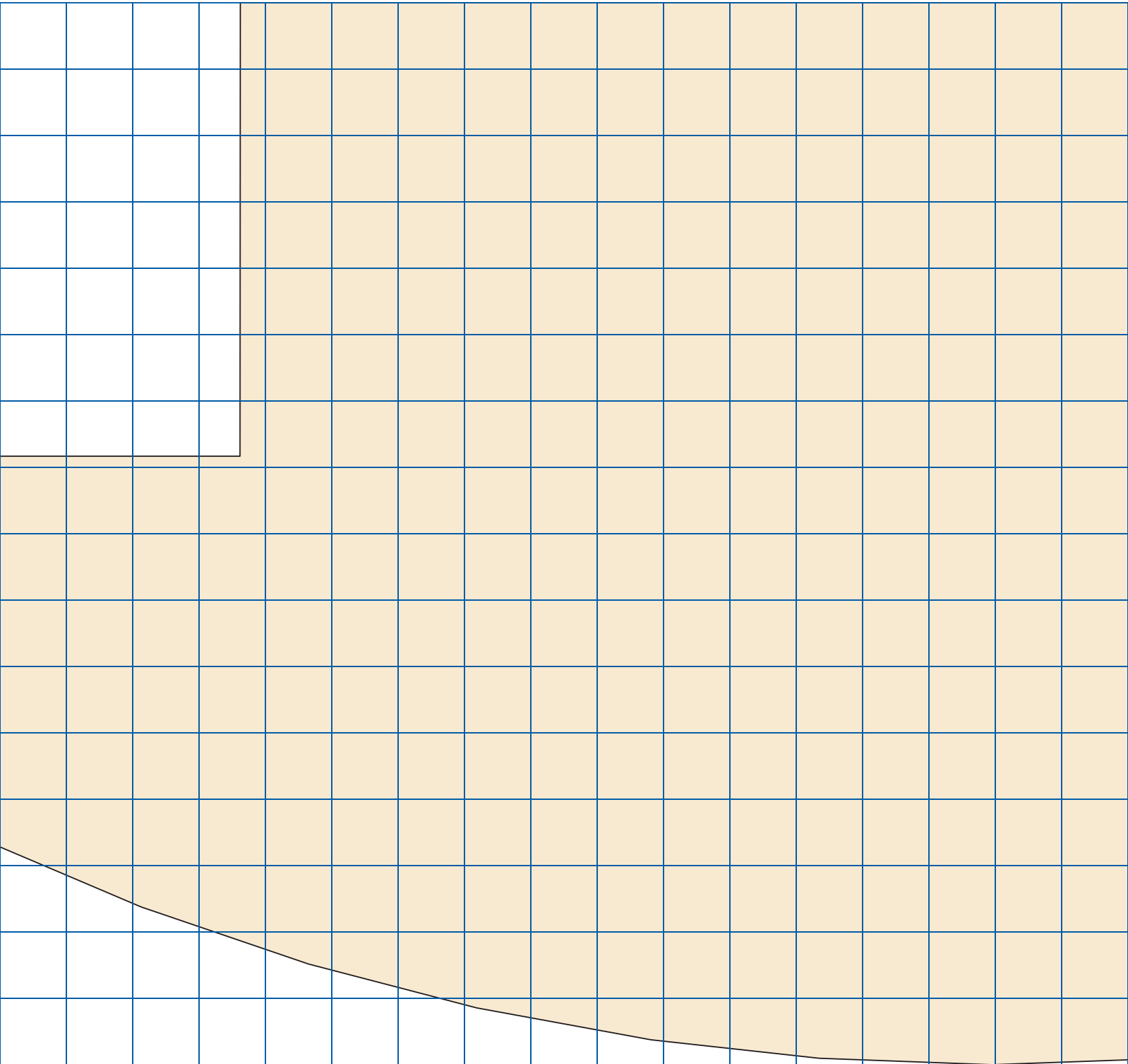


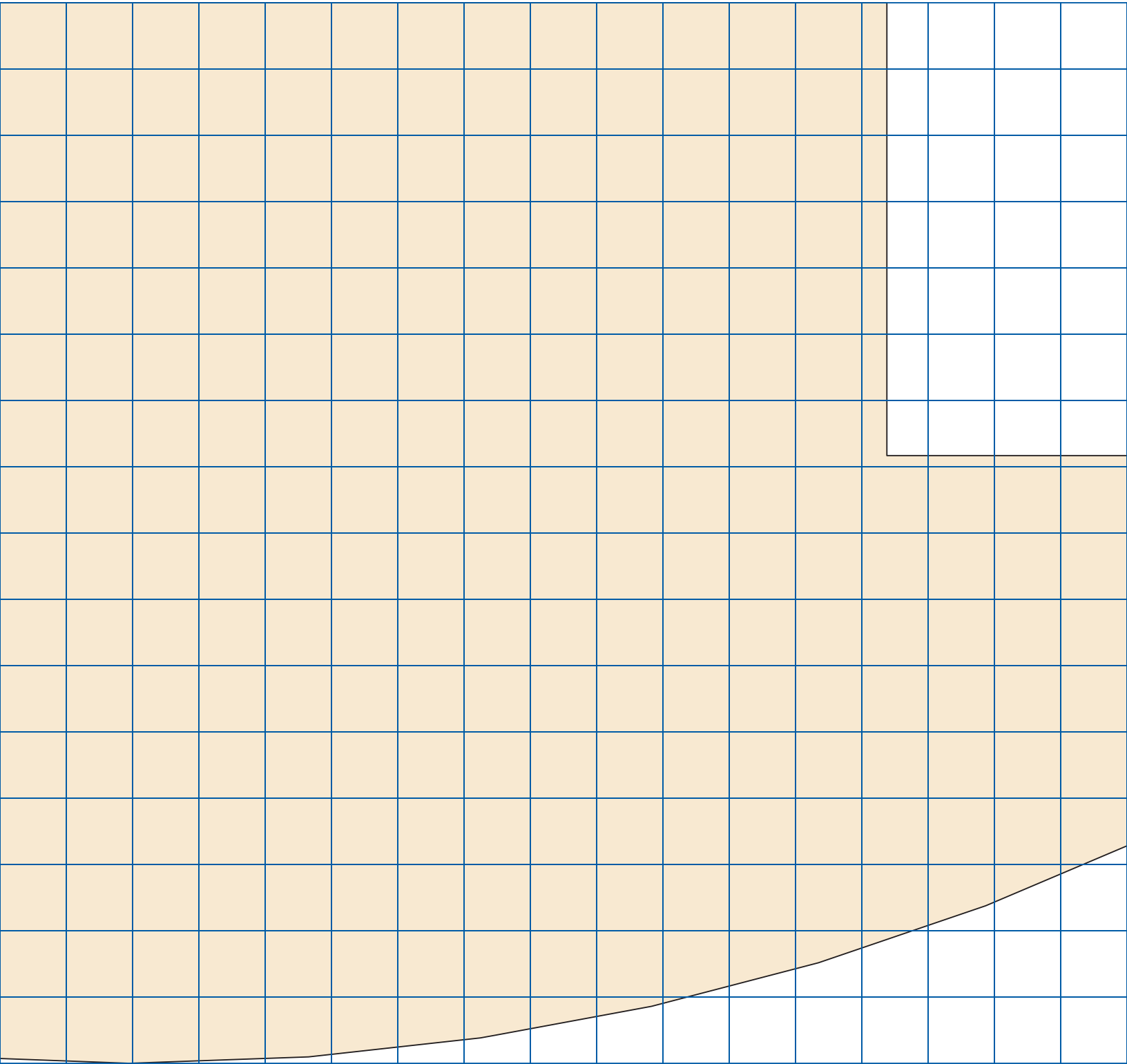
7] When the grout dries, check the fit of the shelf. Sand or file the back edges as needed to produce a tight fit.

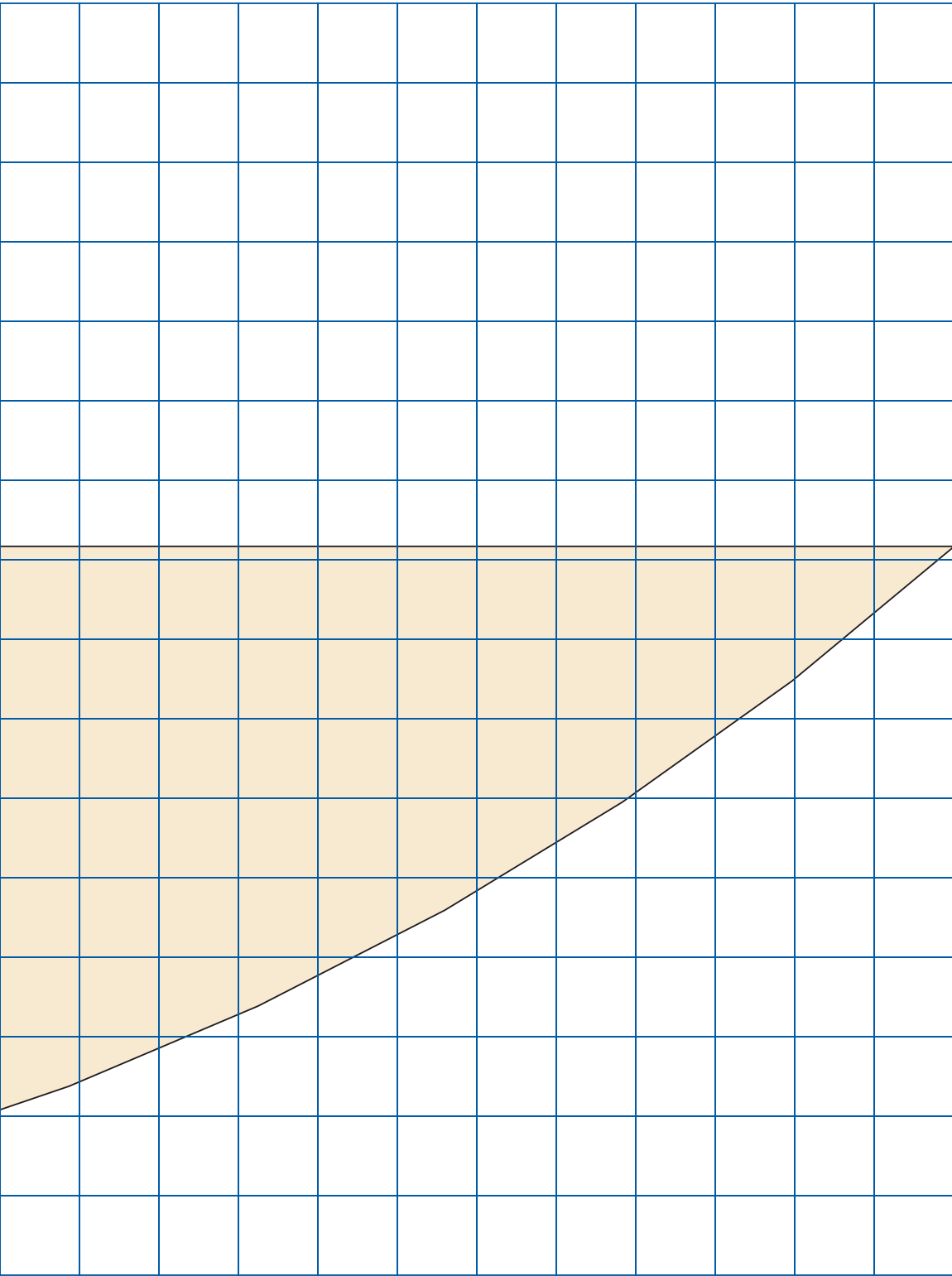


8] If the wall around the niche is textured, you can easily match that look by using a can of spray texture.











15 *Low-Cost* *Kitchen Organizers*

Got a few extra dollars, an hour, and a screwdriver? That's all you need to wipe out clutter in your kitchen. Cabinet organizers that used to sell for big bucks are now affordable for anyone. Here's just a sampling of what's available at prices from less than \$10 to no more than \$75.

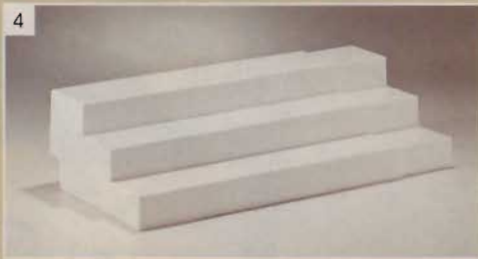
\$10 OR LESS



If you're looking for proof that kitchen organizers have become affordable, just walk the kitchen-organization aisle at your local home center and look at how many items are available for less than \$10. That's right, for the price of a couple fast food burgers, you can select from a surprisingly vast collection of hardworking accessories that are well-built and decent-looking. Here are just a few of the useful items we found.

First, there's an item that does double-duty as storage and display. It's a **hanging stem ware**





holder (1) that holds wine glasses out of the way and on display below a cabinet or shelf. Four screws and about five minutes are all you need to install it.

To keep your silverware organized, you should check out this **wire utensil tray (2)**. Its chrome finish adds a touch of style, and an open-mesh design means those crumbs that collect in a silverware tray will drop right through, so you can easily lift out the tray and clean them from the drawer.

If you need a place to corral your canned goods, it's tough to beat this simple **double shelf set (3)** that mounts to the inside of a cabinet door.

Next come two interesting options for getting more from your shelf space. A **three-tier spice shelf (4)** keeps spice containers visible, and can be expanded to increase its length. The **expandable wire shelf (5)** also grows to fit the available shelf length and turns a single shelf into two tiers of storage space.

\$25 OR LESS



Spend a little extra, and you can select from an array of more-sophisticated organizers, such as this **expandable drawer organizer (6)** with side compartments that adjust to fit drawers from 18" to 24" wide. Or you can get a **drop-down spice rack (7)**. It makes spices easy to locate and pulls down for easy access.

Whether it sits on the counter or inside a cabinet, this **sliding basket (8)** aids accessibility, too, while the top serves as an extra shelf for storing small items. And a **tilt-out sink-front tray (9)** puts extra storage into a space that usually goes to waste: behind the false drawer panel that mounts to the front of most sink cabinets.



\$50 OR LESS

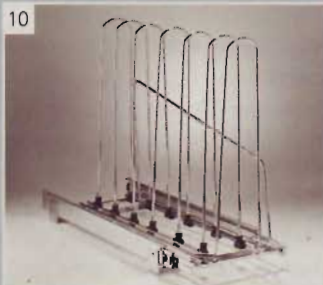


Instead of having to stand on your head to retrieve items stored inside lower cabinets, outfit them with organizers that slide out to meet you.

For example, if you're tired of digging through stacks of pots to find the size that you need, install this **slide-out pot rack (10)**. Not only does it make pots easy to find, it helps prevent damage to fragile non-stick surfaces.

This **sliding basket set (11)** lets you replace the standard shallow shelf in a lower cabinet with two levels of storage that are mounted on convenient slides. Installation just takes driving four screws.

You can keep your trash can stashed inside a cabinet, as well, and then slide it out when you need it with this **pull-out trash can (12)**. You'll find these trash cans in several sizes, so there's bound to be one that will fit your cabinet.



\$75 OR LESS





The area under the sink is always tough to tame because of the drain pipes that hang down into the space. But this **two-tier under-sink organizer (13)** gets around the plumbing problem with a wide lower tray and a narrow one up top. Both are mounted on a heavy-duty slide set that allows the baskets to pull out (both at the same time) for easy access.

Access is also the name of the game with a **pull-out recycling center (14)**. You can find them outfitted with two containers to fit smaller cabinets, or with three or four containers for larger cabinets. Of course, either type comes equipped with slides that bring the containers out where you can reach them.

Sliding organizers work great in standard cabinets, but not so well in corner cabinets. That's especially true if it's a "blind" corner (where a cabinet is partially blocked by the cabinet that butts into it from the adjacent wall). The cure in either case is a **lazy Susan (15)**. Some rotate on a carousel, while others (like the one shown) pivot out from the dead space beside the door. Both styles reduce *total* cabinet space because their rounded profiles reduce shelf area, but lazy Susans increase *practical* space by making corner cabinets more accessible.

—Written by David Stone

FOR MORE INFO:

Check your local home center, kitchen store, or hardware store, and you're likely to find versions of some or all of the low-cost organizers shown here. You'll also find many sources for cabinet organizers online.

To find out more information about the items shown in this article, contact the following companies:

MANUFACTURERS

ClotMaid
800-874-0008
ClotMaid.com

Rev-A-Shelf
800-626-1126
Rev-A-Shelf.com

Real Organized
(available through Lowe's)
866-578-0563
LGSourcing.com

Simple Human
888-988-8880
SimpleHuman.com

RETAILERS

Amazon.com
800-201-7575
Amazon.com

Bed, Bath & Beyond
800-462-3966
BedBathandBeyond.com

The Container Store
888-266-8246
ContainerStore.com

Home Depot
800-553-3199
HomeDepot.com

Lowe's
800-445-6937
Lowes.com

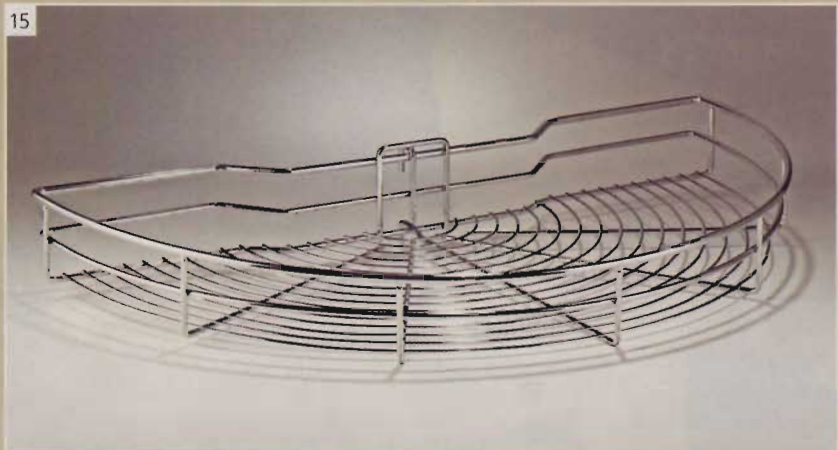
Organize-It-Online
800-210-7712
Organize-It-Online.com

Space Savers
800-849-7210
SpaceSavers.com

14



15



FRAMES

focus on

Anything you choose to display will make a bolder impact when it's surrounded by these fanciful frames—even if it's just your own reflection.



Most frames act as backdrops to the photographs, artwork, or mirrors they surround.

But in this project, the focus shifts to the frames themselves. More to the point, the emphasis is on the colorful paper that covers these frames.

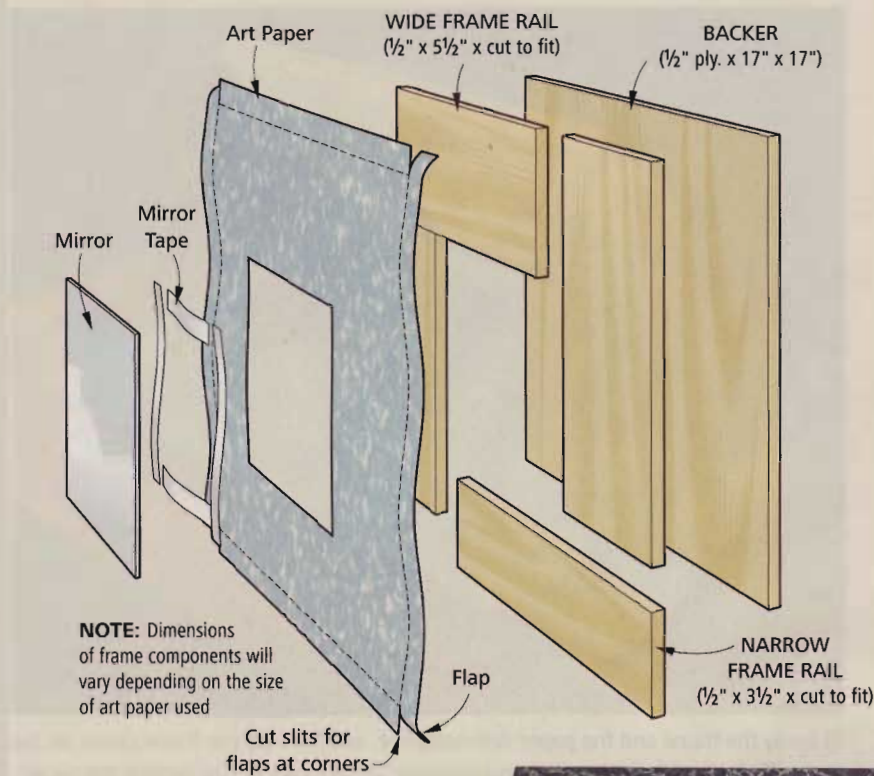
Specifically, these frames are covered with “art paper.” It produces this unique look without any complicated painting or finishing techniques.

Paper Possibilities—If you’re not familiar with art paper, you’ll want to be. It’s made—often by hand and in far-flung parts of the world—in an almost endless array of styles, patterns, and colors. We chose simple but stylish patterns of blue and black with metallic accents for the frames shown here. The frame on page 79 shows that you can achieve equally stunning results with a bright, whimsical pattern.

You won’t find art paper at the local office-supply store, but it’s common in art stores, or just a few clicks away online. Art paper is also surprisingly affordable. Each sheet I used (one sheet per frame) cost less than \$4 online (see page 79).

Picture This Option—Just as your options are wide open for what goes on the frames, you also have choices for what goes in them. Three of the frames at left contain mirrors. The fourth holds a photo, and in a rather unique way, at that. In this arrangement, the glass can’t be adhered with tape like the mirrors, so we used two metal rods to hold the photo and glass in place (Photo, right).

What Lies Beneath—Whether you build frames to hold mirrors or photos, the construction remains simple. Under the paper lies a backer made of 1/2" plywood. The backer is faced with rails made from 1/2" poplar that we picked up in two stock widths (3 1/2" and 5 1/2") at a home center. A few



simple cuts and a little glue are all you need to build the frames. For the photo frame, the only difference is that you need to drill holes for the steel rods.

Pick a Paper, Then Build—Now that you’re familiar with how the frames are made, it’s time to start building.

The first step is selecting the paper. It has to be at least 2" longer and wider than the frame, so that there’s enough to wrap over the frame edges. The paper I chose measured 20" x 30", so I made 17"-square frames.

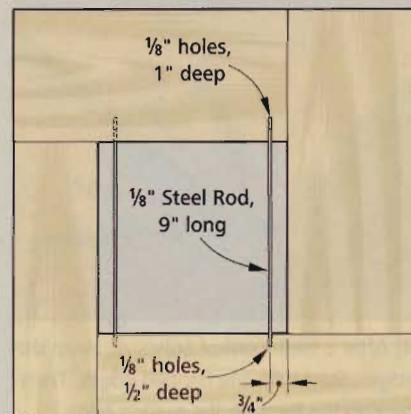
With the dimensions determined, cut the backer and the rails to size. Then lay the rails on the backer to make sure they fit correctly, but don’t glue them in place yet.

If you’re going to build photo frames, you need to drill holes for the rods now (Illustration, right). Note that the upper holes are deeper than the lower holes. That lets you slip the rods into the upper holes, slide them up to clear the lower rail, and then push them down into the lower holes.

All that’s left now is gluing the rails to the backer. Make sure each rail is oriented properly and the outer edges are flush before clamping them together.



Before inserting the steel rods into the holes in the frame, spray them with lacquer to give them a glossy finish.





1] Spray the frame and the paper with adhesive, and then lay the frame down on the paper. The adhesive will bond almost instantly, so take care not to wrinkle the paper.



2] Use a sharp utility knife and a 1"-wide spacer to cut off the excess paper and create the flaps that will wrap the edges.



3] Cut a slit at each corner, aligned with the *inside* edge of the spacer. This creates a flap that lets you fold the paper.



4] After a fresh coat of adhesive, wrap the edges. Start with the flapped edges. Then overlap the flaps on the mating edge.



5] Work your way along the edge, making sure to pull the paper taut before pressing it against the frame.

PAPER MAKES

The Project

The assembled frames may not look like much yet, but that's about to change. It's the paper that brings impact to this project.

Address the Edges—Before you can wrap the frames with paper, though, you need to prepare the edges. Around the outside of the frame, make sure that the edges of the plywood backer and rails are flush and smooth. If there are ridges, sand them smooth with 80-grit sandpaper on a block.

On the inside edges of the rails, scrape any glue that may have squeezed out. Then color the edges to complement the paper. I did that with a black permanent marker. You can see the result in *Fig. 1*.

Time for a Cover-Up—Now it's time to wrap the paper around the frame. If yours came rolled up, lay it out for a couple of hours to flatten. While that's happening, mask the colored frame edges to prevent them from getting covered with adhesive. Also wipe off any dust on the frame.

Spray adhesive is the perfect choice for this project. Just make sure you get one that's listed as "acid-free" or "photo-safe," so it won't soak through the paper or discolor it. (I chose 3M Super 77.) Be aware, also, that spray adhesive puts out potent fumes, so use it in a well-ventilated area.



6] On the face of the frame, slit an "X" in the paper. Then hold the side of the blade against the frame to trim off the waste.



Now you can lay the art paper facedown on a table or workbench. It's a good idea to lay down some Kraft paper underneath it.

Take a Dry Run—This adhesive bonds almost instantly, so it's a good idea to do a "dry run," following *Figs. 1 through 6* at left, to make sure you understand the process and to ensure that you'll be able to set the frame down with the paper overhanging adequately (by at least 1") all around.

Add the Adhesive—After you're done with the dry run, spray the adhesive on the frame rails and the paper following the instructions on the label.

Now remove the masking tape from the inside edges of the frame rails, and then go through the procedures again. Just remember that you're playing for keeps this time, and this adhesive grabs quickly. Position the frame correctly the first time, and you'll have no problems.


Protect the Paper—Art paper is fairly colorfast and durable, but

it's a good idea to protect it with a clear topcoat. Once again, you want a topcoat that's acid-free or photo-safe. I chose Krylon's "Preserve It" spray that's meant to protect digital photo prints. It's easy to use and dries quickly.

Add the Glass—With the frames complete, you can have mirrors or glass cut to size at a hardware store or home center. Have them sized $\frac{1}{8}$ " smaller than the openings they'll fit into.

Then mount the mirrors with mirror-mounting tape, which should be available where you buy the mirror. It won't hurt the silver on the mirror.

For the photo frame, you'll also need to cut the $\frac{1}{8}$ " metal rods.

Now add a hanger to the back of each frame, mount them on the wall, and bring a new focus on style to your room. 

—Written by Kelsey Davis, illustrated by Matt Scott, project designed by Mike Donovan

PROJECT AT A GLANCE

DIFFICULTY: Easy Weekend Project

PROJECT COST: \$90 (four frames)

TOOLS: Circular saw, clamps, utility knife, hammer, sander, drill

SUPPLIES: (1) half-sheet $\frac{1}{2}$ " plywood, (2) $\frac{1}{2}$ " x $3\frac{1}{2}$ " x 72" poplar boards, (2) $\frac{1}{2}$ " x $5\frac{1}{2}$ " x 72" poplar boards, (4) sheets art paper (flocked silver on black, flocked silver on blue; Handmade-Paper.us), (1) sheet art paper for alternate mirror (Thai Batik Dancing Daisies; Handmade-Paper.us), wood glue, permanent marker, mirrors cut to fit frames, mirror tape, 3M Super 77 spray-mount adhesive, Krylon Preserve-It protectant spray, (4) sawtooth frame hangers, $\frac{1}{8}$ " steel rods (optional)

To select art paper to cover these frames, I visited Handmade-Paper.us. I was frankly blown away by the hundreds, maybe thousands of different types of art paper. It's made in every color and print you can imagine, but that's just the beginning. You'll find paper that looks like leather, leaves, metal, and more.



Flat, Flawless Drywall Joints

Many home improvement jobs require at least some drywall work. The display niche on page 66 is a perfect example. When that time comes, there's no need to hire a professional. With the right tools and a little know-how, you can tape and apply "mud" (joint compound) to the seam to produce a smooth, flat joint.

Tape the Joint—The first step is to apply a strip of special tape over the joint (Fig. 1). There are two types of tape:

mesh and paper. I use mesh tape because it's self-adhesive. That makes it easier to apply than paper tape, which requires applying a bed of mud underneath it.

Bring on the Mud—With the tape in place, it's time to apply the first coat of joint compound. The joint compound comes in one- or five-gallon buckets. As its name implies, it's used to fill the joints between sheets of drywall.

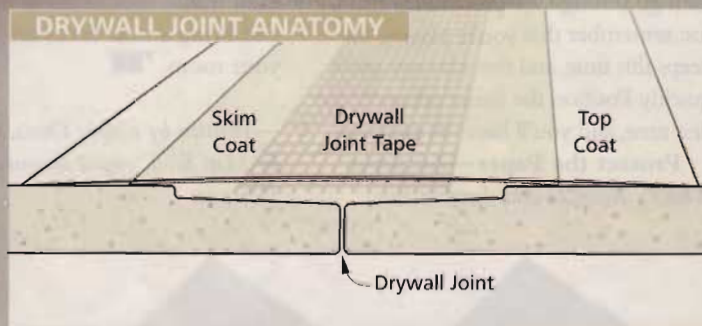
Before you begin "mudding," mix the compound to a smooth, creamy

consistency using a drill-mounted mixer. This removes any thick clumps or air pockets from the compound, which would make it difficult to get a smooth joint. Then just transfer some of the mud from the bucket to a tray, and you're all set.

Now scoop up some mud with the knife, and spread it along the joint, filling the seam (Fig. 2). The goal here is to create about a 1/16"-thick layer of mud. Go over it several times to make it smooth and flat.

One thing you'll find is that the mud at the edges of the joint will still be fairly thick, so you'll need to scrape that smooth. To do that, hold the knife at a slight angle as you scrape along each edge (Fig. 3). Then make another pass over the center of the joint to smooth it.

The smoother the joint is, the less you'll have to sand later, so it's worth taking some time with this process.




Also, in most cases smooth the compound *along* the joint line (not across it) to avoid creating any ridges.

Time to Sand—As the compound dries, it shrinks. This leaves a small recess along the joint that needs to be filled with more joint compound. But before adding more, sand the dried compound to get it as smooth and flat as possible (Fig. 4). Then carefully wipe away any sanding dust.

Applying More Mud—When applying the next coat of mud, the idea is to gradually “feather” the edges to create as thin a layer as possible between the compound

and the wall. Essentially, you want to avoid creating a visible “hump” on the wall surface (Illustration, page 80). That’s where a wider (10”) knife comes in handy. Scoop mud onto this knife along the entire length of its edge, and then apply it just like before, spreading a smooth, even layer (Main Photo, page 80).

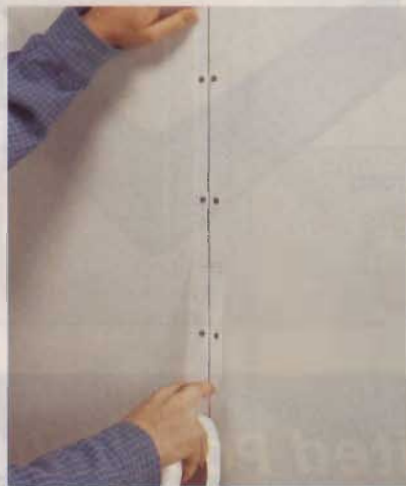
After letting the second coat of compound dry, sand it smooth. If any bumps, ridges, or imperfections remain, apply another coat of mud, and sand again. Once you’re satisfied, wipe off the dust, and you’re ready to paint. 



TOOLS OF THE TRADE

A basic set of drywall tools and supplies should include the following:

- > Drywall joint compound
- > Mesh drywall joint tape
- > 6" and 10" drywall knives
- > 220-grit sanding screens and block
- > 14" drywall mud tray



1] Stick the self-adhesive mesh tape directly over the drywall joint. Use your hand to smooth it along the joint line.



2] Hold the knife almost vertically to the seam, and firmly press the mud into the joint as you move along it.



3] The edges may end up fairly thick, so smooth them out with a stroke down each side, and then one down the middle.



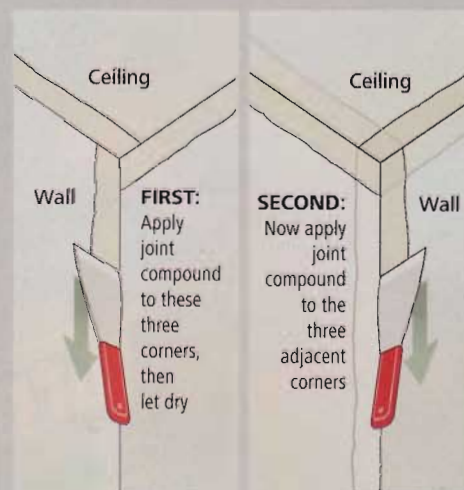
4] When the mud dries, smooth it by making long strokes with a 220-grit sanding screen on a block.



INSIDE CORNERS

Inside corners are tough because you end up with a lot of extra mud, and you can’t work one side of the joint without messing up the other one.

To avoid that, load only half the knife with compound to create a narrower line (Photo, above). Also, follow the sequence shown below to mud one side of the joint first, and then the other.





NOT A KNOT PERSON?

TieHook Ties Itself

This self-tightening cleat fits most truck racks and makes securing a load as simple as tugging on the rope.

Been a few years since you earned a merit badge in knot tying? No problem. Buy a TieHook.

For about \$40 you can get the setup shown above. It's available to fit round- or

square-tubed truck racks and can even be adapted to integrated systems on Toyota and Nissan trucks.

The system works with a spring-loaded cleat that slides along a bar and then locks



The all-metal TieHook has three cleats—two fixed and one sliding—that make it easy for even the knot-impaired to secure loads on a truck rack.

in place when the proper rope tension is achieved. It ties incredibly quickly and releases just as fast.

Also, the TieHook doesn't attach permanently to your rack, so you can

reposition it as often as you need. And if you sell the truck, keep the TieHook!

Visit TieHook.com for a video of how these work and for purchase options. You can also call 415-462-0599.



JOINT COMPOUND WITH

Heavy Dust

The dust raised by sanding joint compound may be the messiest by-product of remodeling known to man. It's super-fine, and keeping it contained within the project area is almost impossible. It *will* catch a draft and it *will* permeate the rest of the house. Unless, of course, it's too heavy to float on air.

This is precisely the idea behind Sheetrock brand Joint Compound with Dust Control from USG. This joint compound is formulated so that dust particles will bind together and create a "heavy dust" that falls straight to the floor.

A 3½-gallon pail of the joint compound sells for about \$13. Visit DownWithDust.com to learn more about the material or to locate a dealer in your area. Or contact USG's product information department by calling 800-874-4968.



WARM TOWEL DRAWER

In a perfect world, bread, stethoscopes, and towels would always be warm. I can't help you with the first two, but for warm towels, check out the Home Spa Towel Warming Drawer from Jacuzzi. It heats towels to a toasty warm 120 degrees in just 15 minutes.

Of course, comfort doesn't come cheap: a 24"-wide version of the towel-warming drawer will set you back \$1,980.

For more information, you can visit Jacuzzi.com or call 800-288-4002.

DAP STIK ADHESIVES

Glue for All Occasions

Whatever you need to hang, repair, or otherwise adhere, chances are one of the new DAP “Stik” adhesives is just what you’re looking for. The five adhesives that make up the Stik line, and some of their intended uses are:

Spray ‘N Stik—An aerosol spray glue that foams as you apply it, so you can see what you’ve covered. It dries clear, won’t turn yellow, and it’s safe for most surfaces. The glue is perfect for cardboard, photos, and fabric.

Stik Arounds—These are pressure-sensitive adhesive dots and lines that come on rolls of paper backer. Just remove them from the

backer, and press them onto whatever you’re trying to adhere. These are much cleaner and easier to use than liquid glues, tacks, or magnets. They’re ideal for mounting pictures, hanging posters, or securing collectibles.

One Stik 2—These dual-applicator glue dispensers have a thin tip for control and a wide tip for spreading more glue. Choose from permanent or repositionable formulas.

Strong Stik—This is an instant-grab construction adhesive. It’s strong enough for vertical or overhead applications and works on most surfaces. It also cleans up with

soap and water and is great for indoor or outdoor projects.

Blue Stik—This removable adhesive putty is a great replacement for tape, tacks, staples, and magnets. It won’t chip paint or put holes in the wall. Use it to hang decorations and notes.



STIK adhesives from DAP are low-odor, low-mess adhesives for every gluing job. Visit DAP.com or call 888-327-8477 to find a retailer in your area.

OWENS CORNING BERKSHIRE COLLECTION

Asphalt Slate

If you’ve longed for a slate roof, or if you have an old one that needs replaced, you know that real slate is cost-prohibitive. That’s why Owens

Corning developed the Berkshire Collection of asphalt shingles.

The Berkshire shingles are constructed to simulate the random colors and variations in texture that are the trademark of natural slate, but at a fraction of the cost of the real thing.

Backed by a limited lifetime warranty, the shingles also include 15-year algae-resistance protection.

For more information on the Berkshire Collection, or to locate a supplier in your area who can provide pricing, call 800-438-7465 or visit OwensCorning.com.



The natural variations in tone and texture that distinguish slate shingles are now available in a more affordable asphalt alternative.


WD-40 IN A PEN

It lubricates; it cleans; it protects. It also smells terrible and gets everywhere. It’s WD-40, and we’d be lost without it.

Hey, we all love the stuff. But you have to admit: It’s messy. Or, it was messy. Until they put it in this cool little pen. Now it only goes where you want it to go. And it doesn’t make the kitchen smell like your mechanic’s garage just for the sake of quieting a squeaky hinge.

You can find the WD-40 No-Mess Pen in most hardware stores and home centers for about \$4.

Tool Report

A less-burly belt sander, a picture-perfect drill, and a cordless nailer that'll drive most anything.

COMPACT SANDER — "Don't blame the sander." That's the helpful advice I got from one of the other editors here when I complained about my monster belt sander gouging my projects. He told me that belt sanders are notoriously hard to control, and if I hadn't mastered it yet, well, it's not the tool's fault.

Maybe. But I got rid of that oversized belt sander anyway. It's been replaced by **Porter-Cable's model 371K Compact Belt Sander (1)**. This little Armadillo-looking sander (or is it more of a roly-poly bug?) cranks 5 amps of power, drives a 2½" × 14" belt, and weighs just over 5 pounds. If you're doing the math, that means it has about half the weight, power, and belt capacity of Porter-Cable's next larger model (352VS).

So will you notice the decreased capacity? Sure. If you're sanding the deck of a battleship. Otherwise, not so much. What you're more likely to miss is the variable speed of larger, pricier models. This is mitigated, at least partially, by the lighter weight and better ergonomics, which make for better control. Plus, the reduced size, removable front handle, and flush-side design of the sander mean it can work in tight areas that larger sanders couldn't possibly get into. And while this sander isn't exactly gouge-proof, the low rear housing will keep you from digging in too deep. Look for the sander in hardware stores, home centers, and online for about \$130.

KNIFE GUIDE — What is it about utility knives that makes them prone to wandering away from a straightedge? Whatever it is, it can make for some pretty irregular cuts. And even worse, it can cause a nasty injury if the blade "wanders" right into your other hand (surely I'm not the only one this has happened to).

Well, it has happened for the last time because lately I've been using the **Guardian Knife Guide (2)** from Saw Trax. The Guardian consists of a utility knife with a stainless steel bracket attached to it and an aluminum guide track.

The bracket rides on the guide track, so the knife can't wander off the straightedge. So far I've used this for scoring drywall, cutting vinyl flooring, and trimming photo mats to fit inside picture frames. It works flawlessly. And when it gets dull, simply snap a section off the segmented blade, and you're back in business.

The one downside to the Guardian is the price. The 36" kit I've been testing sells for about \$80. A 54" version will cost nearly \$100. I guess it will take lot of cutting (or maybe just one real bad one on your hand if you're *not* using a Guardian) to justify the price.

NUMBERS BAD, PICTURES GOOD — How do the numbers 1 through 26 correlate to drilling holes and driving screws? Don't know? Few people do. Which is why the clutch on drill/drivers rarely gets used correctly. Most clutches, which regulate how much torque gets transferred to the bit, are labeled with numbers. But it's not clear how these numbers relate to the screw or drill bit you're using. Fortunately, Black & Decker has bridged that gap in logic with their new **Firestorm Cordless Drills with Smart Select (3)**. In short, they've replaced the numbers with icons. Just match your job to the nearest representative icon, and the drill is set to the right torque and speed. Firestorm drills in 12-, 14.4-, and 18-volt versions are available exclusively at Lowe's home centers starting at about \$60.



1 Porter-Cable
371K Belt Sander



2 SawTrax
Guardian Knife Guide



3 Firestorm Drills
With Smart Select



THE BEAT GOES ON—The original “cordless nailer” was called a hammer, and it worked with just about any type of nail. Interestingly enough, the latest cordless nailer uses essentially the same technology as the original: It hits nails repeatedly on the head until they’re driven in. And it works with virtually any nail.

The key differences are speed and energy expended. The 18-volt **GMC Strike Allnailer** (4) drives nails much faster than a hammer and requires just the pull of a trigger to do it.

The adjustable jaws of the nailer grip nails with heads up to $\frac{3}{8}$ " in diameter. Pull the trigger, and an internal anvil delivers 5,500 beats-per-minute to drive nails up to 6" long.

Look for the Allnailer on Amazon.com for about \$150.



4 GMC Strike Allnailer

FOR MORE INFO:

Porter-Cable Belt Sander
Porter-Cable.com
 888-848-5175

SawTrax Guardian Knife Guide
SawTrax.com
 888-729-8729

Firestorm by Black & Decker
FirestormTools.com
 800-544-6986

GMC Strike Allnailer
GMCCompany.com
 866-307-0132

Ryobi Cordless Sander
RyobiTools.com
 800-525-2579

RANDOM CORDLESS—The **Ryobi P410 Random-Orbit Sander** (5) is the latest addition to the Ryobi One+ system and the first example of a true random-orbit sander that uses battery power.

Of course, because it’s part of the One+ system, the 18-volt battery is sold separately. The idea is to save you money if you already own Ryobi 18-volt tools and batteries. It’s a good system. And it’s a good sander, especially for touch-up work or finish sanding.

The sander uses standard 5" hook-and-loop sandpaper and turns out 1,100 orbits per minute. It’s available exclusively at Home Depot for about \$40.



5 Ryobi P410 Sander

One time Offer

\$99.00

New

Moisture Meters can help you avoid frustrating moisture problems such as shrinking, warping, failed gluelines, loose joints, etc. Also ideal for lumber drying, to find out if the wood is finally dry enough to use.

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Product Information Number 221

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Product Information Number 222

GARAGE

Floor Facelift

Snap-together plastic tiles protect garage floors—and look great doing it.

Let's face it—whether it's from dirt, mud, motor oil, or chemicals carried in by your car's tires in the winter—garage floors take all kinds of abuse. And the results can be cracked, pitted, or stained concrete.

One way to protect concrete floors and cover unsightly stains is with rigid plastic floor tiles. These 12" x 12" interlocking tiles simply snap together to create a sturdy floor covering that protects concrete from harsh chemicals.

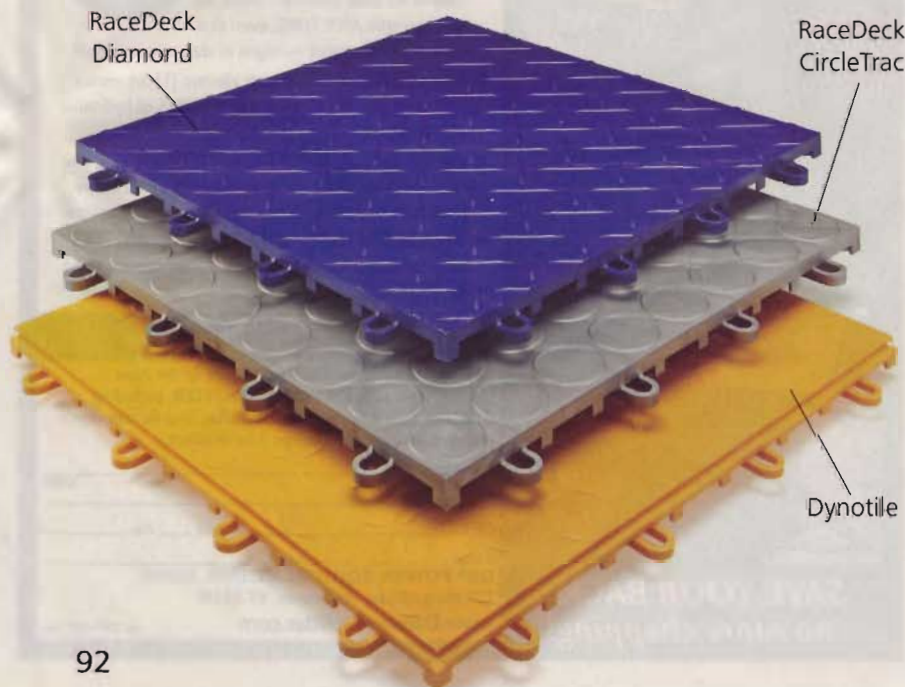
The tiles are sturdy enough to drive on. Plus, they help smooth out irregularities on uneven floors. Embossed patterns in the tiles make them slip-resistant, and they clean up easily—just sweep up dirt, or clean spills with a hose or a mop and warm water.



Colorful Options—Garage floor tiles are available from a number of manufacturers in a wide variety of colors and patterns (see the Buyer's Guide on page 93). Most

sell for around \$3 a square foot. RaceDeck tiles (shown in the Photo above and in the top two tile samples, below left) also feature a number of unique accessories, such as open-grid tiles, customized tiles with logos, and even parking guides, that make them even more useful or attractive (Sidebar, right).

Another manufacturer, Dynotile (the bottom tile at left), has a slightly different twist on the tile design. Their tiles actually overlap to create a nearly impenetrable seam. When



Rigid plastic tiles manufactured by RaceDeck (upper two tiles) and Dynotile (bottom) feature tab and loop systems that "lock" together to create a sturdy floor. Note the integral lip on Dynotile's floor system. The lips on these tiles form overlapping seams that seal out water.



To install the tiles, line up the tabs on one tile with the loops on the other, and lightly tap the seam with a rubber mallet.

fitted together, this overlapping design prevents water, dirt, or other debris from seeping through the tiles to the floor below.

Easy Installation—Regardless of the brand you choose, installing these tiles is, quite literally, a snap.

If you take a closer look at the tiles in the *Bottom Photo* on page 92, you can see that two sides of each tile have small loops, while the other sides have small tabs that fit down into these loops. To install them, all you have to do is lay a tile down with the loops facing out toward the garage door. Then align the tabs on the adjoining



If you need to trim the tiles to fit, just use a circular saw. A 40-tooth carbide blade produces crisp, clean cuts.


tile with the loops, and tap them together with a rubber mallet (*Photo, above left*). The process is so simple that you can cover an entire garage floor in a few hours.

If you want to install the tiles from wall-to-wall, you may need to cut them to fit the edges and corners of the garage. That's easily done with a circular saw, as shown in the middle *Photo* above. Or if you'd prefer to only cover a small section of the garage floor, you can get tapered edging and corner pieces.

These edging pieces also make a great transition at the garage door



Install tapered edging and corner pieces to create a smooth transition between the tiles and the surrounding floor.

opening, as they allow cars to roll smoothly up onto the tiles. And just like the tiles, these edging and corner pieces lock together using the same convenient tab-and-loop system, as shown in the *Photo, above right*. 

BUYER'S GUIDE

RaceDeck
800-457-0174
RaceDeck.com

Dynotile
866-605-8700
Dynotile.com

Lock-Tile
888-562-5845
LockTile-USA.com

Gladiator
866-342-4089
GladiatorGW.com

RevTek
800-585-0922
RhinoCourts.com

Absolute Garage
515-254-0040
AbsoluteGarage.net

3 WAYS TO ACCESSORIZE YOUR GARAGE FLOOR



These open-grid tiles (called Free-Flow from RaceDeck) direct water or snowmelt into a drain below.



Some companies offer customized tiles. The design can fit on one tile or spread across multiple tiles.



Two small "lifts" in RaceDeck's AccuPark tiles let you know when you've pulled the car in far enough.



BOX BEAM CEILING

Before the days of engineered lumber, homes often relied on heavy beams that spanned between walls to support upper floors and roofs. When left exposed, these beams became stylish in addition to being structural.

Modern floor joists and roof-truss systems have eliminated the structural need for these big beams, but you can recreate their look by building hollow "box beams" that make a strong style statement in any room.