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EDITOR'S NOTES

"You'll be amazed at the amount of valuable space even a modestly sized closet has to offer — space that can be used to organize your home."

It's a good thing closets have doors. With the doors closed and the clutter hidden from view, it at least provides us with the illusion of a well-organized home. Of course, the real question is why we bother to keep all that stuff in the first place. Professional home organizers (yes, there really is such an occupation) recommend getting rid of anything that hasn't been used in the past year.

Okay, so what if you actually were to follow their advice? First, you'd see a lot more garage sales. (By all means, resist the temptation to go.) And second, you're likely to discover at least one over-filled yet underutilized closet.

Now don't be surprised if the full potential of that closet isn't immediately apparent. But remove those old clothes, storage boxes, and other seldomly used items, and you'll be amazed at the amount of valuable space that even a modestly sized closet has to offer — space that can be used to organize your home.

From Closet to Office — One such closet was the inspiration for our cover story that begins on page 50. In it, you'll see how we converted a standard closet with bi-fold doors into a fully functioning home office.

Bedroom Makeover—Another underutilized closet was the impetus for our cottage-style bedroom makeover (page 40). By recapturing space from a long, narrow closet, we created a cozy nook that houses a daybed, trundle bed, and display shelving. It's just another example of finding useful space in unexpected places.

Tim

"An underutilized closet may not seem like the ideal home office space, but with some creativity, a collection of "off-the-shelf" items, and just a few specialty pieces, it soon will."

—page 51

easy weekend



Easy Deck Redo

Give your tired deck a bold new finish. It only takes two days—one to strip off the old finish, and one to apply a new one.

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Curved-Rail Wine Rack

Store a few bottles of your favorite wine and add a stylish touch to your decor with this curved-rail wine rack. You can build one in no time.

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Make your own seat cushions and save hundreds. And here's the best part—there's no sewing required!

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Instant Home Office

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Cut the clutter with this roll-around recycling center. It holds four bins that offer organized storage, and its simple design makes it a great project to build with your kids.

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- Slide Shows: Deck Refinishing; Faux Wall Finish
- Free Online Article: Refinishing Hardwood Floors

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ReStore: GREAT BARGAINS THAT

Support a Great Cause

If you're looking for materials for your next home project, there may be an easy way to get good stuff at a good price while simultaneously supporting a worthy cause.

Looking for home-improvement bargains? Just visit the ReStore in your area.

ReStores are retail outlets run by local affiliates of Habitat for Humanity, an organization with the goal of eliminating homelessness and "poverty housing" in the world. Habitat is well known for its efforts to build affordable homes, but many people aren't aware of ReStores.

There are now more than 500 stores in the United States and Canada. At most ReStores, you can buy an array of new and

used building materials and supplies, from unopened cans of paint to windows, doors, flooring, appliances, and just about anything else. Some ReStores even carry home furnishings and thrift-store items, such as clothing and shoes.

Regardless of what the store stocks, the selection changes constantly. That's because almost everything is donated by homeowners, contractors, other retailers, and community organizations. Some ReStores also run a "deconstruction" program, in which they carefully tear down homes

to preserve and resell the building materials. This activity is well worth the effort, because as much as 85 percent of the material in an average home can be recycled or reused, according to B.J. Perkins, Habitat's National ReStore Coordinator.

Whether they're donated or deconstructed, these materials serve good causes in a number of ways. First, they're affordable for people of modest means. Second, ReStore revenues help local Habitat affiliates cover their overhead and expenses. In many cases, ReStore profits allow a local affiliate to work on ten or more extra housing projects than they would be able to without the proceeds. Finally, ReStores put old building materials to use, rather than into landfills.

Of course, anyone can shop at the ReStore. And after you've been once, you're likely to go back again and again to see what they have in stock.

Even if you don't need materials, you should keep your local ReStore in mind



The idea of the ReStore is simple: Sell good new and used building products at a fraction of their original cost to finance homebuilding projects for Habitat for Humanity.



ReStores often carry brand new overstock items, such as these wallpaper rolls.

as a place to take reusable materials that you remove from your home during a remodeling or renovation project. Your donations support a good cause and may be tax deductible.

To find out more about the ReStore, contact your local Habitat for Humanity affiliate. Or log on to Habitat.org, and then look under "Support Habitat." Along with information about ReStores, you'll find a state-by-state listing of ReStore locations.



One item often in ready supply at the ReStore is kitchen cabinetry. You might not find the latest style, but you will find bargains well-suited for creating garage or basement storage.

WAYS TO ALWAYS SAVE WATER

ELEVEN EASY WAYS TO Reduce Water Use

If you ask people how much water they use in a day, chances are they'll grossly underestimate the amount. In fact, most of us wouldn't even come close.

The surprising answer is that when you consider showers, brushing teeth, laundry, dishwashing, flushing toilets, etc., it's easy for one person to use 60 to 100 gallons of water every day. I'll do the math for you: That's up to 36,500 gallons of water every year.

Many of us don't notice our water-usage habits because water is relatively cheap in most areas. But the price is going up as treated water becomes more costly to make available.

Thankfully, most of us can reduce our water

consumption with a few simple common-sense ideas. And the folks at Kohler Company, a leading manufacturer of plumbing products, want to help. Here are a few ideas they offer for conserving water.

IN THE KITCHEN:

- » Capture running water while waiting for the temperature to change. Then use this excess to water plants.
- » When washing dishes by hand, use as little water as possible, and use only the required amount of dish soap. When rinsing, put the dishes in a rack to rinse them all together, and use short bursts instead of letting the water run constantly. If you wash



Most people would be astounded by how much water runs down their kitchen faucet unused. That's why even a little effort toward conservation can pay off with big savings.

dishes using the the dishwasher, use appropriate water and energy settings.

- » Keep a container of drinking water in the refrigerator. With cold drinking water on hand, you'll waste less than you would while waiting for the water to change temperature for each glass.
- » Do not defrost frozen food with running water. Use the microwave or the refrigerator instead.
- » When cooking, use only the amount of water required; this reduces the amount of water wasted when straining.

IN THE LAUNDRY ROOM:

- » Match the water level with your load size. If your washing machine doesn't allow manual water-level adjustment, wait until you have a

full load before running your machine.

IN THE BATHROOM:

- » Turn off the faucet while brushing your teeth, and rinse out the sink when you're finished.
- » Capture shower/bath water while waiting for water to change temperatures: This excess water (often called "gray water") can also be used for watering plants.
- » Don't wait for the water to get hot before filling the tub for a bath. Put in the plug, and adjust the water temperature as the tub fills.
- » Do not use the toilet as a garbage can: Only flush the toilet when disposing of sanitary waste.
- » Turn off the water while shaving: Fill the bottom of the sink with a few inches of water to rinse your razor.



You can save hundreds of gallons of water every year by doing simple things, such as shutting off the bathroom faucet while you brush your teeth or shave.

90 times a kitchen faucet gets turned on per day, on average (according to Grohe America, Inc.)

2.2 gallons-per-minute of water that flow through a standard kitchen faucet



NATIONAL TRUST APPLAUDS PRESERVATION OF Local Character

Before chain stores and strip malls, every town had a flavor of its own. Whether that came from geography, architecture, or lifestyle, there was something that made one community different from the next. Today, some communities are fighting to regain that individuality, and the National Trust for Historic Preservation is rewarding those efforts.

For the past eight years, the National Trust has compiled an annual list of a Dozen Distinctive Destinations. Each of these towns, some large, some small, have

worked hard to preserve their individual character.

Winners for 2007 include communities as diverse as the quaint mining town of Durango, Colorado (Photo, right), and the urban chic of West Hollywood, California. Though all twelve towns are different, they share common traits. Most importantly, their residents have worked to prevent the destruction of historic buildings, protect against sprawl, make the communities more livable, or simply preserve their local character.



PHOTO: JIM JACOBSON FOR LOCAL PRESERVATION SOCIETY

The Durango & Silverton railroad carries visitors around Durango, Colorado. In operation for 125 years, the railroad helps preserve this mining town's unique character.

To date, there are 96 Distinctive Destinations located in 41 states. So if you're looking for a quick vacation in a unique spot, chances are you may have

one that's located within easy driving distance.

To learn more about all the Distinctive Destination communities, pay an online visit to NationalTrust.org.

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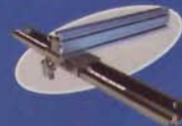


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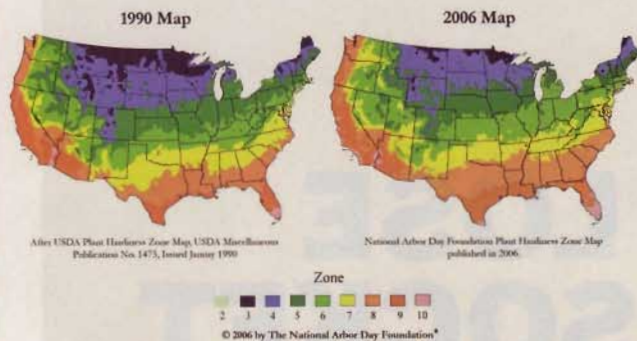
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Compare the USDA hardiness zone map (left) to the Arbor Day version (right), and you may agree that the country is getting warmer.

ARBOR DAY PRODUCES NEW Zone Map

According to the National Arbor Day Foundation, the country is getting warmer. That's demonstrated by the new hardiness zone map that the Foundation recently published (*Illustrations, left*).

This map, which is similar to the hardiness-zone map produced by the United States Department of Agriculture (USDA), divides the country into zones based on the average annual low temperature. Each zone represents a 10-degree increment.

For gardeners and anyone looking to plant trees, the map is invaluable. That's because many trees and perennial plants carry a rating for which zones they can thrive or survive in. So as long as the item you want to plant matches up with your zone, you can be reasonably assured that it will withstand the hot and cold temperatures that it's likely to encounter.

On the new Arbor Day Foundation map, many areas have jumped north an entire zone. That means the average winter lows are 10 degrees warmer than they were in 1990, the last time the USDA published its map.

The Arbor Day Foundation based its new map on data from 5,000 National Climatic Data Center cooperative stations across the continental United States. After compiling all the temperatures recorded, the Foundation decided that a change to the map was in order.

So far, the USDA has not revised its hardiness zone map to match the new Arbor Day Foundation version, so you may want to compare both maps if you're unsure about just which zone you're in.

You can view several more illustrations of the old and new maps and the areas that have changed, as well as an animated comparison of the 1990 and 2006 maps, by logging onto ArborDay.org.

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PROPER MATERIALS & CLEAN DUCTS ENSURE

Safe Dryer Venting

Q: My dryer vent is made of white, flexible tubing. I heard that this may be unsafe. Is it, and if so, should I replace it?

David Briggs
Des Moines, IA

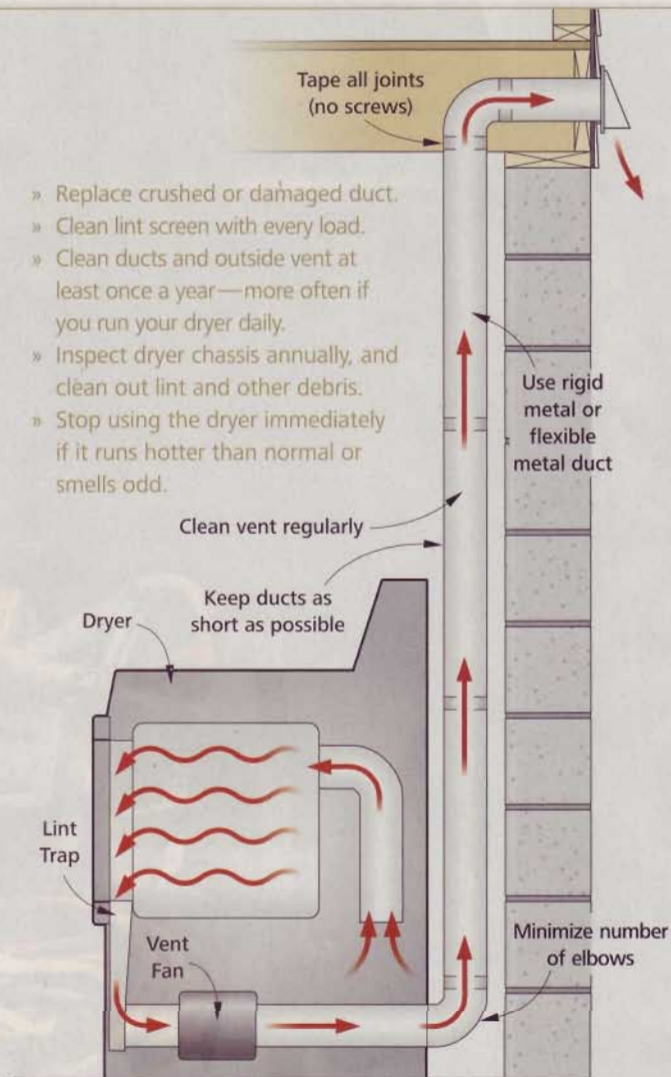
A: Flexible vinyl dryer vent hoses are unsafe. They trap a lot of lint, which can get hot enough to catch fire. And they can easily be crushed, which may cause the dryer to overheat. That's why flexible vinyl hose is now prohibited by most building codes and why using it can void the dryer warranty.

If you don't think these fire hazards are cause for alarm, consider that the Consumer Products Safety Commission estimates that clothes dryers cause 15,000 fires each year.

Safety concerns aside, keep in mind that restrictive or clogged ducts mean your dryer must work harder and run longer to dry your clothes. And that costs you money.

For effective, safe dryer venting, replace the flexible vinyl duct with rigid or flexible metal duct. Be sure to follow the guidelines and tips in the *Illustration* at right to keep the ducts free of lint clogs.

- » Replace crushed or damaged duct.
- » Clean lint screen with every load.
- » Clean ducts and outside vent at least once a year—more often if you run your dryer daily.
- » Inspect dryer chassis annually, and clean out lint and other debris.
- » Stop using the dryer immediately if it runs hotter than normal or smells odd.



A nut and locking pin allow you to adjust the force of a hinge-pin closer.

MAKE ANY DOOR SELF-CLOSING WITH Spring Hinges

Q: I'd like the door between my mudroom and kitchen to close automatically. Is there an easy way to accomplish this?

John Hockins
Duluth, MN

A: The easiest way to make a door self-closing is to install a hinge-pin closer (*left*). It replaces the pin in the existing hinge, so it's simple to install, and it only costs about \$5.

On a heavy door (such as a steel door), you may need to install adjustable spring hinges (*right*). They replace the existing hinges and cost about \$18 each.



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Mail: Ask Workbench, 2200 Grand Ave.,
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GET WITH THE PROGRAM TO Cut Cooling Costs

Q: I'd like to install a programmable thermostat to save on my cooling and heating bills. Can I do that myself, or do I need to call a furnace repair person?

Kent Lowery
St. Louis, MO

A: Installing a programmable thermostat is a great way to decrease your cooling and heating costs. Claims vary, but it's reasonable to expect a savings of 10 to 20 percent.

Installing a programmable thermostat is easy. After shutting off the furnace and air conditioner, remove the old thermostat. The dial will either pop off or unscrew, revealing wires connected to the wall plate. Each wire connects to a terminal that is marked with a letter. Remove one wire at a time, and mark it using the labels that come with the new thermostat (*Photo, above right*). Then remove the wall plate.

Next, install the wall plate for the new thermostat using screws and hollow-wall anchors. Make sure the plate is level. Then reconnect the wires to the terminals on the new plate. Put batteries in the new thermostat, and snap it onto the wall plate (*Photo, right*). Now, all you need to do is program the thermostat for the times and temperatures you want.

When installing a thermostat, the most important step is to mark all the wires accurately when you disconnect the old unit. That way, you can reconnect them to the new unit accurately. The letter doesn't necessarily correspond with the wire color.



The "PEI rating" on a box label tells you about tile durability at a glance.

CHECK THE RATING ON THE LABEL TO

Determine Tile Durability

Q: I'm planning to install some tile, and I'm confused by the types. How do I tell the difference between floor tile and wall tile?

Jennifer Martin
Boston, MA

A: First, check to see if the usage is specified on the box. Wall tile is often marked as such. Next, look for a "PEI rating" on the box. Here's what the ratings mean:

Class 1: No Foot Traffic—For wall applications only.

Class 2: Light Traffic—For interior residential and commercial wall applications or residential bathroom floors only.

Class 3: Light/Moderate Traffic—For residential floors, countertops, and walls.

Class 4: Moderate/Heavy Traffic—For residential, medium commercial, and light institutional floors and walls.

Class 4+ (or Class 5): Heavy/Extra Heavy Traffic—For residential, commercial, and institutional floors and walls subjected to heavy traffic.

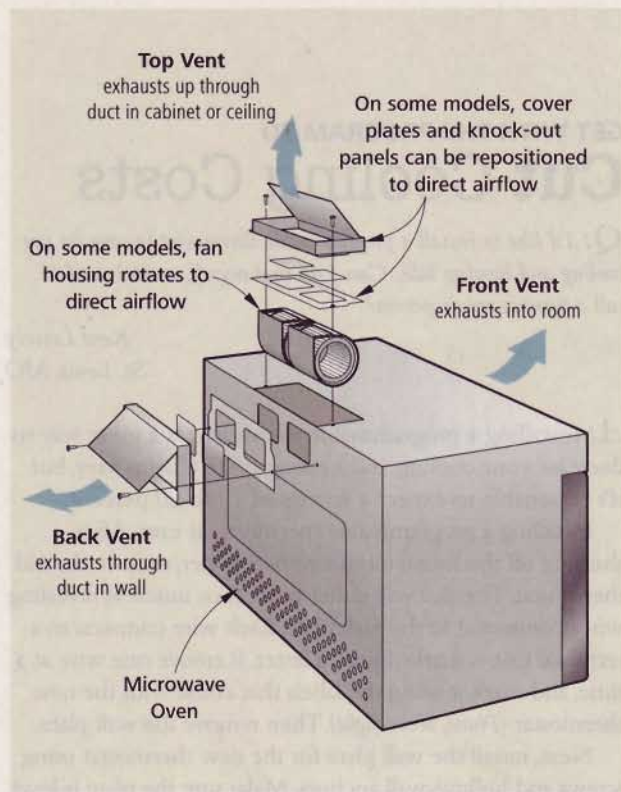
MAKE A SIMPLE CHANGE TO REROUTE Microwave Vent

Q: I have an over-the-range microwave that vents back into the room. Can it be converted to vent outside?

Marty Hernandez
Kansas City, KS

A: Most over-the-range microwaves can be vented three ways: back into the room, outside through the back, or outside through the top. This is done by either relocating cover plates around the oven's fan housing or by removing and repositioning the fan (*Illustration*). Check your owner's manual to determine whether your oven offers these options.

If your oven vent can be rerouted, then you'll just need to figure out how to run a duct to the outside. If the oven is located on an outside wall, or if you have an unfinished attic over the kitchen, then the process should be easy. If the oven is located on an interior wall or there's finished living space overhead, you may need to call in a carpenter for advice or assistance.



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Drop-Down Storage

Basement workshops are hardworking hubs of activity for do-it-yourselfers. But in tight quarters, space comes at a premium. Jim Mahan of Thompsons Station, Tennessee, adds extra storage in his shop by using the space between the floor joists overhead. To do that, he installed pull-down storage bins to hold his power tools and other building supplies.

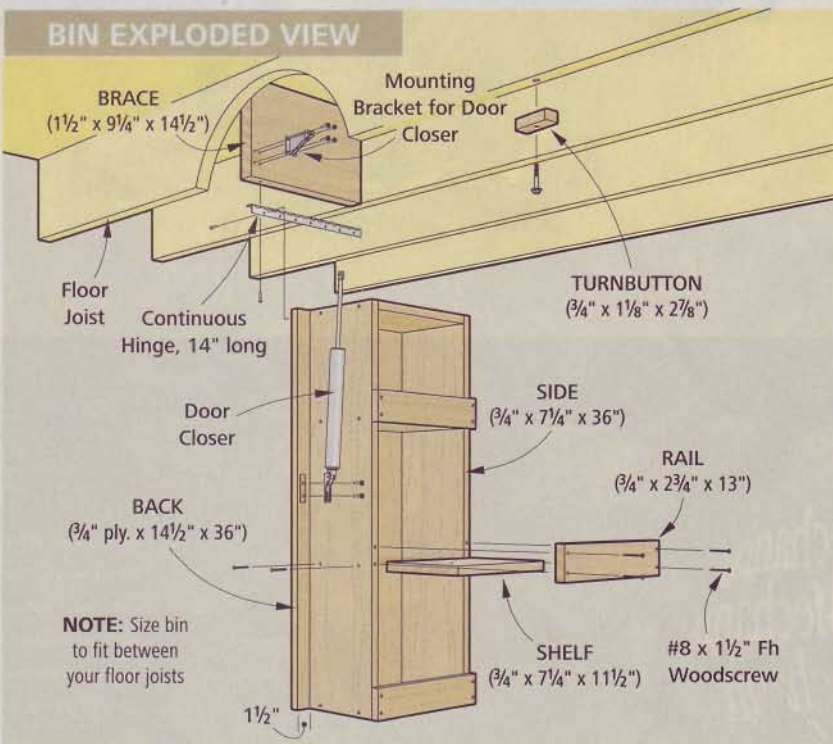
This handy drop-down bin is easy to build. It's just a box made of $\frac{3}{4}$ " plywood and pine that's sized to fit between the floor joists. Shelves divide the bin into compartments, and wide rails keep items from falling out.

After building the bin, it must be mounted securely. To do that, start by cutting a 2x10 brace to fit between the floor joists. Then attach a continuous hinge to the bin and brace. The bin is secured in its closed position with a wood turnbutton.

A screen-door closer gets attached along one side. It prevents the bin from swinging down too quickly and holds the bin in position when it's open.



This storage bin takes advantage of the last unused space in the shop—the space between the exposed floor joists. A wood turnbutton (left) "locks" the bin in place.



BEST TIP WINNER!

For his storage tip, Jim Mahan wins a Husky 1800 PSI portable pressure washer—a \$180 value!



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NOTE: Size bin to fit between your floor joists



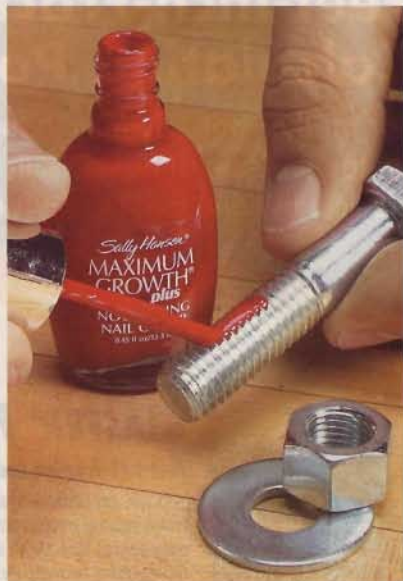
PLASTIC WRAP GRIP

Paint roller extension handles often loosen with use and make painting difficult because the roller can slip or fall off. To prevent that, Bob Kelland of St. John's, Newfoundland, covers the threads of the handle with plastic wrap before screwing it into the roller handle. The wrap tightens the connection, and it's easily removed when the job is finished.



SAVE "SAFETY SPECS"

Safety glasses often get scratched and dusty lying around in a workshop. To protect his glasses, Stanley Krasovic of Honesdale, Pennsylvania, stores them in soft sleeves that he makes by cutting the cuffs off socks.



HANDY THREAD LOCK

If you need to tighten a bolt but don't want to run to the hardware store for thread-locker, try this solution from Tom Snakett of Boise, Idaho. He brushes on a bit of nail polish, installs the bolt, and then threads on the nut.

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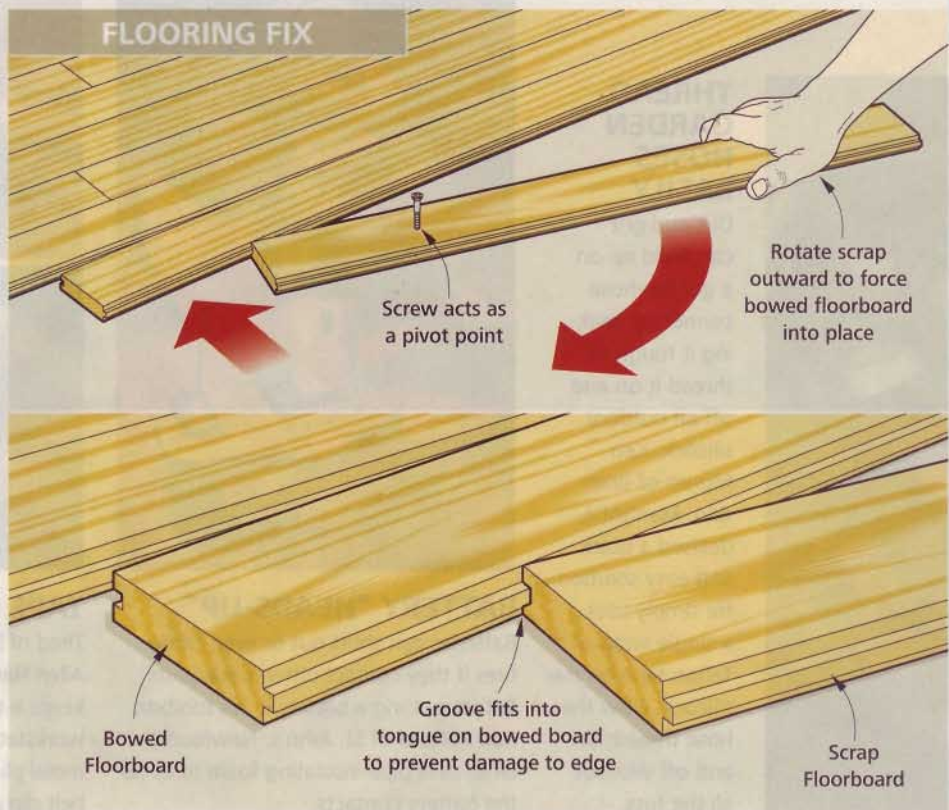
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LEVERAGE TAMES BOWED Flooring

If you ever come across a bowed board while installing tongue-and-groove flooring, don't throw it out. Many boards can be bent to your will using this simple tip from Tom McNulty of Princeton, New Jersey. To straighten the bowed plank, he uses leverage.

He sets a 2-ft. long section of scrap flooring against the bowed board at about a 30° angle, making sure to line up the grooved side of the scrap with the tongue on the bowed board. Then he drives a screw into the scrap about 6" from the end to act as a pivot point (Illustration). This creates a lever that can be used to push the plank into place. By rotating the opposite end of the scrap piece outward, it forces the bent board tightly into place for nailing.



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Electronically controlled heat element offers infinitely
variable heat from 100 to 200° C.
Built-in cut-off knife with palm-strike knob.
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work pieces.

Model 45-100 MI

EDGE BANDER

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THREAD GARDEN HOSES EASILY

Dirt and grit can build up on a garden-hose connector, making it tough to thread it on and off an outdoor sillcock. Ken Munro of Brandon, Manitoba, devised a quick and easy solution. He simply uses a single wrap of Teflon tape on the sillcock. Now the hose threads on and off without all the fuss.



BATTERY "HEADS-UP"

Batteries can short out or even cause fires if they contact other metal parts. Before putting a battery in his toolbox, Bob Kelland of St. John's, Newfoundland, uses pipe-insulating foam to cover the battery contacts.



TAPE MEASURE CLIP

Tired of hunting for your tape measure? Allen Hawley of Wappapello, Missouri, keeps a tape measure handy at each workstation. He bends hangers from metal plumber's strap to fit the tape's belt clip and screws them in place.



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SIMPLE STRATEGIES FOR SUCCESS WITH

Jig Saw Cuts

For cutting versatility, you just can't beat a jig saw. Here's what you need to know to get great results every time.

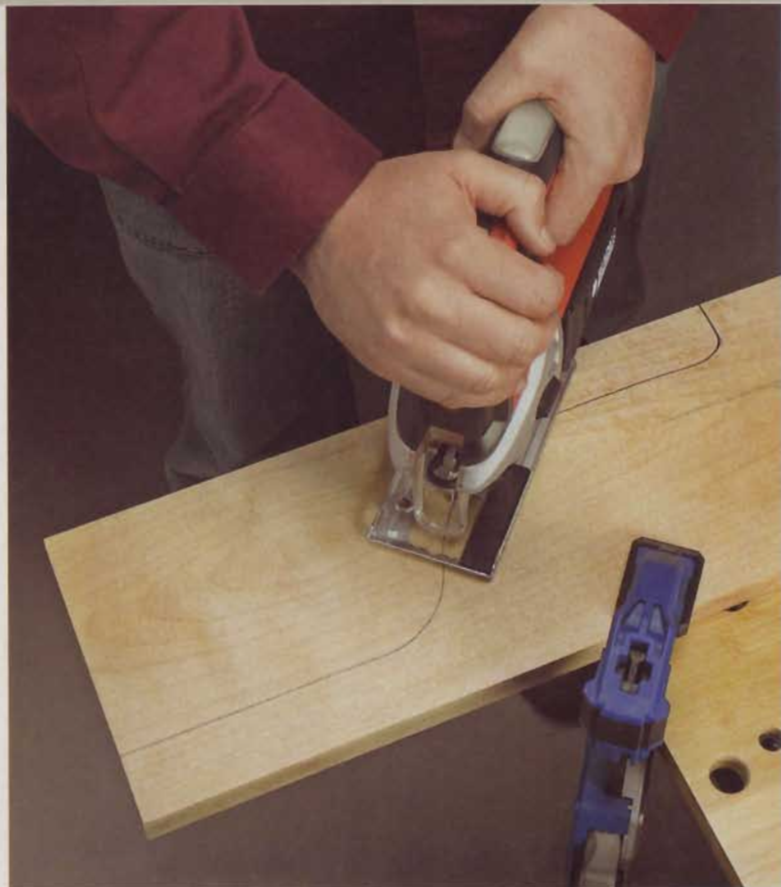
A jig saw is one of the most versatile tools you can own. With this one simple tool, you can make curved and straight cuts in wood (as are called for in our "Digital Hub" on page 72). You can also cut plastic, metal, and other materials.

Learn how to use a jig saw correctly, and it's also remarkably accurate and easy to control. You just need to select the proper blade for the task, set the saw to the correct cutting mode, and then guide the saw properly.

Choose a Blade—The biggest reason a jig saw is so capable is the wide variety of blades available (Photo, below).

For cutting wood alone, you'll find blades for fast cuts, smooth cuts, straight cuts, and tightly curved cuts. Plus, there are blades for cutting metal, plastic, acrylic, ceramics, and leather, among others. And you'll find general-purpose blades that cut about anything—just not as cleanly as a specialty blade.

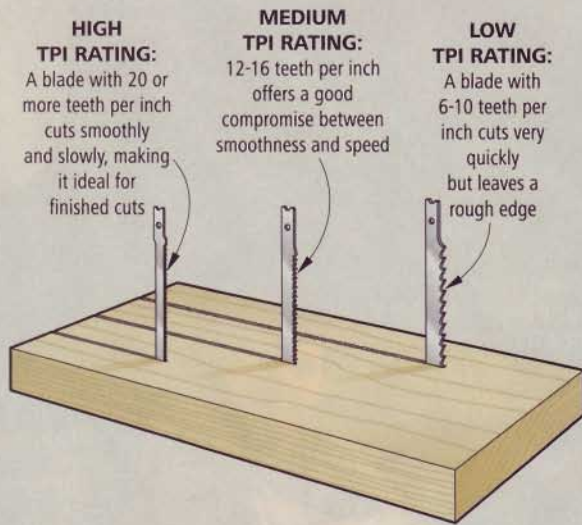
When selecting a blade, you also need to make sure it will deliver the quality of cut you need. That's based on the "tpi" rating, or teeth-per-inch (Illustration, right).



A jig saw easily tackles straight and curved cuts. To guide a curved cut, place one hand on the saw housing above the blade, and use it to pivot the saw. Push with the other hand.



Whatever cutting task you have, chances are good that you'll find a blade designed to match the material.



HIGH TPI RATING: A blade with 20 or more teeth per inch cuts smoothly and slowly, making it ideal for finished cuts	MEDIUM TPI RATING: 12-16 teeth per inch offers a good compromise between smoothness and speed	LOW TPI RATING: A blade with 6-10 teeth per inch cuts very quickly but leaves a rough edge
---	---	--

When selecting jig saw blades, pay attention to how many teeth per inch (tpi) the blade has. A low tpi yields a rough but fast cut. A high tpi produces a smooth, slow cut.

Use the Correct Mode—How a jig saw cuts is easy to understand: The saw moves the blade up and down rapidly, causing the teeth to cut through the material. You push the jig saw forward to keep the blade biting into uncut material as it works.

Some jig saws also offer an orbital cutting mode. In that mode, which is most useful for cutting wood or thick plastic, the saw rocks the blade forward on the upstroke (*Illustration, right*).

Orbital action can be adjusted from no orbit to aggressive orbit, usually with two additional settings in between. For fast cuts where smoothness isn't important, set the saw to full orbit. For the smoothest cuts, or for cuts following tight curves, turn the orbit off. Otherwise, you can experiment with the alternate settings.

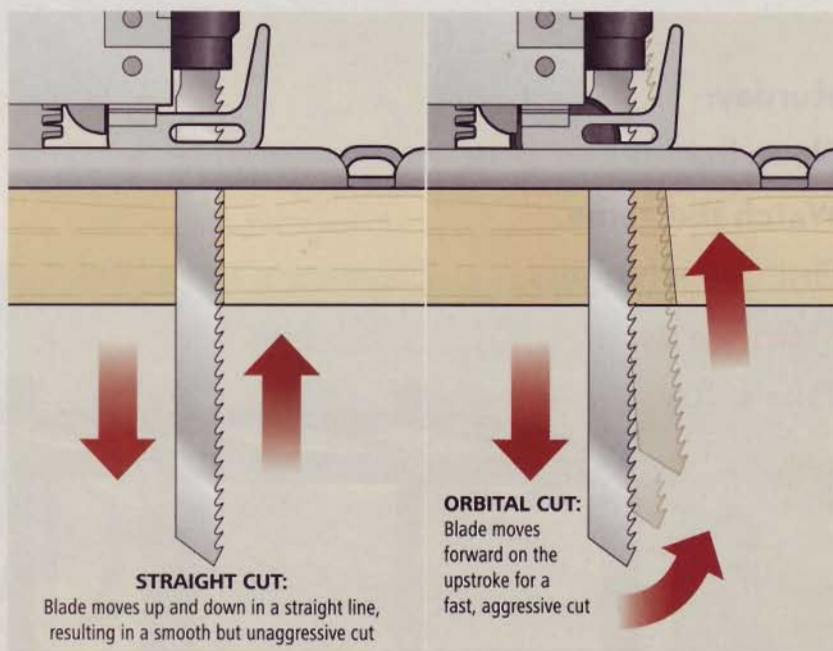
Some jig saws also offer variable speed, which may be controlled by a dial, or by how far you depress the trigger. Faster speed equals more cuts in the same amount of time. That can yield faster and/or smoother cuts. But for tough-to-cut materials, or for materials like plastic that melt if they get hot, a slow speed is a better choice.

Let the Saw Work—When cutting with a jig saw, the most common mistake people make is thinking that the harder they push the saw, the faster it will cut. But forcing the blade into the cut is counterproductive.

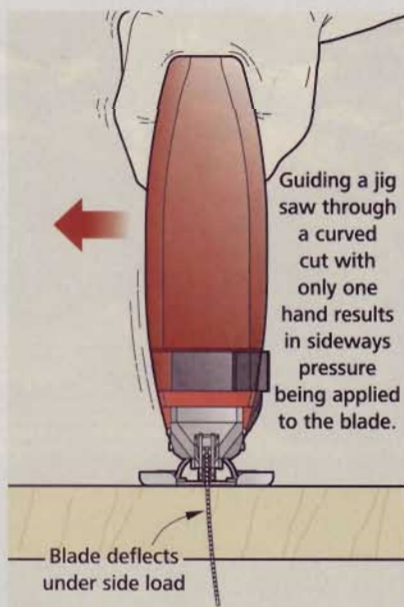
First, forcing the cut causes unnecessary friction. Plus, it keeps the teeth against the workpiece, which means there's no chance for the gullets (the spaces between the teeth) to remove the waste. Both of these conditions cause the blade to get hot, which dulls it quickly and can burn the workpiece.

At the same time, pushing aggressively forces the blade's teeth to "bite" too hard into the material. This can cause the blade to catch and kick the saw upward, which makes the jig saw jump around as it cuts.

Instead of forcing the saw into the cut, let the blade do its work, and



In straight-cutting mode, a jig saw blade moves straight up and down (*left*). In orbital mode, a roller behind the blade pushes the blade forward on every upstroke (*right*).



When cutting curves, avoid pushing the saw sideways, which flexes the blade and causes an out-of-square cut.

simply push the saw along at the rate it wants to go. Of course, you still need to keep a secure hold on the saw, and keep it firmly against the workpiece. Just don't force it forward.

Handle the Curves—Forcing a jig saw into the cut becomes even more problematic when making curved cuts. If you hold the saw with one hand only and push it around the curve, you end up inadvertently pushing the saw sideways as well. This causes the blade to flex and results in a cut that wanders off course and is not perpendicular to the surface of the workpiece (*Illustration, left*).

The first remedy for this is to slow your feed rate when making curved cuts. The second is to hold the saw with two hands. One hand goes on the saw housing directly above the blade, while the other hand goes on the handle as usual (*Photo, page 28*).

With this technique, your front hand does the "steering" by pivoting the saw to follow the curve. Your rear hand does nothing more than guide the saw forward, without applying any sideways pressure. With a little practice, you'll be cutting curves that are dead on every time. ■

—Written by David Stone, illustrated by Matt Scott

5 EASY STEPS TO A

“Re-Newed” Deck

Make your old deck look like new. It only takes two days to clean and refinish most decks. And here's the best part—it can be done without any scrubbing or sanding.

Decks are a funny thing—the worse they look, the more hesitant we are as homeowners to do anything about them.

Perhaps this is because deck refinishing conjures up visions of hot summer days spent on your hands and knees, endlessly scrubbing and sanding the old deck. And, of course, most of us would rather spend the

summer months actually *enjoying* the deck, rather than taking it out of commission for weeks on end to clean and refinish it.

If this is how you feel about deck refinishing, you'll be happy to learn that cleaning and refinishing a deck isn't the chore it used to be. Today's deck strippers and cleaners have virtually eliminated scrubbing and sanding. In fact, if you can get your hands on a pressure washer for a day, the cleaning and stripping process shouldn't take you more than a couple hours.

Also, today's deck finishes are so easy to apply that you can get good results even if you're a first-time refinisher. And the results are impressive, as you can see in the “Before” and “After” Photos above. Even a deck this old and gray can look like new with a thorough cleaning and a fresh coat of finish.



For this deck refinishing, we used a line of products from the Flood company. They include StainStrip (a stripper/cleaner for removing the deck's existing finish), Dekswood (a cleaner/brightener), and their CWF-UV5 cedar-colored stain (a semi-transparent, penetrating stain specifically formulated for wood that has weathered for at least one year).

Over the next few pages, we'll walk you through everything you need to know as a homeowner to refinish your deck this summer. And by “this summer,” we don't mean *all* summer. The entire process only takes about two days.



Flood is one of many companies with a refinishing product line. Stay in the same product family to ensure good results.



1] Use a synthetic bristle brush to apply the stripper/bleach solution to the rails and balusters.



2] On the deck boards, roll on the solution with a roller attached to an extension handle. This lets you work your way quickly across the deck. Instead of a roller pan, use a five-gallon bucket with a roller grid to prevent spills.

Off With the Old

Before removing the old finish from the deck, you need to do a bit of prep work. That starts with sweeping the deck, securing any loose boards, and, if necessary, replacing damaged boards.

In addition, you'll want to cover the plants around the deck with plastic to protect them from the cleaning solution. Also, to protect the paint, tape plastic on the walls that adjoin the deck.

The Correct Solution—Now you can strip and clean the deck. You can actually use a mixture of a stripper/cleaner to remove the existing finish, bleach to remove mildew, and water. Our deck had an existing finish, so we mixed a solution of one gallon of stripper, one gallon of bleach, and two gallons of water.

Work in Sections—This solution can damage wood if left on too long, so you only want to let it soak for about 20 to 30 minutes before rinsing it off with a pressure washer. For this reason, it's best to clean and rinse small sections rather than trying to do the whole deck at once.

Brush the Rails First—Start by brushing the solution onto the deck rails and balusters (Fig. 1). The dry wood will really soak this stuff in, so apply a



3] After letting the solution soak in for 20 to 30 minutes, spray it with a pressure washer. This high-pressure stream of water will remove finish, dirt, and mildew from the boards and make them look new again.

generous amount. Keep putting it on until the wood is saturated.

Roll on the Deck—For the deck boards, a roller attached to an extension handle is a great way to apply a large amount of cleaner quickly (Fig. 2). Here again, break the deck into sections, and rinse off the cleaner after about 30 minutes.

Wash It Away—When it's time to rinse, a pressure washer is the way to go. It allows you to blast off any dirt and mildew effectively (Fig. 3).

To avoid damaging the wood, set it at low pressure (about 2,400 PSI). Also, start with the nozzle held away from the surface, and gradually move it closer as needed.

Brighten It Up—If your deck is pressure-treated, that should be all there is to it. If your deck is cedar like this one, though, the bleach may react with the wood and darken it. To lighten the wood, apply a coat of cleaner/brightener (we used Flood Dekswood), and then rinse it off.

On with the New

After the deck dries for two or three days, you'll be ready to apply the topcoat. You have three options here: clear finish, semi-transparent stain, and solid-color stain (*Photos, below*).

As you'd expect, a clear finish allows the most wood grain to show through, so it's the best choice for preserving the natural look of the wood. On the downside, it's the least protective when it comes to blocking out sunlight, which can damage a finish.

If you want more protection against sunlight, use a semi-transparent or solid-color stain. The extra pigment contained in these stains, as well as added UV blockers, help preserve the finish against the sun's harmful rays.

It Takes Two—As you're getting ready to apply the topcoat to the deck, it's a good idea to recruit a helper for the day. This will allow you to work more efficiently, with one person applying the topcoat with a roller, and the other brushing it smooth and getting between the deck boards with a brush.



4] Stain the deck rails and balusters first. Use a small roller to coat most of the surfaces and a synthetic bristle brush to fill any areas where the roller can't reach. Also use the brush to smooth the stain with the grain direction.

Rails, Then Deck Boards—As far as the actual sequence goes, the same rule applies here as for cleaning: start with the rails and balusters. It's best to get these out of the way first, as they'll be tough to do once you start staining the deck boards. Use a brush or small roller for these (*Fig. 4*).

Once the rails and balusters are done, you can move on to the deck boards. Before you begin, plan where to start and stop, so that you can exit the deck when finished.


Team Strategy—This is where the teamwork really comes into play. Whoever has the brush should use it first to "cut in" a small area around the deck rail or the house, whichever will be your starting point. Then, the "roller" can come in and saturate this area with stain.

When rolling, limit your coverage to just three deck boards at a time, working from end to end. This will prevent lap marks when you move to the next set of boards. So, working as a team, this means that the "roller" should coat about 5 to 6 feet of his or her three boards. Then, the "brusher" can move in and brush these boards smooth with the grain. In addition, the "brusher" should coat the edges



5] The most efficient way to finish the deck boards is as a two-person team, with one person applying the stain with a roller and the second person smoothing the stain with a brush. Attach a brush to an extension handle with duct tape to save your back.

of the boards along the gaps. This is as easy as loading the brush with stain, turning it on its side, and running it along the gap (*Fig. 5*).

While this is going on, the "roller" can move on and coat the next section of deck boards, again followed by the "brusher." Simply follow this sequence across the entire deck, let it dry according to the manufacturer's specifications, and then you're ready to enjoy the rest of your summer! 

—Written by Wyatt Myers

CHOOSING A FINISH

Clear—Retains the truest wood color and shows grain; offers the least protection; should only be used on new decks.

Semi-Transparent—Slight tint but still shows grain; best on decks 5-15 years old.

Solid—Provides complete coverage with no grain showing through; best on decks 15-25 years old.

EASY AIR ACCESS WITH

Hose Reels

Stop untangling hoses whenever you need to use your air compressor. These hose reels put compressed air right at your fingertips.

Even among casual DIYers, air compressors are becoming commonplace. And when you consider how handy they are for filling up tires, nailing projects together, or cleaning up after working, it's easy to understand why.

The only drawback is that compressors, even small ones, are deceptively heavy and awkward to move around, so dragging them out and setting them up every time you need them can be a real chore. But the biggest problem is the hose, which somehow always manages to get itself into a tangled mess.

More Convenient Air—Thankfully, there's an easier way to make



the most of an air compressor in your garage. Instead of lugging it out every time you're working, just keep it parked in an out-of-the-way place and connect it to one of these hose reels. Then you can unwind as much air hose as you need, and wind it back up when you're done (*Photo, above*).

Reel Options—Two kinds of reels are available—retractable and hand-crank (*Photos, below*)—with hose lengths from 25 to 50 feet. (Most

come with $\frac{3}{8}$ " hose.) Prices range anywhere from \$20 to \$100.

These reels have long been standard fare in professional garages and machine shops. But recently, a growing number of reels have been packaged and priced for the consumer. We picked up the 25-ft. reel you see in the *Photo* above at Home Depot for just \$50. To learn how easy it is to mount one of these reels and hook it up to your compressor, see page 37.

REELING IN THE OPTIONS

Retractable

These retractable reels are typically a bit more expensive, but they're easier to use—the hose pulls out, locks in place, and then rewinds when you're done working.



Hand-Crank

Hand-crank reels cost less and hold more hose, but you have to wind up the hose by hand when you're finished using them.

5-MINUTE REEL INSTALL

Installing one of these hose reels in your garage isn't difficult, but there are a few things to take into account.

Before you mount it, keep in mind that these reels are quite heavy, and they're subjected to a lot of stress when you pull out the hose. To handle this weight and stress, they come with heavy-duty brackets that can be bolted in place. The only problem is that the mounting holes on these brackets are spaced about 4" apart. That means the holes won't align with the studs in most garages.

The solution is to make a plywood mounting plate, and screw it securely to the wall studs. Then you can attach the mounting bracket to the plywood plate to form a secure connection with the wall, as shown in Figs. 1 & 2.

Tight Connections—With the reel installed, the last step is to connect

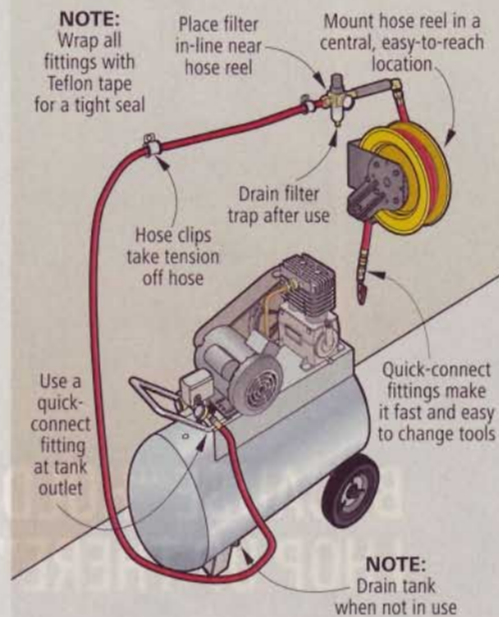
the air hose from the compressor to the reel. To form a tight seal, see Fig. 3.

Faster, Cleaner Air—A couple of other additions can make your reel even more useful. First, by adding a quick-connect coupler to the end of the hose, you can make connections between air tools and the air hose incredibly simple. Second, it's also worth investing in a filter to keep the compressed air dry and clean. The filter can be installed in-line between the compressor and air hose (Illustration, right).

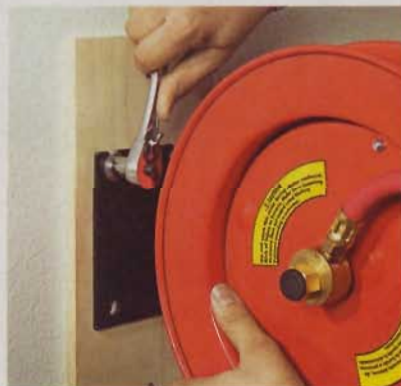
The other way to keep air dry, and prolong the life of the compressor, is to drain water from the tank. If you use your compressor occasionally, it's a good practice to drain it after every use. If you use it frequently, drain it after every third or fourth use.

—Written by Wyatt Myers, illustrated by Kurt Schultz

HOSE REEL INSTALLATION



1] After cutting a plywood mounting plate to size, align the bracket on it, and mark the hole locations.



2] Mount the plate to a wall stud. Then secure the bracket to it by driving lag screws and washers at the hole locations.



3] Before attaching the hose to the reel, wrap Teflon tape around the fitting to form an airtight seal.

3 MUST-HAVE AIR TOOLS

If you're considering buying a compressor, also consider picking up the three tools you see at right. They will quickly become your air-powered workhorses.

Every home needs a tire inflator, not only for balls and bicycle tires, but also to prevent trips to the gas station to fill up your car's tires. And a dust blower can easily clean up nooks and crannies that you just can't reach with a broom and dustpan. Finally, an 18-gauge finish nailer, or nailer/stapler combination, is invaluable for assembling all kinds of projects.



BUYER'S GUIDE

Harbor Freight
805.388.3000
HarborFreight.com

Home Depot
800.553.3199
HomeDepot.com

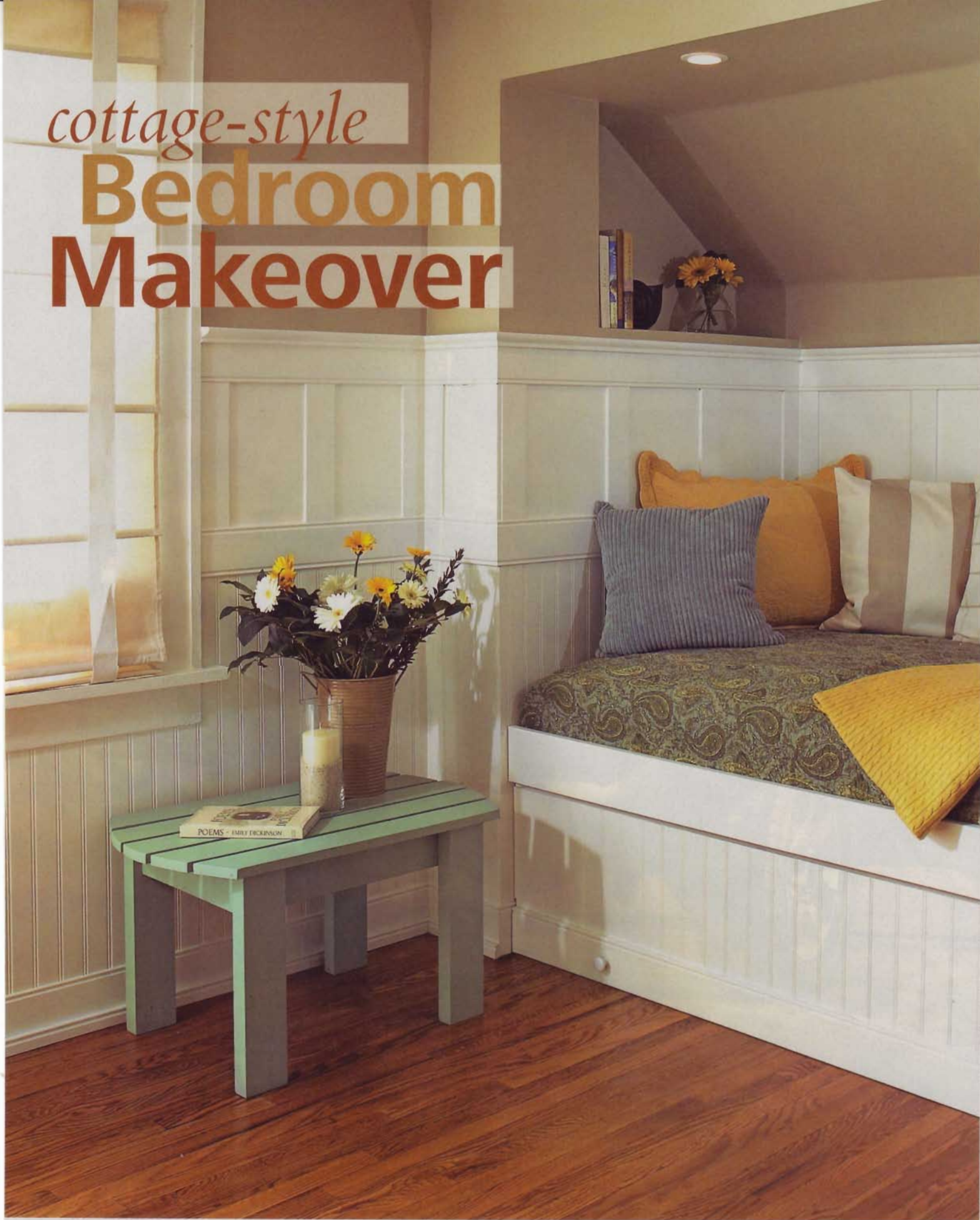
Lowe's
800.445.6937
Lowe's.com

Menards
800.871.2800
Menards.com

My Reels
866.697.3357
MyReels.com

Northern Tool
800.221.0516
NorthernTool.com

cottage-style
**Bedroom
Makeover**



Transform a spare bedroom from outdated, inefficient, and cramped to cozy, comfortable and spacious with five simple projects. Each project alone creates a dramatic impact—or you can build them all to give your bedroom a stunning new look.



Few rooms in the home are as overlooked and underutilized as the spare bedroom. Most of the time, this room sits empty, so it tends to be low on most homeowners' priority lists.

This was definitely the case for Brian and Katherine Mayer. Their guest bedroom was cramped, and most of the space was taken up by an extra closet and a big bed. The room had a hardwood floor that was in bad shape, and in general, it just lacked the comfortable charm of the rest of the home.

With the help of the *Workbench* design team, however, Brian and Katherine turned this room into much more than just a spare bedroom—it became extra living space that they now use every day for reading, relaxing, or just soaking in some sunshine.

Five Great Projects—This bedroom makeover consists of five separate projects. These include a built-in nook that replaces a long, narrow closet (*more on this on page 42*), a daybed that fills this nook, a window seat that matches the look of the daybed and offers extra storage, elegant wainscoting that's installed on all the walls, and a stunning refinished floor.

Of course, any one of these projects could completely transform the look and feel of a spare bedroom. Put them all together, though, and the results are dramatic—as you can see in the "Before" and "After" Photos at left. Over the next few pages, we'll walk you through the details of each of these projects.

Built-in Nook
replaces existing closet and houses daybed
and trundle bed to free up extra space

Mini-Can Lights
recessed into ceiling
illuminate the nook

Small Recess
holds books and
display items

Wainscoting
comes as an easy-
to-install kit to give
the room a charming
cottage look

Trundle Bed
rolls out and pops up
to same height as daybed,
allowing for use as
two twins or one double

Hardwood Floor
was filled with stainable
wood filler, sanded,
and finished to look
like new

Removable Rail
makes it easy to pull
out and operate the
trundle bed

Window Seat
matches style of
wainscoting and
features a large
roll-out storage bin

DESIGN OPTION: If you don't need a trundle bed, just make a large roll-out storage bin to match the one beneath the window seat (see page 46)

FIVE EASY PROJECTS TO Transform a Bedroom

The main desires of our homeowners for their spare bedroom makeover were to free up some extra space, as well as give the room a style overhaul. And the five projects shown in the *Illustration* above helped them do exactly that.

One of the biggest challenges in achieving these goals, however, was an existing, hard-to-access closet in the corner of the room (see the "Before" Floor Plan on page 43). This long, narrow closet was so inconvenient that at some point, a second closet had been added to the room. This

meant that the original closet was just eating up valuable space.

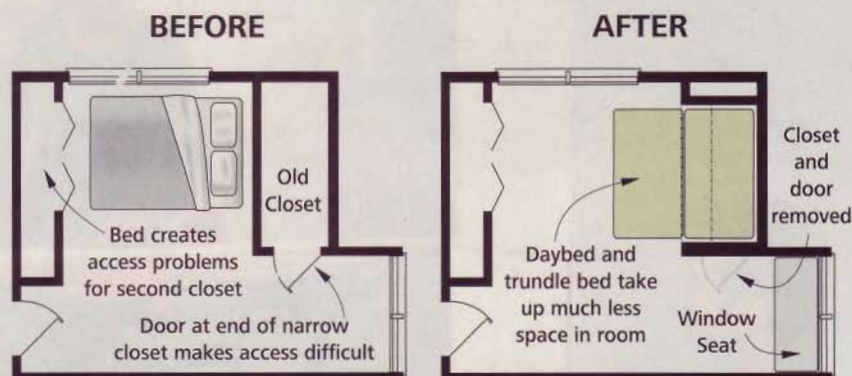
Built-in Nook—To solve this problem, we tore out the old closet and built a wall in place of the closet-entry door. Then, we created an opening in the wall that faced into the room to form a cozy built-in nook.

If you don't have this kind of space in your own bedroom, you can simply frame in a new wall to form one side of the nook. (Complete plans for this nook, and all the projects in this article, are available at WorkbenchMagazine.com.)

While framing in this nook, we also added a small recess at one end that became a perfect location for storing books and display items. And a pair of mini-can lights recessed into the ceiling of the nook illuminate the area below.

Floor Refinish—Once the nook was complete, our homeowners addressed another of the challenges in this bedroom by refinishing the old hardwood floor. All it took was a bit of stainable wood filler to close up the small gaps between the floorboards, some sanding, and a few fresh coats of

CHANGE OF FLOOR PLAN



This bedroom's existing floor plan featured a long, narrow closet that was essentially unusable, and a full-size bed that occupied much of the room's space. We tackled both problems at once by replacing the closet with a built-in nook, and then filling that nook with a daybed. Adding a window seat with a large roll-out bin beneath it created even more useful storage in the room.

finish. (For a complete article on sanding and refinishing a hardwood floor, check out WorkbenchMagazine.com.)

Wainscoting—The most dramatic impact on the style of this bedroom comes from the wainscoting that the homeowners installed. Though it looks elaborate, this particular wainscoting comes as a kit of pre-made, interlocking parts that are incredibly easy to assemble.

The company that manufactures the wainscoting, New England Classic, even creates computer drawings and a materials list for you, free of charge, based on the dimensions of your room. More information on this wainscoting system begins on page 44. Also see the *Buyer's Guide* at right.

Storage—With the wainscoting installed, the homeowners could set about adding two built-in projects that both freed up a lot of extra space and further accentuated the cottage style of the room. These projects were a window seat and a built-in daybed.

Window Seat—Built to fit snugly between the walls underneath a pair of windows, the window seat is actually just a simple

assembly of plywood parts. The front of the window seat is faced with the same type of beadboard and rails as the wainscoting. Underneath, the seat conceals a large roll-out storage bin for stowing blankets, bedding, pillows, and other household clutter. Like the seat itself, the storage bin is easy to make. Plans begin on page 46.

Daybed with a Surprise—The daybed is a companion project to the window seat, and it's built quite similarly. The major difference is that instead of a storage bin, the area under the daybed houses a trundle-bed frame and mattress that you can roll out and lift into position when guests arrive. Here again, the trundle-bed frame is faced with rails and beadboard to match the wainscoting. Details of the daybed/trundle bed are on page 48.

The daybed is sized to fit inside the nook, and it's topped with a twin mattress. By placing the bed within the nook like this, we came full circle in solving this room's biggest challenge—how to gain back the space occupied by that big bed (*"After" Floor Plan, above*).



Wainscoting	44
Window Seat	46
Daybed	48

BUYER'S GUIDE

PAINT

Benjamin Moore
800.344.0400
BenjaminMoore.com
Walls: Bleeker Beige (#HC-80)
Trim: Mountain Peak White (#OC-121)

NOOK LIGHTING

Lowe's
800.445.6937
Lowe.com
(2) Halo 4" Lights (#60607) & Baffles (#59569)

WAINSCOTING

New England Classic
888.460.6324
NewEnglandClassic.com
ClassicCottage Style

WINDOW SEAT & DAYBED HARDWARE

Rockler
800.279.4441
Rockler.com
Bed Box Rollers (#71597), 1/2" Rare-Earth Magnets (#30810), Cups (#31668), & Washers (#37474)

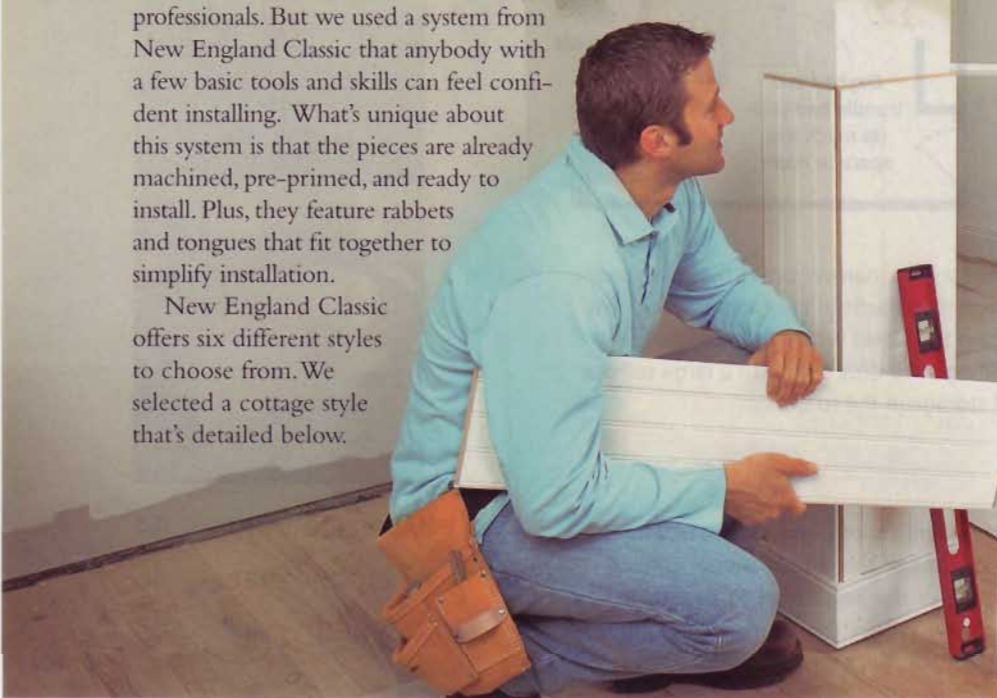
Humble Abode
877.692.2633
HumbleAbode.com
Duralink Trundle-Bed Frame

READY-MADE WAINSCOTING CREATES Walls That Wow!

Few things can improve the look of a room quite like decorative wall paneling, otherwise known as wainscoting. That's why, after applying a fresh coat of paint, we started off this bedroom makeover by wrapping the walls with it.

Typically, putting up wainscoting is a job reserved for professionals. But we used a system from New England Classic that anybody with a few basic tools and skills can feel confident installing. What's unique about this system is that the pieces are already machined, pre-primed, and ready to install. Plus, they feature rabbets and tongues that fit together to simplify installation.

New England Classic offers six different styles to choose from. We selected a cottage style that's detailed below.



WAINSCOTING DETAILS

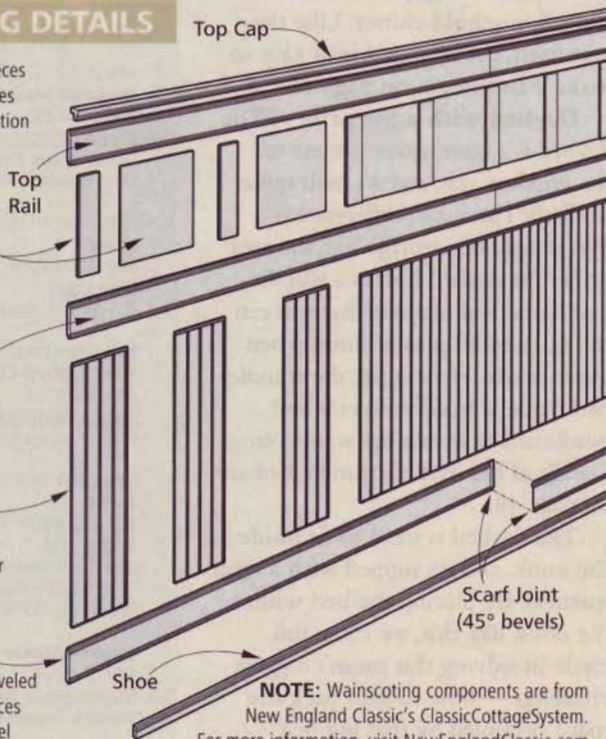
NOTE: All wainscoting pieces feature interlocking tongues and rabbets for easy installation (see Details at right)

Panels & Stiles should be centered on width of wall, so each corner ends with a stile

Middle Rail forms a transition between the beadboard panels and the plain panels and stiles

Beadboard is made up of 8"-wide panels that interlock for a continuous look

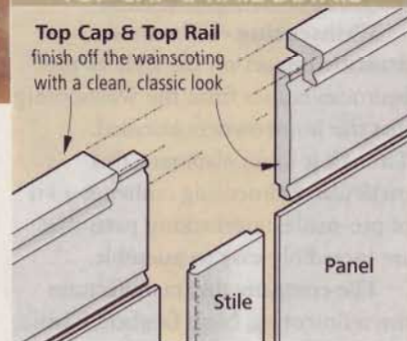
Bottom Rail gets installed first and is leveled to ensure that all the pieces above it will also be level



NOTE: Wainscoting components are from New England Classic's ClassicCottageSystem. For more information, visit NewEnglandClassic.com

TOP CAP & RAIL DETAIL

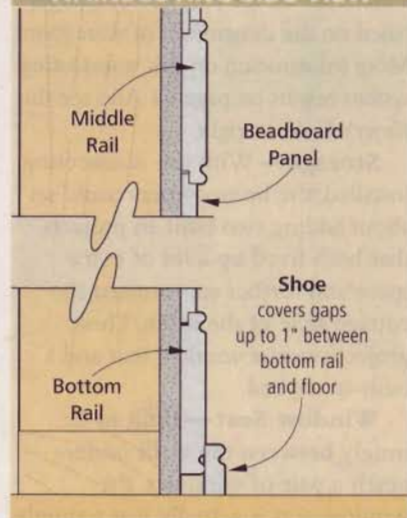
Top Cap & Top Rail finish off the wainscoting with a clean, classic look



WAINSCOTING SIDE VIEW

Middle Rail and **Beadboard Panel**

Shoe covers gaps up to 1" between bottom rail and floor



TOP TIPS FOR

Easy Installation

The interlocking tongues and rabbets on this wainscoting go a long way toward ensuring a perfect installation. They make it easy to align the pieces, and the overlaps they create allow you to position the components level and plumb, even if the floors and walls aren't. Still, learning a few tricks will help you get professional-looking results.

Start on a Level Playing Field—The first piece that gets installed is the bottom rail. It's important that this rail is level. If it's not, the other parts of the wainscoting won't be level either. Before you level and install this rail, however, you need to find the high point in the floor. This will be where you begin the installation. To find the high point, use a pencil or a chalk line to create a level line around the room, and then measure down from it to the floor. Wherever the measurement is the shortest is your high point.

Glue and Nail—Once you have established and marked the high point, you can install the bottom rail around the perimeter of the room (*Photo, above right*). Apply a bead of construction adhesive to the back of the rail before nailing it in place.

Other Rail Considerations—The bottom rails come in 96" lengths, so for longer runs, you'll need to butt two pieces end-to-end to fill a section of the wall. In that case, use a scarf joint to join the pieces. This simply requires mitering the mating ends at 45° so they overlap and won't show a gap. Also, cut the pieces so the scarf joint aligns with a wall stud. This way, you can drive nails into the studs to create a tight-fitting joint.

Scribe to Fit—Once the bottom rail is installed, you can add the beadboard panels. These just sit in a rabbet in the top edge of the bottom rail and lock together with rabbets on the edges of each panel. One challenge of this beadboard, though, is that your walls might not be square with one another. This can result in gaps in the corners where the panels butt together. You can prevent this by scribing a panel to match the contour of the wall (*Photo,*

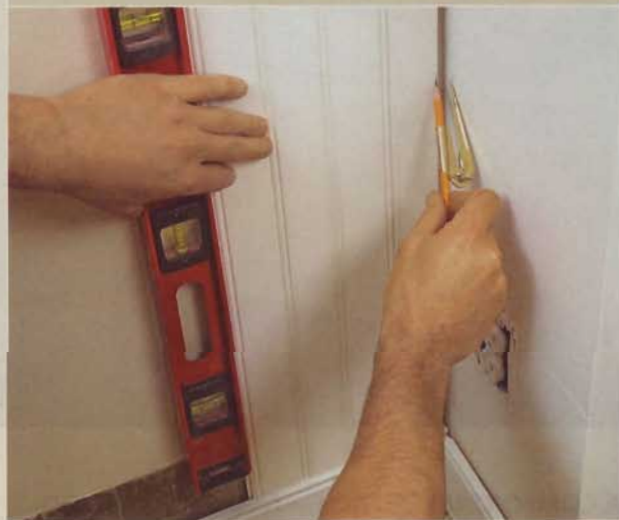


A TEMPLATE FOR TRICKY NOTCHES.

Rather than trying to measure and cut a panel to fit around an intricate notch, use a template made from cardboard.



LEVEL THE BOTTOM RAIL. Starting at the high point of the floor, use shims to level the bottom rail. Then use construction adhesive and 15-gauge nails to secure it to the wall.



SCRIBE PANELS TO FIT. To scribe a panel to fit the corner, slide a compass along the wall, marking the edge of the panel. Use a level to hold the panel plumb.

above). After scribing, cut to the line with a jig saw, and check the fit. Fine-tune the cut until the pieces meet in the corner with no gaps.

Tame Trim with a Template—Another challenging area is where a panel needs to be notched to fit around window trim. The best way to get a tight fit is to use a cardboard template (*Photo, left*). Once your template is complete, transfer it to the panel, and trace the profile onto the panel itself. Then use a jig saw to cut the notch, and test-fit the panel.

Add the Top Trim—The style of wainscoting we chose also features a middle rail that mounts above the beadboard, a series of panels and stiles that create the look of frame-and-panel construction, a top rail, and a decorative top cap that completes the look. Once the beadboard is installed, these pieces can be glued and nailed in place as shown in the *Illustrations* at left.



A COMFORTABLE PERCH—AND STORAGE TOO

Stylish Window Seat

This window seat gives the homeowners a comfortable place to kick back and relax. And by using the same beadboard and rails from the wainscoting (page 44) on the seat's front panel, we were able to match the style of the room.

But beyond just style, the seat adds some much-needed functional space to the bedroom. This comes in the form of a roll-out storage bin underneath the seat.

Seat Construction—Regardless of where you install this window seat, the height and depth shown here will provide comfortable seating. But the width may vary. To size your seat, make it $\frac{1}{2}$ " narrower than the opening it fits into (measure

the opening with the wainscoting installed). This way, the seat will fit in place with just a slight gap around it. For example, our opening was $63\frac{1}{2}$ ", so the total width of our seat was 63". (Refer to the *Window Seat Assembly*, above right, to size the parts for your window seat.)

Regardless of its size, the basic components of this seat are easy to build. The window seat consists of two assemblies: a U-shaped seat box and the storage bin.

If you plan to install the wainscoting in your room, you may want to order extra beadboard and rail stock for the window seat (and the daybed on page 48). If you're going to build the projects as stand-alones, though,

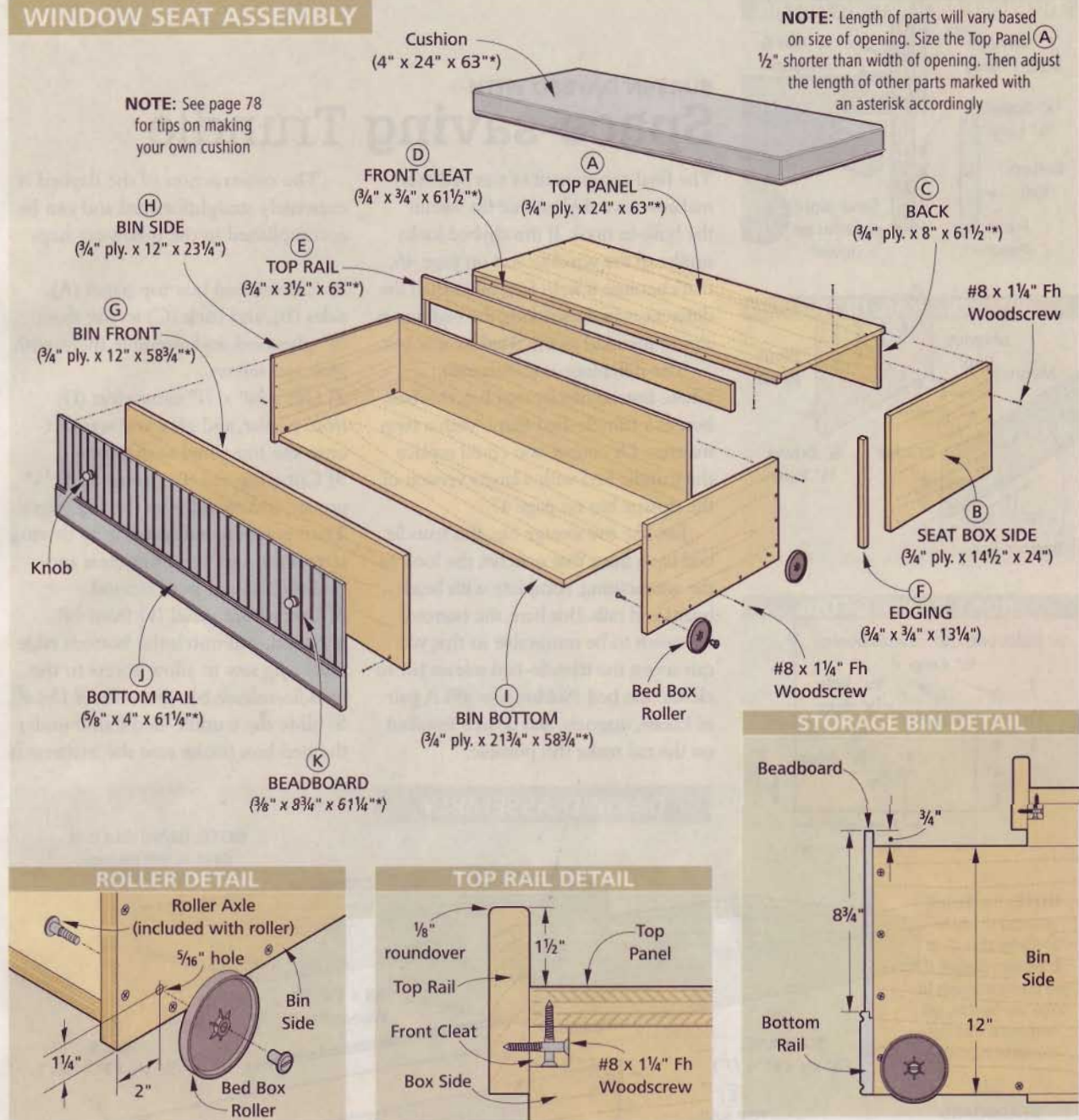


you can pick up beadboard and trim pieces at your local home center.

Once you've sized the seat components carefully for your space and gathered all the materials, the window seat can be built in the following steps:

- 1] Cut the seat box top panel (A) and sides (B) to size from $\frac{3}{4}$ " plywood (*Window Seat Assembly*, above right). Pre-drill pilot holes in these parts, and assemble them with glue and screws.
- 2] Measure between the seat box sides. Then cut a plywood back (C) and a

WINDOW SEAT ASSEMBLY



poplar front cleat (D) to fit the space. (They're different widths but the same length.) Then glue and screw these pieces in place as shown above.

3] Now it's time to add the top rail (E), which helps to hold the cushion in place. Start by cutting this rail to size from $\frac{3}{4}$ " poplar. Then round over the top edges of the rail with a router and an $\frac{1}{8}$ " roundover bit (*Top Rail Detail*).

4] Position and install the top rail by driving screws through the back of the front cleat and into the top rail.

5] Rip solid-wood edging strips (F) to cover the exposed plywood edges of the box sides. Glue and nail them in place.

6] Now you can turn your attention to the storage bin: Start by cutting the bin front and back (G), sides (H), and bottom (I) to size. Then pre-drill pilot holes, and glue and screw the bin together.

7] Cut a bottom rail (J) to length so that it's $\frac{1}{4}$ " shorter than the seat box opening.

8] Cut beadboard panels (K) to length so they extend $\frac{3}{4}$ " above the bin front

(*Storage Bin Detail*), and glue and nail them in place.

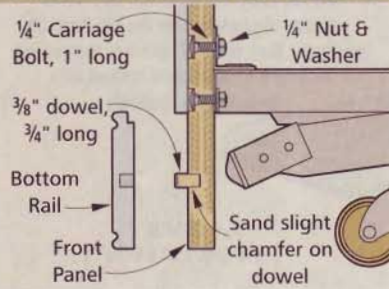
9] Fill any nail holes. Then prime and paint the seat box and storage bin.

10] Install bed box rollers using the included hardware and the dimensions shown in the *Roller Detail* above. Also install a pair of knobs on the bin front.

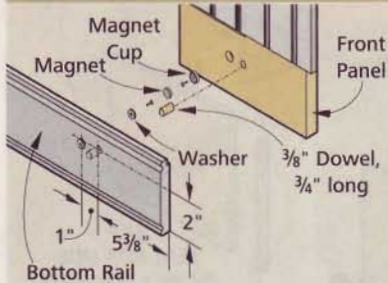
11] Slide the seat box into position, and drive screws through the back and into wall studs. Then slide the bin in place.

12] Make a cushion (*page 78*), or have one custom-made to fit the seat.

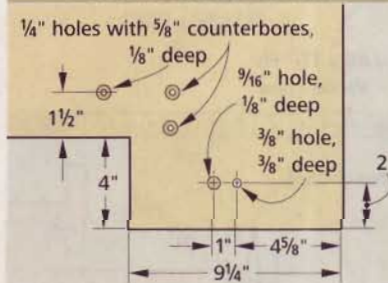
TRUNDLE MOUNTING DETAIL



BOTTOM RAIL DETAIL



FRONT PANEL DETAIL



BUILT-IN DAYBED WITH Space-saving Trundle

The final component of this bedroom makeover is a daybed that fits within the built-in nook. If this daybed looks similar to the window seat on page 46, that's because it is. In fact, other than the differences in dimensions, the bed box is almost identical to the window seat box.

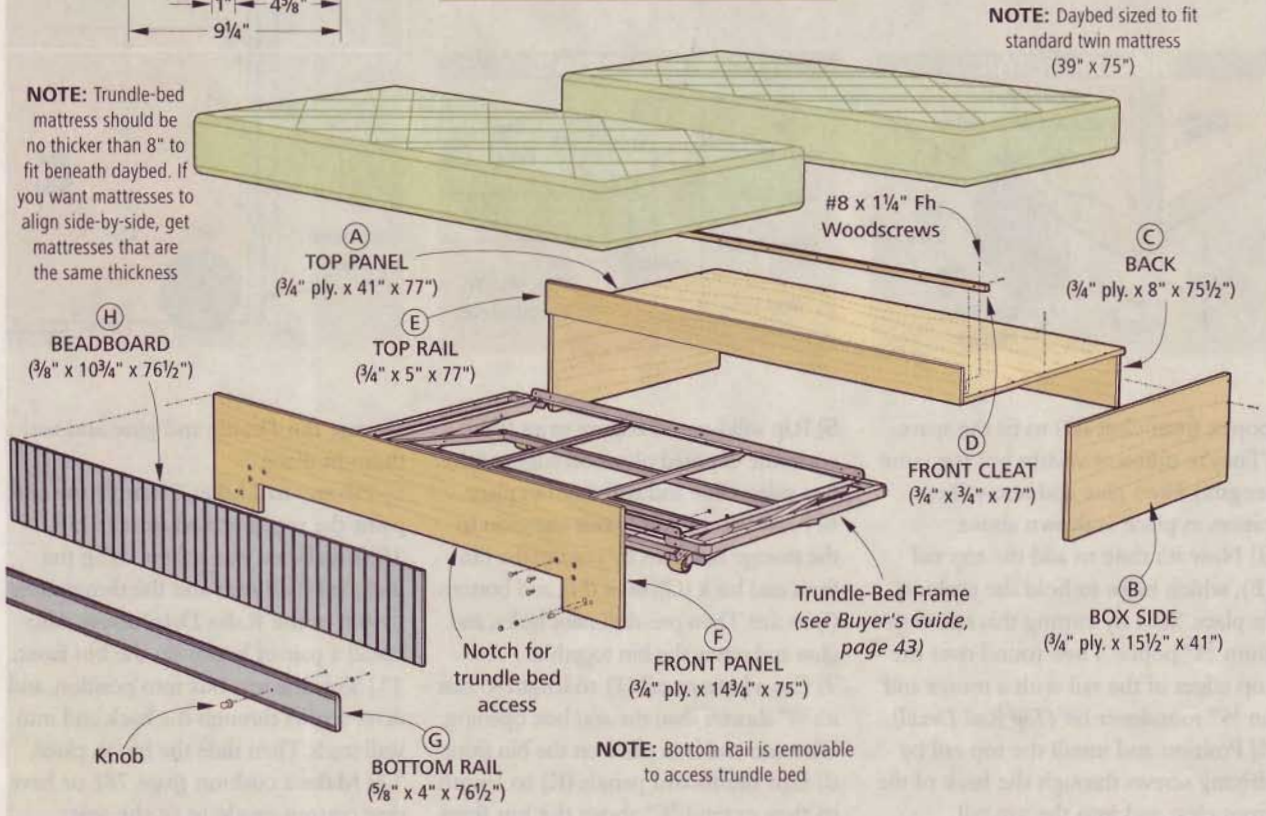
The difference is underneath, where instead of a storage bin, this box houses a trundle-bed frame with a twin mattress. Of course, you could replace the trundle bed with a larger version of the storage bin on page 47.

Just like the storage bin, this trundle bed has a front that matches the look of the wainscoting, complete with beadboard and rails. But here, the bottom rail needs to be removable so that you can access the trundle-bed release bar to elevate the bed (*Sidebar, page 49*). A pair of knobs, magnets, and dowels installed on the rail make this possible.

The construction of the daybed is extremely straightforward and can be accomplished in the following steps:

- 1] Cut the bed box top panel (A), sides (B), and back (C) to size from $\frac{3}{4}$ " plywood, and assemble them with glue and screws.
- 2] Cut a $\frac{3}{4}$ " x $\frac{3}{4}$ " front cleat (D) from poplar, and glue and screw it onto the top panel as shown.
- 3] Cut a top rail (E) to size from $\frac{3}{4}$ " poplar, and round over the top edges. Then position and install it by driving screws through the front cleat and into the top rail from behind.
- 4] Cut a front panel (F) from $\frac{3}{4}$ " plywood, and notch the bottom edge with a jig saw to allow access to the trundle-release bar (*Front Panel Detail*).
- 5] Slide the trundle-bed frame under the bed box (make sure the mattress is

DAYBED ASSEMBLY



in place, as the frame will lower a bit under its weight), and clamp the front panel in position on it. Then slide out the frame. Using the holes in the frame as guides, mark the hole locations for attaching the front panel to the frame (see the *Front Panel Detail*).

6] Drill counterbored mounting holes, and then attach the front panel to the trundle-bed frame with carriage bolts, nuts, and washers (*Trundle Mounting Detail*).

7] Cut the bottom rail (G) to length, and drill holes for installing the


magnet strike plates and alignment dowels, as shown in the *Bottom Rail Detail* on page 48. Also drill corresponding holes for the magnet cups and the dowels in the front panel.

8] Sand a slight chamfer on the ends of the dowels. Then install the magnet components and dowels. Also install a pair of knobs on the bottom rail.

9] Attach the bottom rail, and then cut beadboard (H) to fit on the front panel above this bottom rail. Attach the beadboard to the front panel with glue and nails.

10] Fill any nail holes, and prime and paint the bed box and the front panel of the trundle bed frame.

11] Install the daybed in the nook, and secure it by driving wood screws through the back and into the wall studs behind it.

12] Outfit the bed box and trundle-bed frame with twin mattresses and bedding of your choice. 

—Written by Wyatt Myers, illustrated by Erich Lage, projects designed by James R. Downing

FROM TWIN BED TO DOUBLE BED

This twin-sized daybed is actually a double bed in disguise. That's possible because of the trundle bed that hides underneath. We added a few features to the project to disguise the trundle bed, yet still make it easy to access.

The secret to doing that is the removable bottom rail. A pair of powerful Rare-Earth magnets and alignment dowels make it easy to remove and replace this rail (*Fig. 1*).

With the rail removed, the trundle-bed frame slides out easily. Once you have it partway out of its niche, you can hold onto the front panel to pull it out (*Fig. 2*). Then, simply reach through the notch in the bottom of the front panel and pull on the trundle bed release bar to raise the bed into position (*Fig. 3*).

The bed frame sits at the same height as the daybed, so you can position them side by side to create one large bed.



1] To access the notch in the front panel that lets you slide out the trundle bed, simply remove the bottom rail. A pair of knobs make it easy to grasp the rail.



2] Pull the bed partway out, and then grasp the front panel to roll the bed completely out of its niche. The bed frame glides easily on a set of casters.



3] To lift the bed into position, reach through the notch in the front panel, and pull the trundle bed release bar. The bed will spring up into position.

workbench® Bedroom Makeover

Issue 302 Volume 63 Number 4

August 2007

MATERIALS LIST



MATERIAL LIST

Part	Qty	Size	Material
WINDOW SEAT			
A	1	3/4" x 24" x 63" *	Birch Plywood
B	2	3/4" x 14 1/2" x 24"	Birch Plywood
C	1	3/4" x 8" x 61 1/2" *	Birch Plywood
D	1	3/4" x 3/4" x 61 1/2" *	Poplar
E	1	3/4" x 3 1/2" x 63" *	Poplar
F	2	3/4" x 3/4" x 13 1/4"	Poplar
G	2	3/4" x 12" x 58 3/4" *	Birch Plywood
H	2	3/4" x 12" x 23 1/4"	Birch Plywood
I	1	3/4" x 21 3/4" x 58 3/4" *	Birch Plywood
J	1	5/8" x 4" x 61 1/4" *	Poplar
K	1	3/8" x 8 3/4" x 61 1/4" *	Beadboard **
DAYBED			
A	1	3/4" x 41" x 77"	Birch Plywood
B	2	3/4" x 15 1/2" x 41"	Birch Plywood
C	1	3/4" x 8" x 75 1/2"	Birch Plywood
D	1	3/4" x 3/4" x 77"	Poplar
E	1	3/4" x 5" x 77"	Poplar
F	1	3/4" x 14 3/4" x 75"	Birch Plywood
G	1	5/8" x 4" x 76 1/2"	Poplar
H	1	3/8" x 10 3/4" x 76 1/2"	Beadboard **

* **NOTE:** Length of parts will vary based on size of opening. Size the Top Panel (A) 1/2" shorter than width of opening. Then adjust the length of other parts marked with an asterisk accordingly.

** **NOTE:** The beadboard used for this project can be the same as that used for the bedroom wainscoting (NewEnglandClassic.com). A suitable substitute is a PVC beadboard available at Home Depot that comes in 7 1/4"-wide pieces. Butt the PVC pieces together edge-to-edge to fill the desired space.

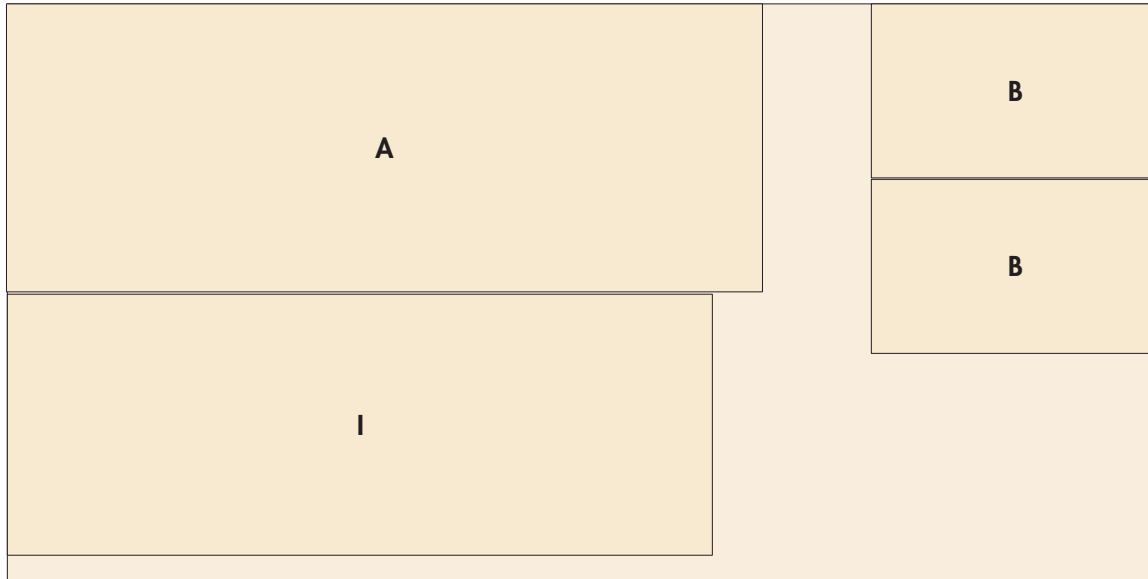
HARDWARE:

- (115) #8 x 1 1/4" Fh Woodscrews
- (1) 4-pack of Bed Box Rollers (#71597) *
- (1) Duralink Trundle-Bed Frame **
- (2) 1/2" Rare Earth Magnets (#30810), Cups (#31668), & Washers (#37474) *
- (2) 3/8"-dia. Dowels, 3/4" long
- (6) 1/4" Carriage Bolts, 1" long
- (6) 1/4" Nuts & Washers
- (4) Knobs

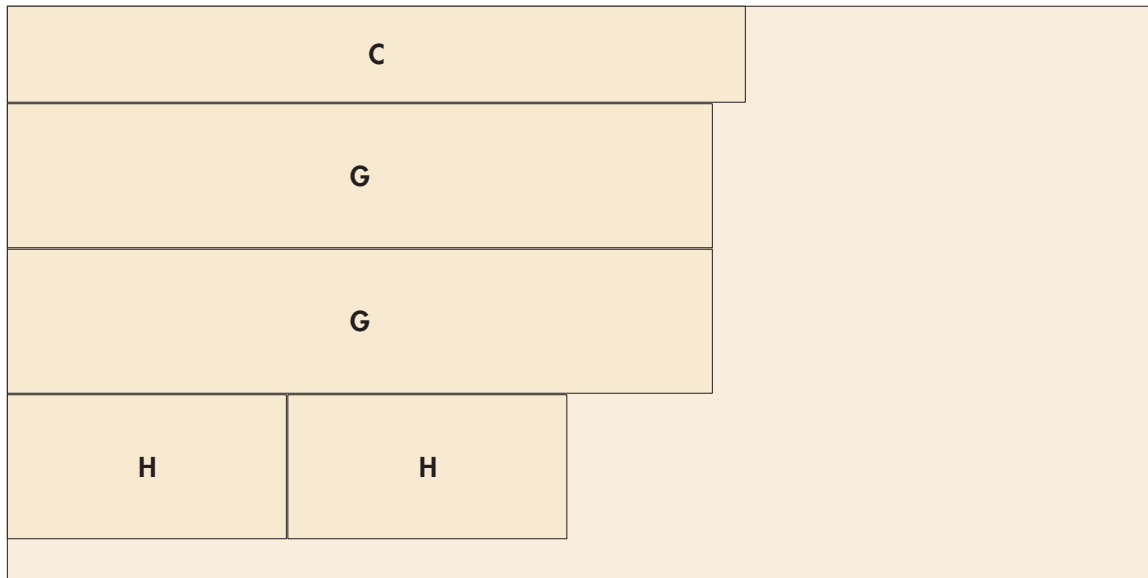
* Items available from Rockler (800-279-4441, Rockler.com)

** Item available from Humble Abode (877-692-2633, HumbleAbode.com)

CUTTING DIAGRAM - WINDOW SEAT



$\frac{3}{4}$ " x 48" x 96" Birch Plywood

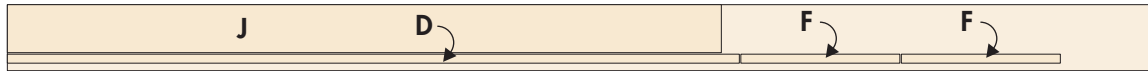


$\frac{3}{4}$ " x 48" x 96" Birch Plywood

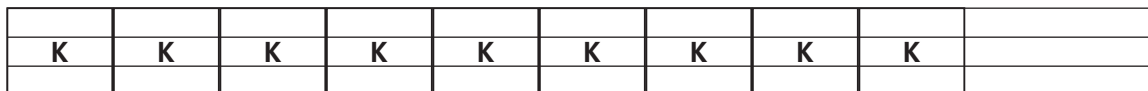
CUTTING DIAGRAM - WINDOW SEAT



$\frac{3}{4}$ " x $3\frac{1}{2}$ " x 96" Poplar

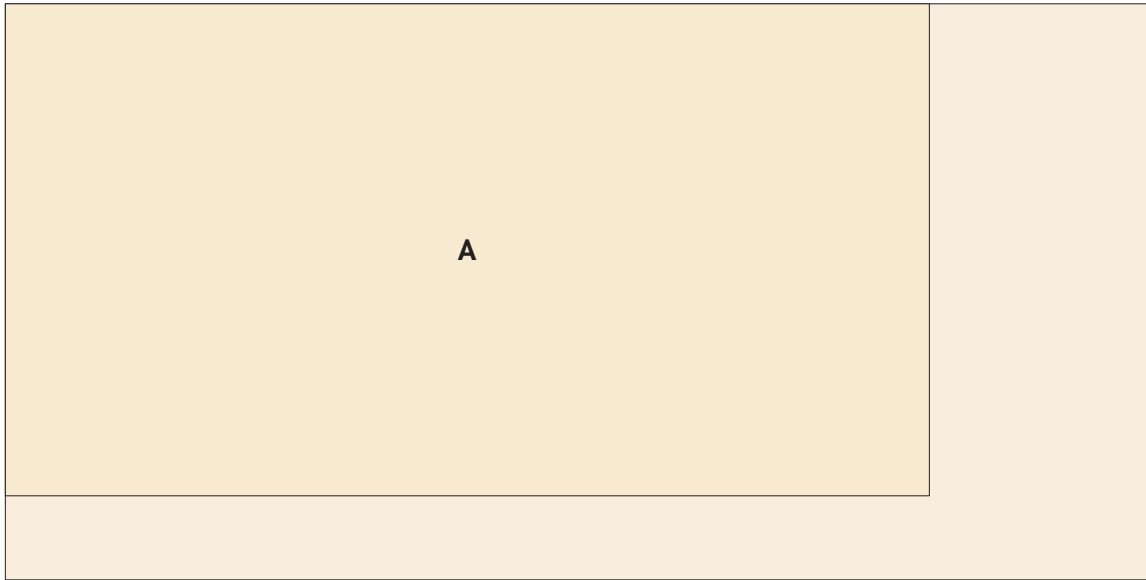


$\frac{3}{4}$ " x $5\frac{1}{2}$ " x 96" Poplar

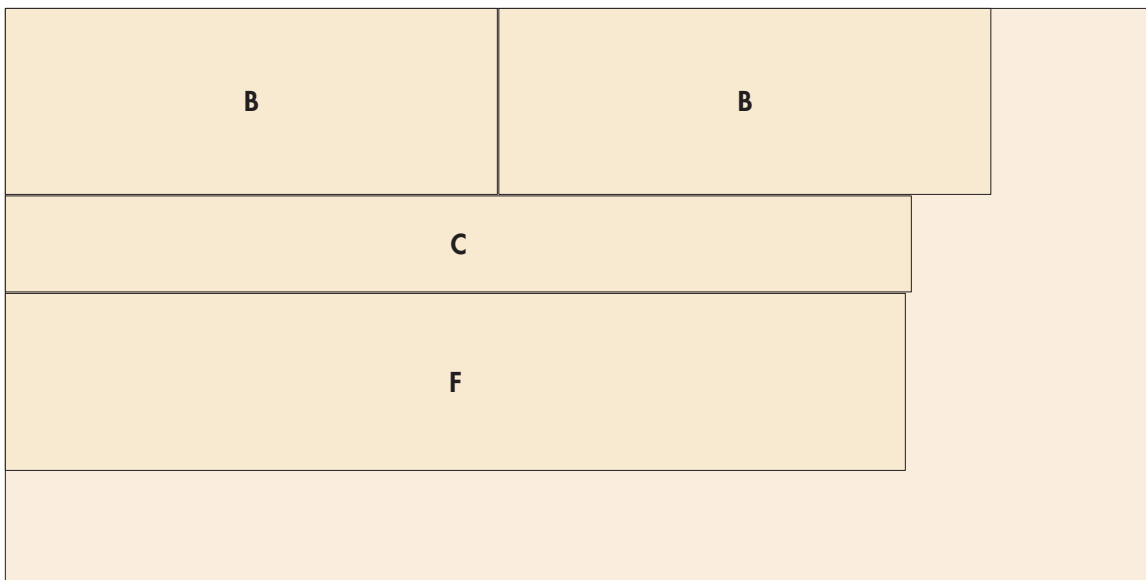


$\frac{1}{4}$ " x $7\frac{1}{4}$ " x 96" Beadboard Planking

CUTTING DIAGRAM - DAYBED

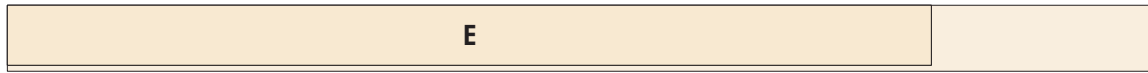


$\frac{3}{4}$ " x 48" x 96" Birch Plywood



$\frac{3}{4}$ " x 48" x 96" Birch Plywood

CUTTING DIAGRAM - DAYBED



$\frac{3}{4}$ " x $5\frac{1}{2}$ " x 96" Poplar



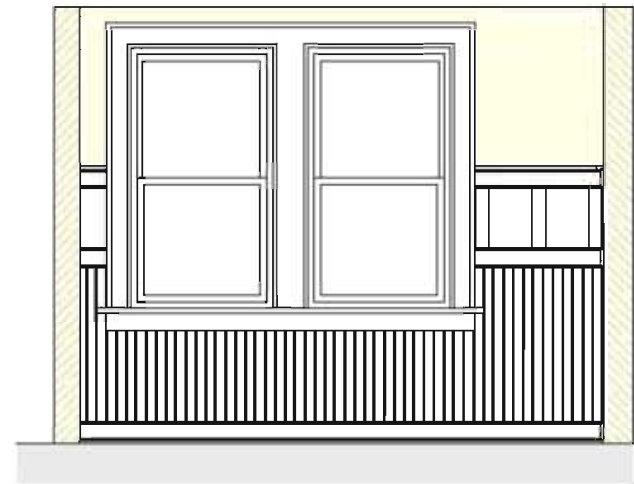
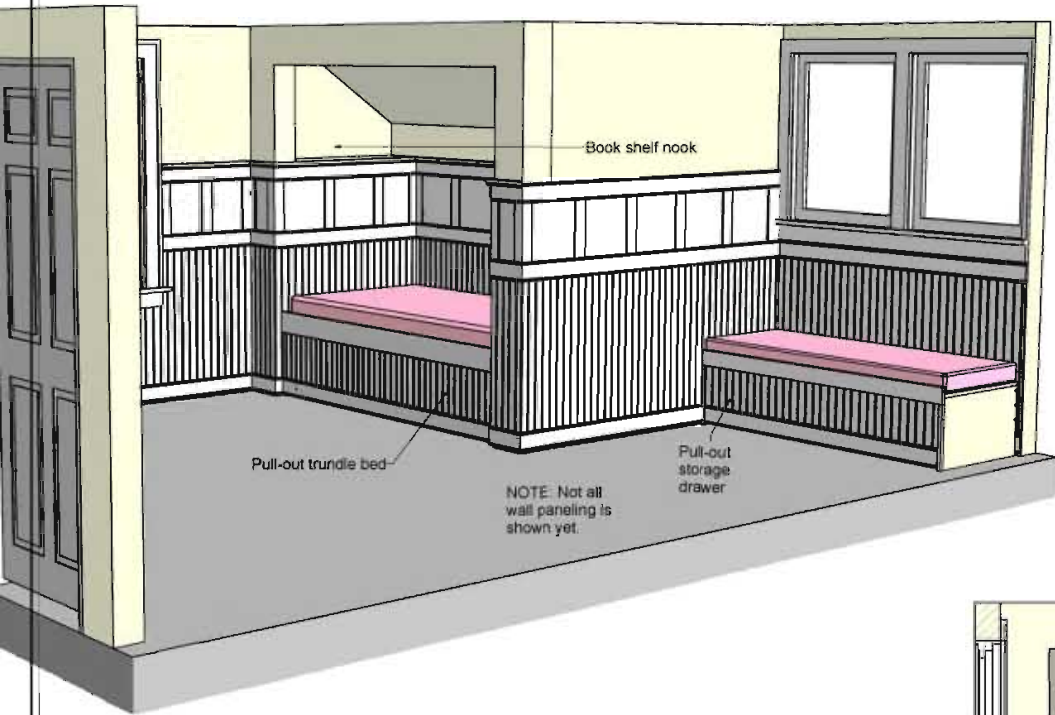
$\frac{3}{4}$ " x $5\frac{1}{2}$ " x 96" Poplar

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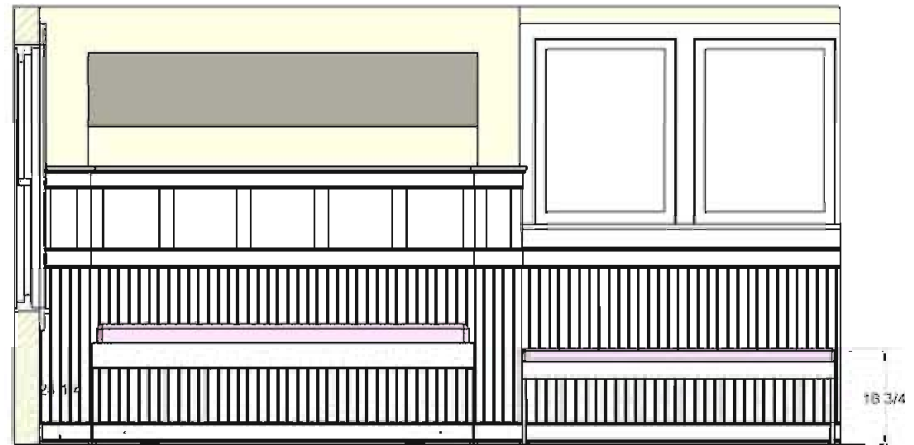
$\frac{1}{4}$ " x $7\frac{1}{4}$ " x 96" Beadboard Planking

H	H	H	
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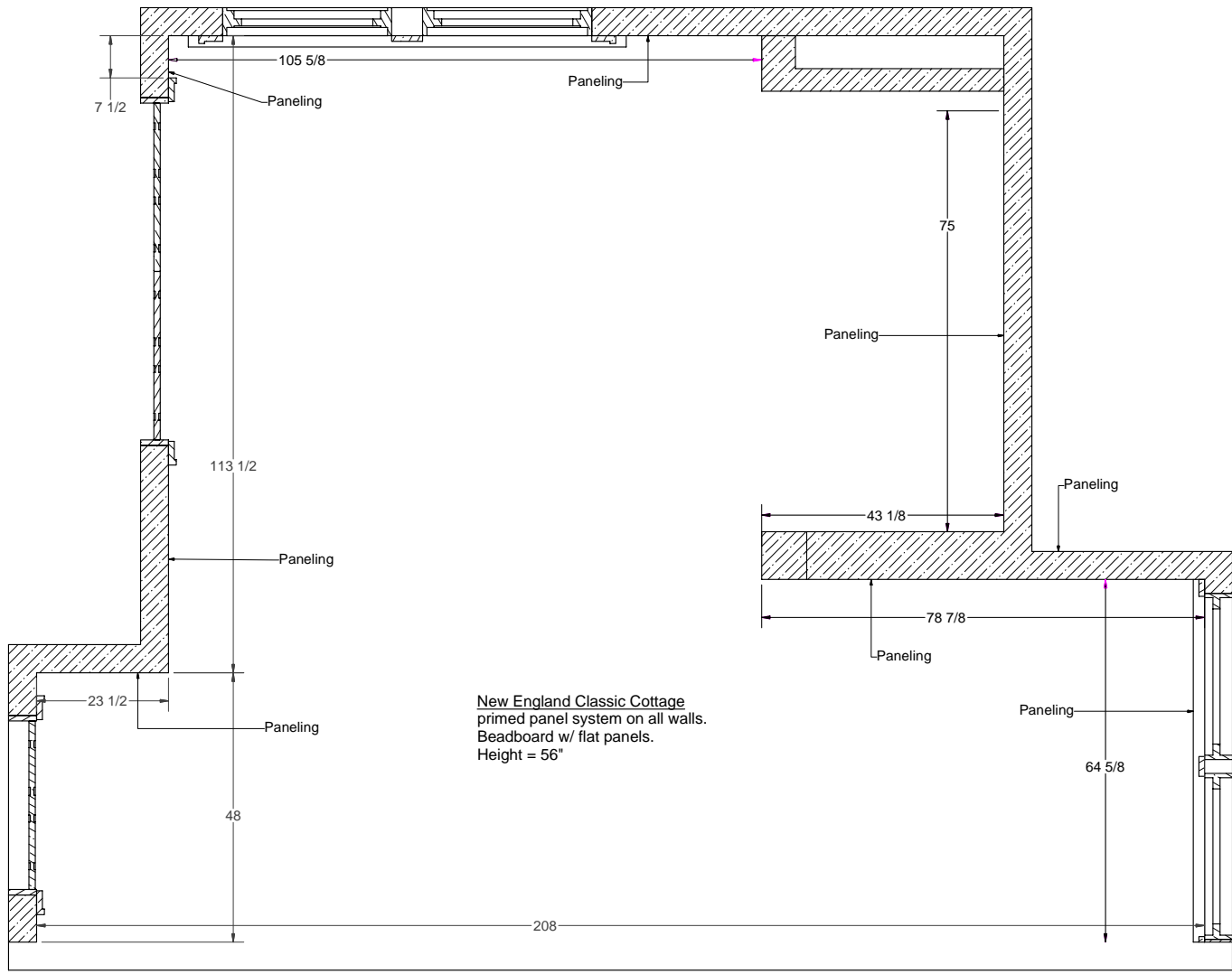
$\frac{1}{4}$ " x $7\frac{1}{4}$ " x 96" Beadboard Planking



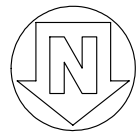
SOUTH ELEVATION



WEST ELEVATION

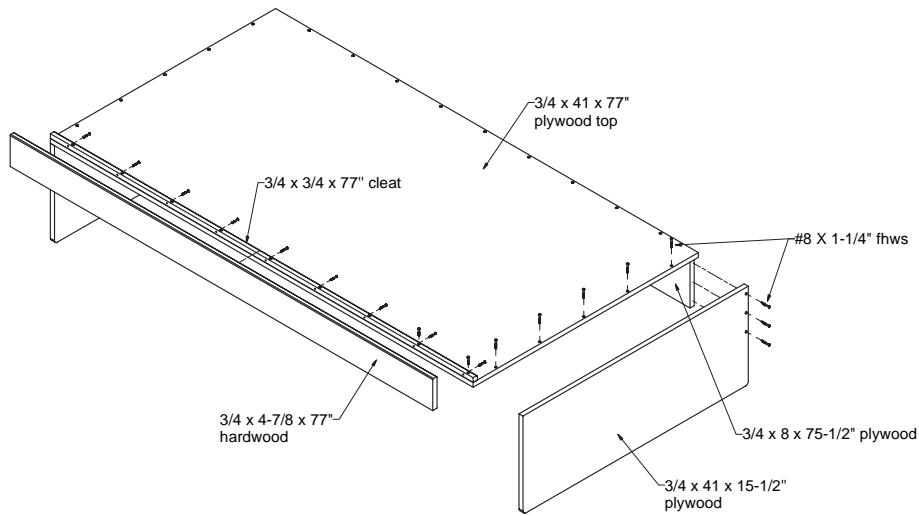


New England Classic Cottage
 primed panel system on all walls.
 Beadboard w/ flat panels.
 Height = 56"

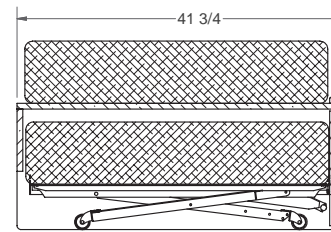


FLOOR PLAN

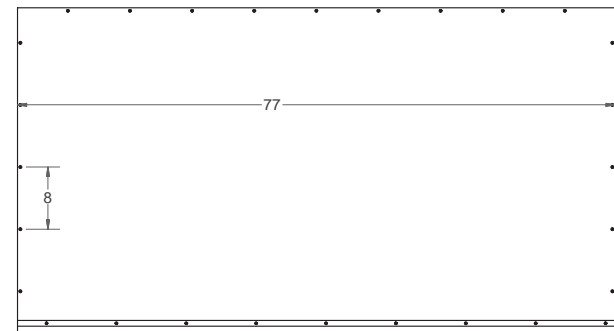
workbench #302	Bedroom Remodel	Downing	DATE 3.5.07	SHEET 2
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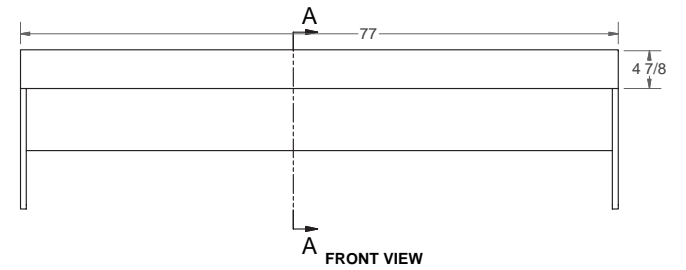
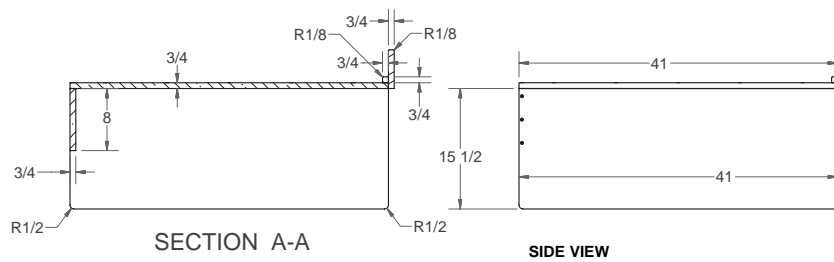
Stationary Bed Box

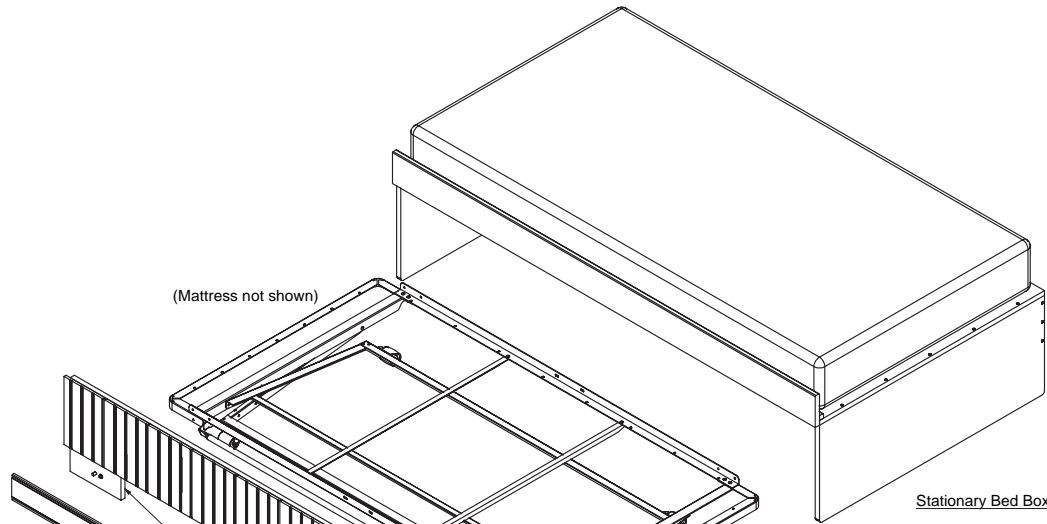


**SECTION VIEW
(Bed & Trundle)**



TOP VIEW



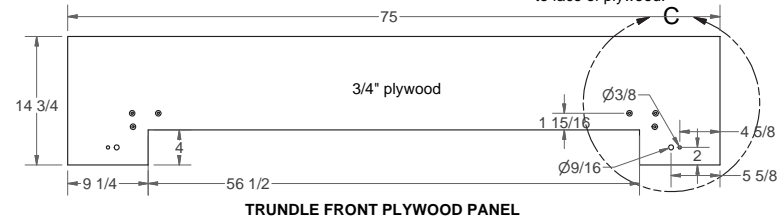


(Mattress not shown)

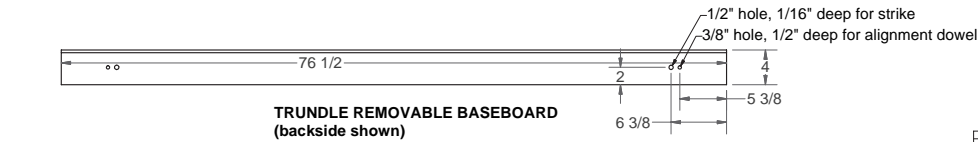
Stationary Bed Box

Roll-out Trundle

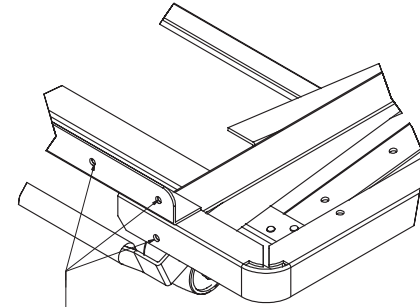
Plywood notched out to provide access to trundle release bar.



TRUNDLE FRONT PLYWOOD PANEL

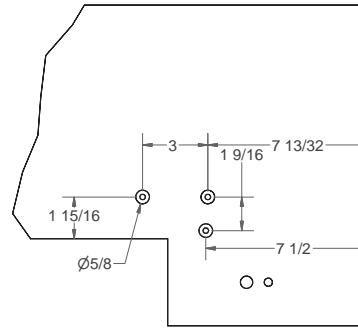


TRUNDLE REMOVABLE BASEBOARD (backside shown)



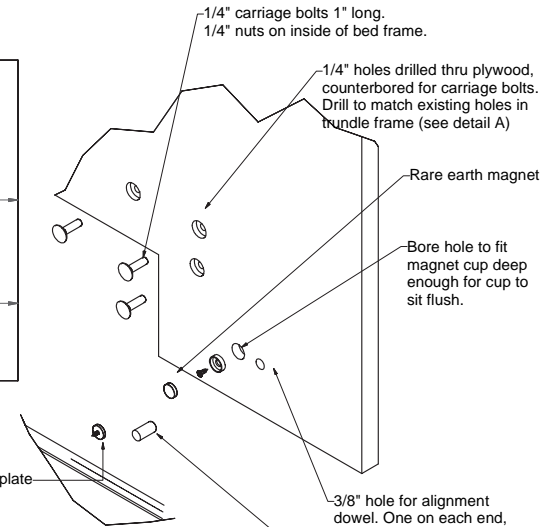
Use existing holes in trundle frame to mount front panel.

DETAIL A

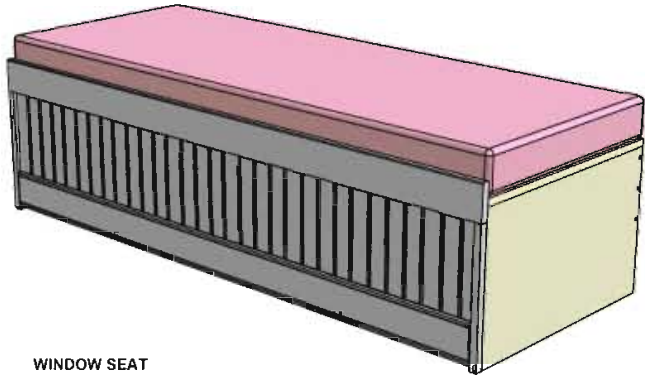


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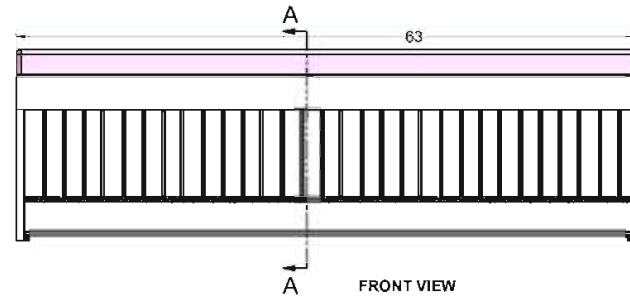
Magnet strike plate



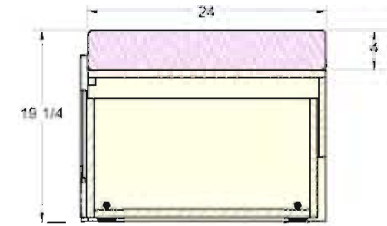
DETAIL B



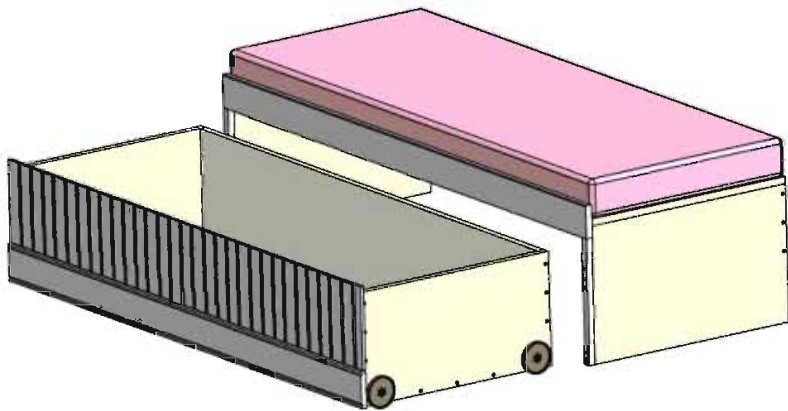
WINDOW SEAT



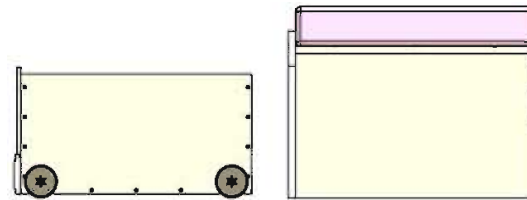
FRONT VIEW



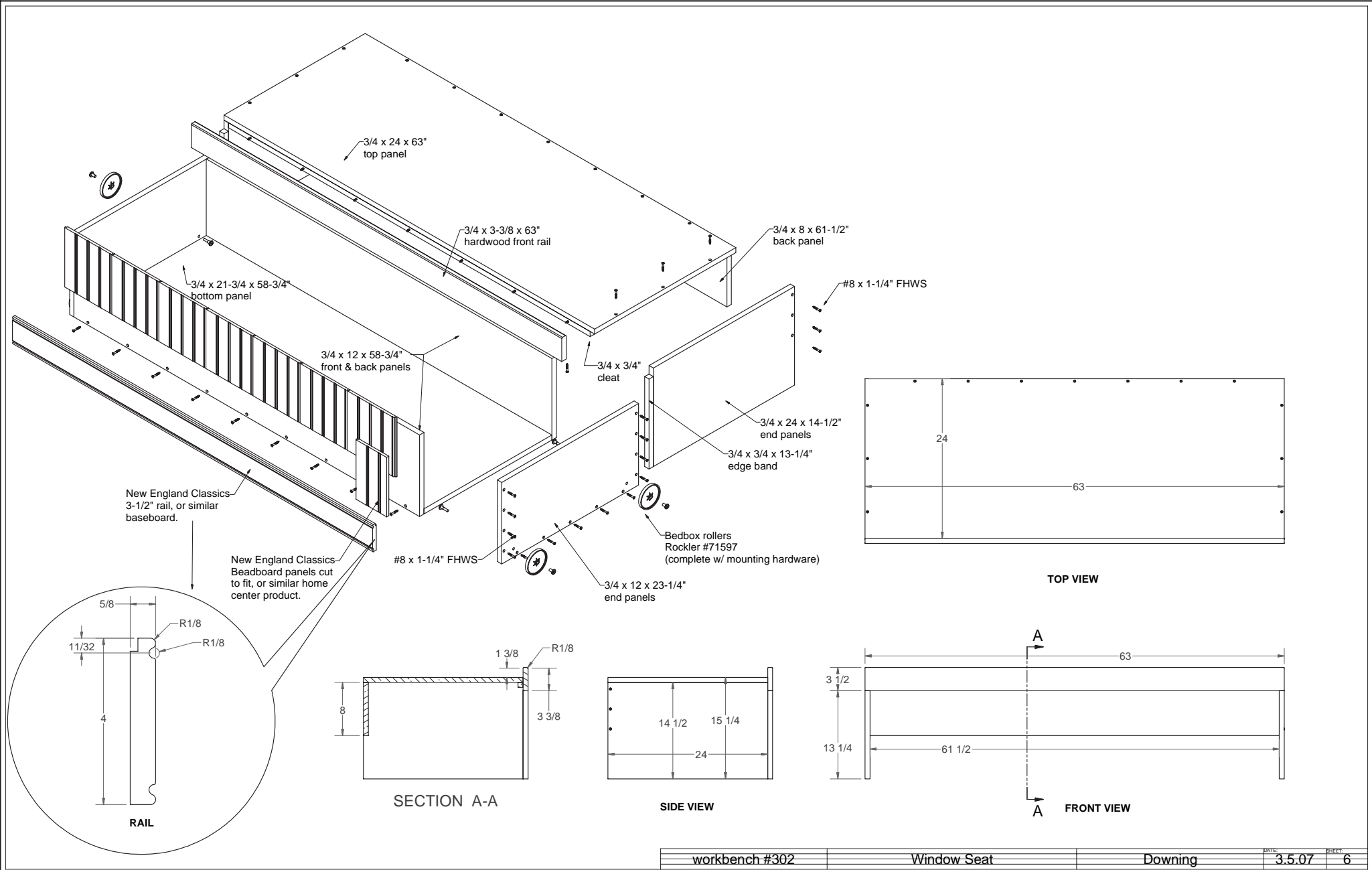
SECTION A-A

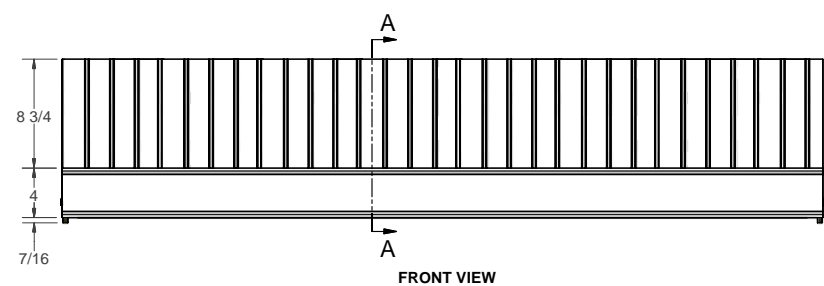
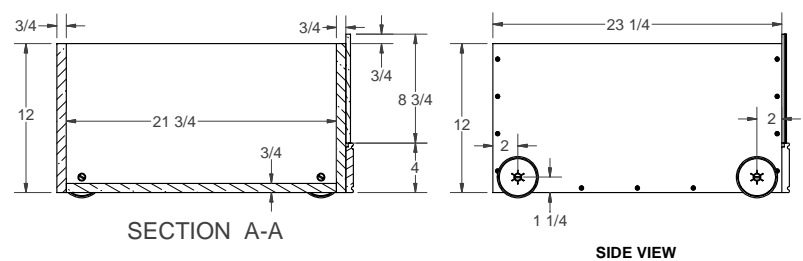
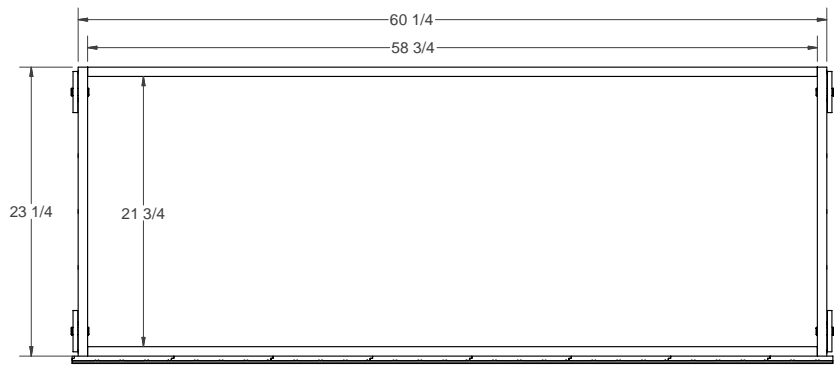
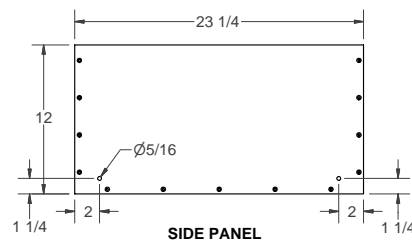


WINDOW SEAT
w/ storage unit rolled out



SIDE VIEW

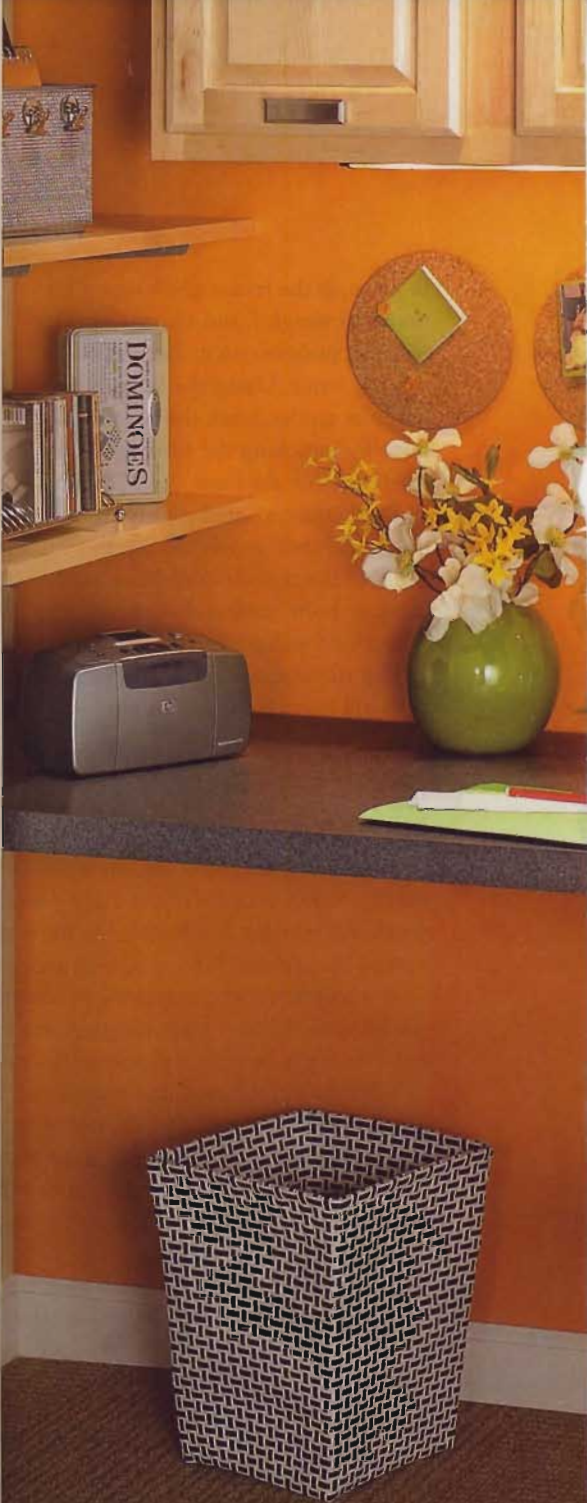
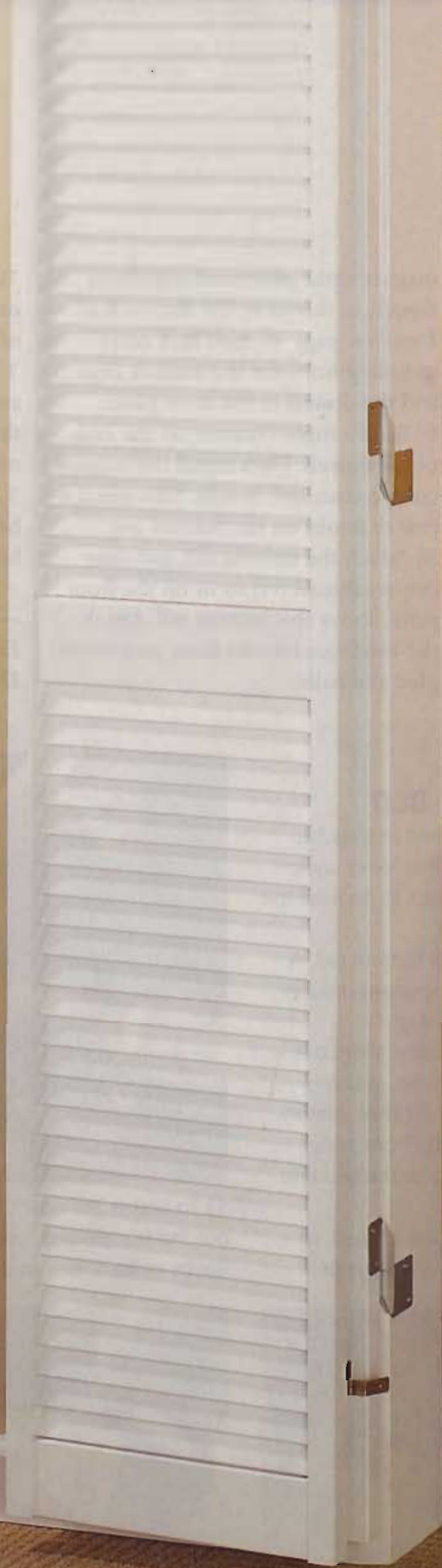




workbench #302	Window Seat	Downing	DATE 3.5.07	SHEET 7
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The trouble with most closet-to-office conversions is that the space still seems more closet-like than office-like. A truly worthwhile home office has comfort and efficiency in mind. It reflects your unique style while keeping an eye on organization and productivity. Most of all, a home office should say that this is your home first and your office second.

This closet-to-office conversion meets all of those priorities using mostly off-the-shelf items. Only a handful of items were purchased online or special-ordered. Over the next few pages, we'll highlight a few of our favorite features of this unique workspace.



from closet to
Instant C



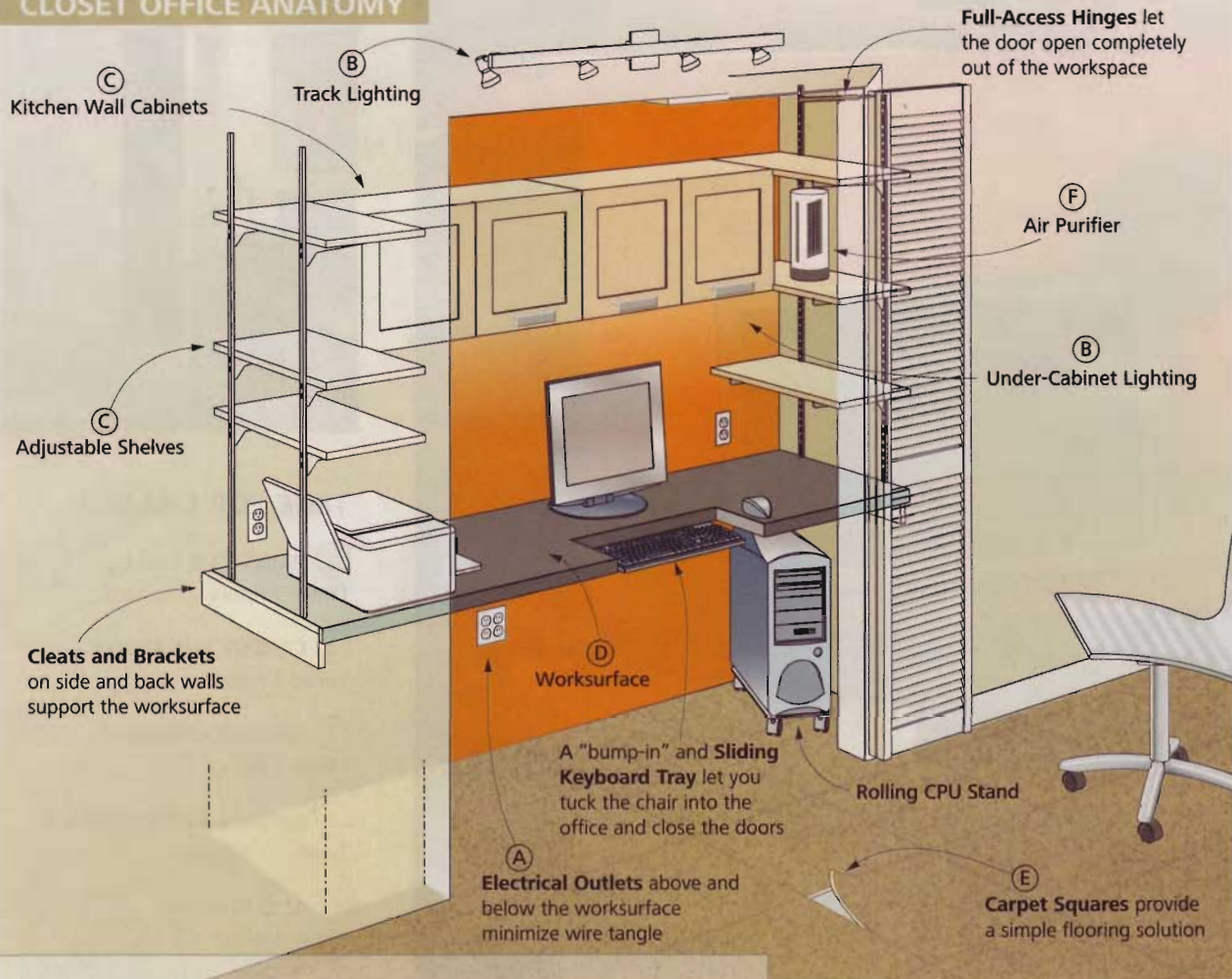
BEFORE

TIME FOR CHANGE

- ① PAINT THE WALLS
Time: 3 hours
- ② CARPET THE FLOOR
Time: 3 hours
- ③ MOUNT CABINETS
Time: 1 hour
- ④ INSTALL WORKSURFACE
Time: 30 minutes
- ⑤ ADD SHELVES
Time: 1 hour
- ⑥ UPGRADE DOOR HINGES
Time: 1 hour
- ⑦ ADD A KEYBOARD TRAY
Time: 15 minutes
- ⑧ UPDATE ELECTRICAL
Time: N/A
- ⑨ INSTALL LIGHTING
Time: 30 minutes
- ⑩ SET UP AIR PURIFIER
Time: 5 minutes
- ⑪ ADD A ROLLING CPU BASE
Time: 5 minutes
- ⑫ ACCESSORIZE
Time: 30 minutes

Office

CLOSET OFFICE ANATOMY



CLOSET OFFICE SETUP TIPS:

- A]** Electrical outlets in closets are rare. So the first step in your closet conversion may be to have an electrician route power to the space so you'll have adequate outlets both above and below the work surface. Include power for your lighting in the plan, as well.
- B]** Speaking of lighting, that one stark lightbulb typical in most closets won't be enough to work by. So we used easy-to-install track lighting above the door along with under-cabinet lights to illuminate this closet office.
- C]** When shopping for storage solutions, think outside the office. The cabinets we used are intended for the kitchen. And those shelf standards and brackets can be found among garage, basement, or closet organizers. The round cork tack boards on the back wall (*Photo, page 50*) are actually trivets, and the magnetic baskets came from a bed-and-bath store.
- D]** The plastic laminate countertop isn't exactly an "off-the-shelf" item. But any home center will build you a work surface like this one, including a "bump-in" for the chair to tuck into.
- E]** For flooring, we chose carpet squares that are attractive, easy-to-install, and just as easy to replace if they get worn or stained.
- F]** Considering that you may spend hours facing into this poorly ventilated closet space, a small air purifier or, at a minimum, a fan will help circulate the air and keep you feeling your best while working in your office.

ONE-OF-A-KIND CLOSET OFFICE

As the *Closet Office Setup Tips* (left) make clear, a closet office (or any office, for that matter) requires wall-to-wall and floor-to-ceiling planning. And while the bulleted list and *Illustration* provide a nice overview for designing your own office in a closet, there are some specific qualities about this makeover that bear closer examination. So many, in fact, that we had to choose our four favorite traits to highlight in this article.

For instance, you may have noticed when comparing the "Before" and "After" *Photos* (*page 50*) that we changed the carpet. There may have been a little life left in the existing carpet, but by replacing it with short-*nap* carpet squares [1] we created a floor that an office chair will roll on much more easily. And installing the squares couldn't be any simpler—just line them up and press them into



1
4



2



3

place. Best of all, as the chair causes a wear pattern, or a dropped pen leaves a stain, we only need to replace one or two squares to fix the problem.

Another important goal for this office was to include as many storage options as possible without making the small space seem cramped. In lieu of the typical drawers, cabinets, bulletin boards, and desk sets, we used creative arrangements of adjustable shelves, decorative boxes, and even cork trivets (meant to set hot pans on) to meet those needs. Our favorite, though, is this metal “basket backer” [2]. This is simply a sheet of galvanized metal that we glued to a piece of 1/4”-thick plywood. It’s an ideal mounting surface for magnetic baskets. We mounted it on the wall with screws and hollow wall anchors. And we slipped finish washers on the screws for a sleek look.

Another unique feature of our closet office is that the whole thing fits behind the closed doors when it’s not in use. To accomplish that, we ordered a plastic laminate countertop with a small “bump-in” for the chair to tuck into during the off hours. But rather than sacrifice that worksurface, we installed a slide-out keyboard tray that we made from a maple board and mounted with keyboard tray slides [3].

Finally, having packed all this ingenuity and creativity into the closet office, we wanted to be sure to have full access to this space. To accomplish that, we installed special hinges [4] that allow the bi-fold doors to pivot completely out of the opening and sit flat against the walls.

— Written by Bill Link, illustrated by Erich Lage, designed by James R. Downing

BUYER'S GUIDE

FIXTURES

Lowe's

800.445.6937

Lowes.com

Custom plastic laminate countertop, 30" wall cabinets, 20" FLOR carpet squares, shelf standards, shelves, support brackets for worksurface, 12" keyboard slides

Johnson Hardware

800.837.5664

JohnsonHardware.com

Full-access bi-fold door hinges

ACCESSORIES

Bed, Bath, & Beyond

800.462.3966

BedBathandBeyond.com

Cork trivets, magnetic baskets, air purifier

Target

800.440.0680

Target.com

Manhattan office chair, ball vase, expandable file, pencil holder, rolling CPU stand

PAINT

Benjamin Moore

800.344.0400

BenjaminMoore.com

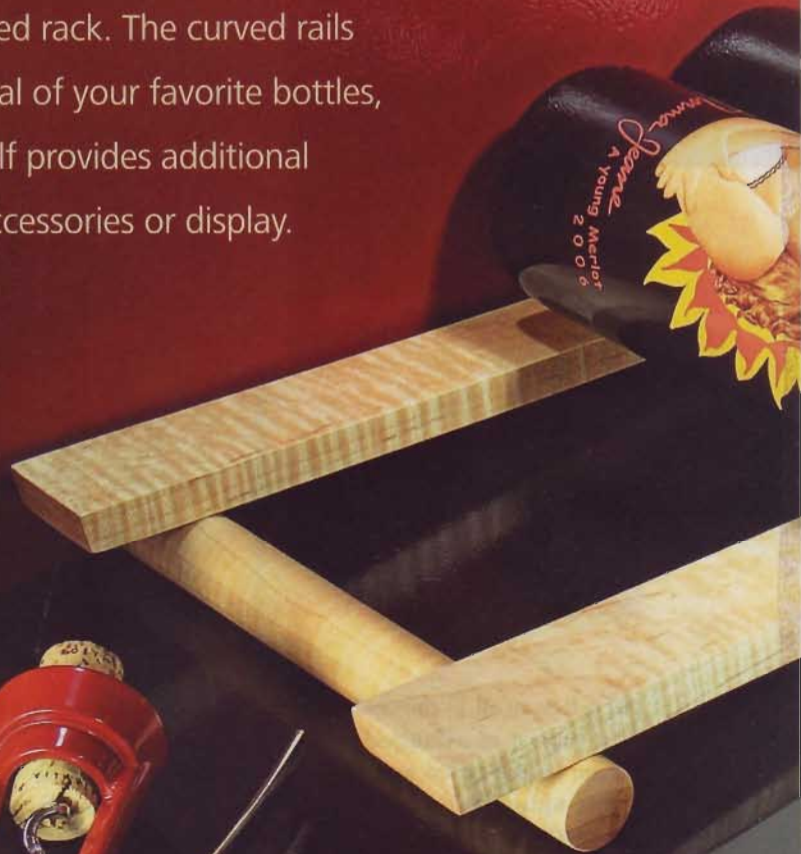
Back Wall: Fruity Cocktail Orange (#147)

Side Walls: Monroe Bisque (#HC-26)

Curved-Rail

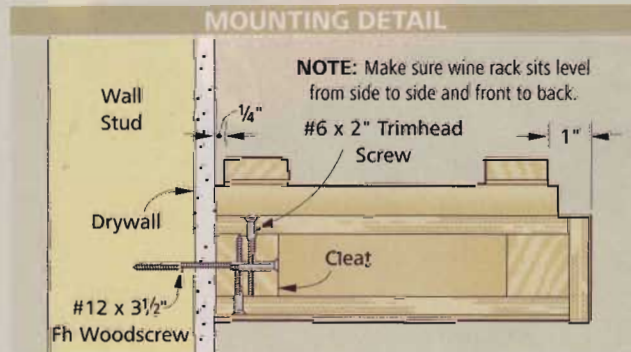
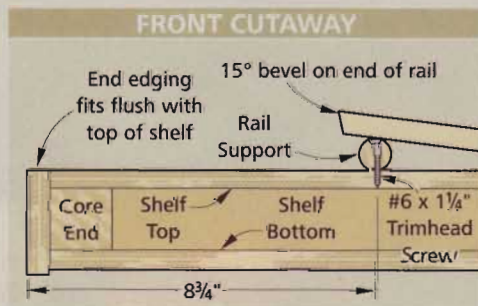
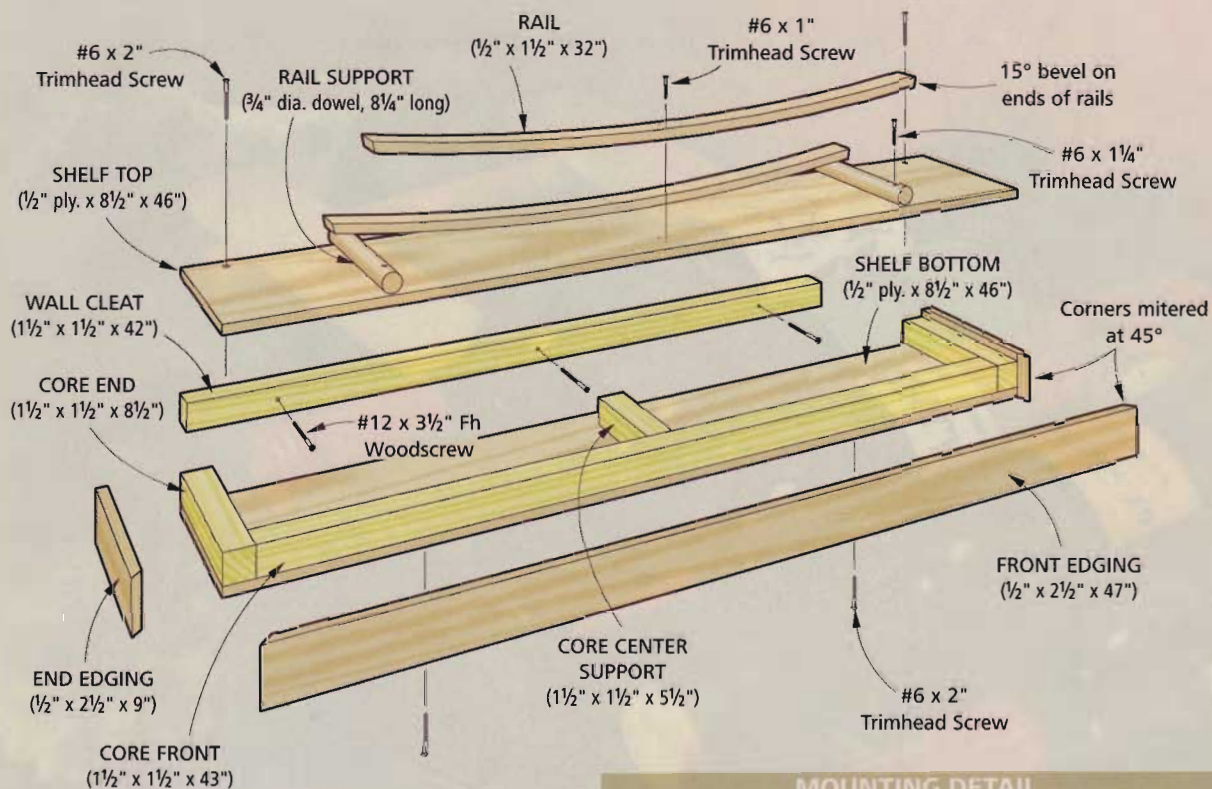
WINE RACK

Store your wines in style on this elegant wall-mounted rack. The curved rails cradle several of your favorite bottles, and the shelf provides additional space for accessories or display.





CONSTRUCTION VIEW



An Easy-to-Build Wine Rack

With its elegantly curved maple rails and gloss-black shelf, this wine rack is as much about style as storage.

But don't let its sophisticated appearance, or the lack of visible supports securing it to the wall, fool you. The shelf on this wine rack is just a hollow box mounted on a wall cleat (*Construction View*). And the rails start out flat. They rest on dowels near each end, and then get flexed into a gentle curve when screwed in place.

Here's how the wine rack goes together, step by step:

- 1] Cut the shelf top and bottom to size from 1/2"-thick plywood.
- 2] From a straight pine 2x2 (1 1/2" x 1 1/2" actual size), cut the shelf core front, ends, and center support to length.
- 3] Lay the shelf bottom on your worksurface with the good face down. Then glue and clamp the core pieces to the shelf bottom. Make sure they don't stick out beyond the edge and ends of the plywood.
- 4] Before the glue dries, spread more glue on the core pieces, and lay the shelf top in place. Make sure the

edges and ends of the shelf top and bottom are aligned. Then clamp the assembly together.

- 5] After the glue dries, it's time to add the front and end edging that covers the shelf core. The edging is made from 1/2"-thick poplar strips.

Notice that these pieces are mitered at the corners. The easiest way to get tight-fitting corner joints is to start at one end, and then work your way around to the other end, mitering, measuring, and cutting each piece as you go. Once you have all

the pieces cut to fit, glue and clamp the edging to the shelf.

6] Now you can make the rails that cradle the wine bottles. They're cut to length from $\frac{1}{2}$ "-thick, $1\frac{1}{2}$ "-wide strips of maple. You'll notice, though, that the ends aren't square—they have a slight bevel that adds a subtle but stylish touch (*Front Cutaway*). So before cutting the rails, set your miter



Position each rail support over the pilot holes drilled in the shelf earlier. Secure each support with trimhead screws.



Bend each rail using your hand or a clamp until the rail rests against the shelf. Then drive 1" screws into the mounting holes.

saw (or table saw) to 15° . Then cut the rails to length.


7] To complete the rails, drill counterbored shank holes for #6 \times $1\frac{1}{4}$ " trimhead screws that will attach the rails to the shelf. Lay the rails on the shelf so the rear rail is $\frac{1}{4}$ " from the back edge, the front rail is 1" from the front edge of the shelf, and both are centered lengthwise. Then mark through the shank holes to locate pilot hole locations in the shelf. Drill the pilot holes, but don't attach the rails yet.

8] While you have the drill handy, drill holes for the screws that attach the shelf to the wall cleat later.

9] Next, cut rail supports to length from a $\frac{3}{4}$ " maple dowel. Lay out and drill counterbored pilot holes through the rail supports, 1" in from each end. Then position the supports on the shelf, and mark the locations of pilot holes for mounting screws. Drill the pilot holes, but don't attach the supports.

10] Now you can paint and finish the wine rack. Start by sanding everything through 180-grit. Use wood filler to conceal any gaps, and then sand these areas smooth. Then spray a coat of primer on the shelf. Next, spray on two coats of gloss-black paint, followed by two or three spray coats of clear gloss lacquer. For the rails and rail supports, just spray on a couple coats of the clear lacquer.

11] After the paint and lacquer dry, you can mount the rail supports to the shelf (*Photo, top left*). Then mount the rails (*Photo, bottom left*).

12] To mount the shelf, start by cutting a cleat to length from a 2x2. Then mount the cleat to the wall, making sure it's level and secured to at least two studs, preferably three, with $3\frac{1}{2}$ " wood screws (*Mounting Detail*). Now just fit the shelf over the cleat, check to make sure it sits level from front to back, and secure it with two 2" screws from above, and two more from below. 

—Written by David Stone, illustrated by Matt Scott, project designed by John Doyle



On this wine rack, wood dowels lift the ends of the rails to establish their graceful curve, while a slight bevel on the ends of the rails adds subtle style.

SUPPLIES

Materials:

- » (1) Quarter-sheet of $\frac{1}{2}$ " Cabinet-grade Plywood
- » (2) $\frac{1}{2}$ " \times 3" \times 48" Poplar
- » (2) $\frac{1}{2}$ " \times $1\frac{1}{2}$ " \times 48" Maple
- » (1) $\frac{3}{4}$ "-dia. \times 24" Maple Dowel
- » (1) 2x2 Pine, 8-ft. Long

Fasteners:

- » (4) #6 \times 1" Trimhead Screws
- » (4) #6 \times $1\frac{1}{4}$ " Trimhead Screws
- » (4) #6 \times 2" Trimhead Screws
- » (3) #12 \times $3\frac{1}{2}$ " Fh Woodscrews

Paint & Finish:

- » (1) Spray Can Primer
- » (1) Spray Can Gloss-Black Paint
- » (1) Spray Can Gloss Clear Lacquer

Tools:

- » Benchtop Table Saw, Miter Saw (optional), Drill, Clamps



Stain it **Bright** stain it **right**

Go beyond natural wood stain colors and explore the bold, brilliant possibilities of water-based stains. They're available in a dazzling array of custom-mixed hues.



We all love wood stains because they bring out the natural beauty inherent in wood grain. And we're familiar with the variety of natural wood tones available. But what are the options when you want to finish a project with vibrant or decorator color?

Here's the good news. Now you can choose from a virtual rainbow of colored stains available from Minwax. In addition to the selection of lively colors, these stains offer several other advantages as well. They're water-based, so they dry fast. They require only soap and water for cleanup. And they have no unpleasant fumes.

But don't expect to buy the stains "off the shelf." They are custom-mixed in the store from 60 decorator color formulas the way paint is mixed.

Follow the steps and tips on these pages for successful results that are virtually goof-proof.

Proper Prep—Applying water-based stain directly to bare wood will raise the grain and produce blotchy, uneven color, so "conditioning" the wood is essential. To do that, sand the wood with fine-grit sandpaper, and then apply the conditioner. After allowing it to penetrate for 1 to 5 minutes, wipe the excess off with a soft cloth (*Fig. 1*). Now let the wood dry for 15 to 30 minutes, and then give it a light sanding before applying the stain (*Fig. 2*).

Successful Staining—At this point, you can brush on stain as shown in *Fig. 3*. These stains dry fast, so you'll want to wipe down the applied stain within a few minutes (*Fig. 4*). If the stain starts to dry, the color lifts off, and the coverage becomes uneven.



1 Brush on conditioner in the direction of the grain. Let it sit for 1 to 5 minutes, and then remove the excess with a soft cloth.



2 Let the conditioner dry for 15 to 30 minutes, and then lightly sand with 220-grit sandpaper.

Tips For Success—For best results, here are a few more tips:

- The amount of stain applied determines the final result. You can apply one coat for translucent coverage or additional coats for more intense color.
- Two thin coats are better than one heavy coat, but it's best to wait at least two hours between applications.
- Uneven areas can be blended using a cloth dampened with stain.
- Small surface areas are easy to manage, but when working on large areas, be sure to keep a wet edge in order to avoid lap marks.

The Big Finish—To bring out the beauty of the wood grain and the intensity of the color, applying a topcoat of protective finish is a must. Just be sure to choose a clear formula. We used a water-based polyurethane. 📖

—Written by Patricia Garrington



3 Use a foam brush, staining pad, or synthetic bristle brush to apply the stain in the direction of the wood grain. Don't let the stain penetrate longer than 3 minutes.



4 Remove the excess stain using a clean, soft cloth lightly dampened with stain. Wipe in the direction of the wood grain, and use light to medium pressure for even color.



Buyer's Guide:

Minwax Water-Based Wood Stains: Harvest Gold, Mandarin Orange, China Red, Green Tea (how-to sample)
Minwax.com

Stacking File Boxes:
Target.com

Other Tools and Supplies:
 Minwax Pre-Stain Conditioner
 220-grit sandpaper
 Foam brush
 Clean cloths
 Clear finish



Recycling Center

save the planet *(and some space)*

Teach the next generation two valuable skills—conservation and construction—by building this rolling recycling center together.

Almost everyone has gotten on board with recycling these days. Many communities offer curbside pickup of common recyclables, such as cans, glass, plastics, and paper, or at least have convenient drop-off points for these materials.

That means it's easy to properly dispose of recyclable materials. What's tough is finding a place to keep them until it's time to turn them in, especially if they don't get collected weekly with the rest of your trash. And recyclables usually have to be sorted, which means you need additional space to divide everything up.

This recycling center solves all those issues. In a compact space, it holds four 12.5-gallon bins that let you keep everything separated. The bins slide out, so they're easy to access. And the whole center sits on casters to make it easy to move around.

The center is built mainly from white melamine panels, which are good-looking and easy to clean. On top, there's a solid-pine panel that makes a great worksurface.

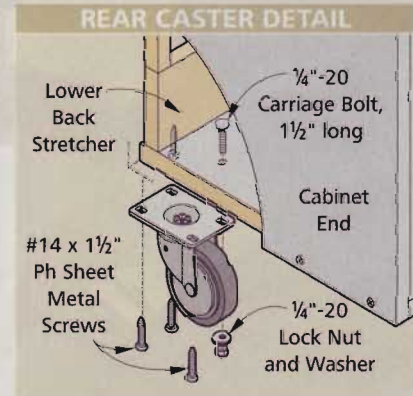
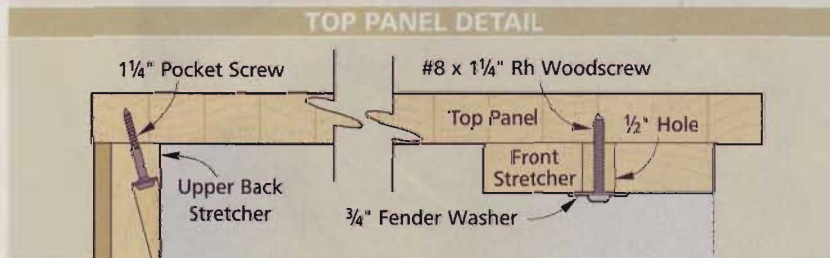
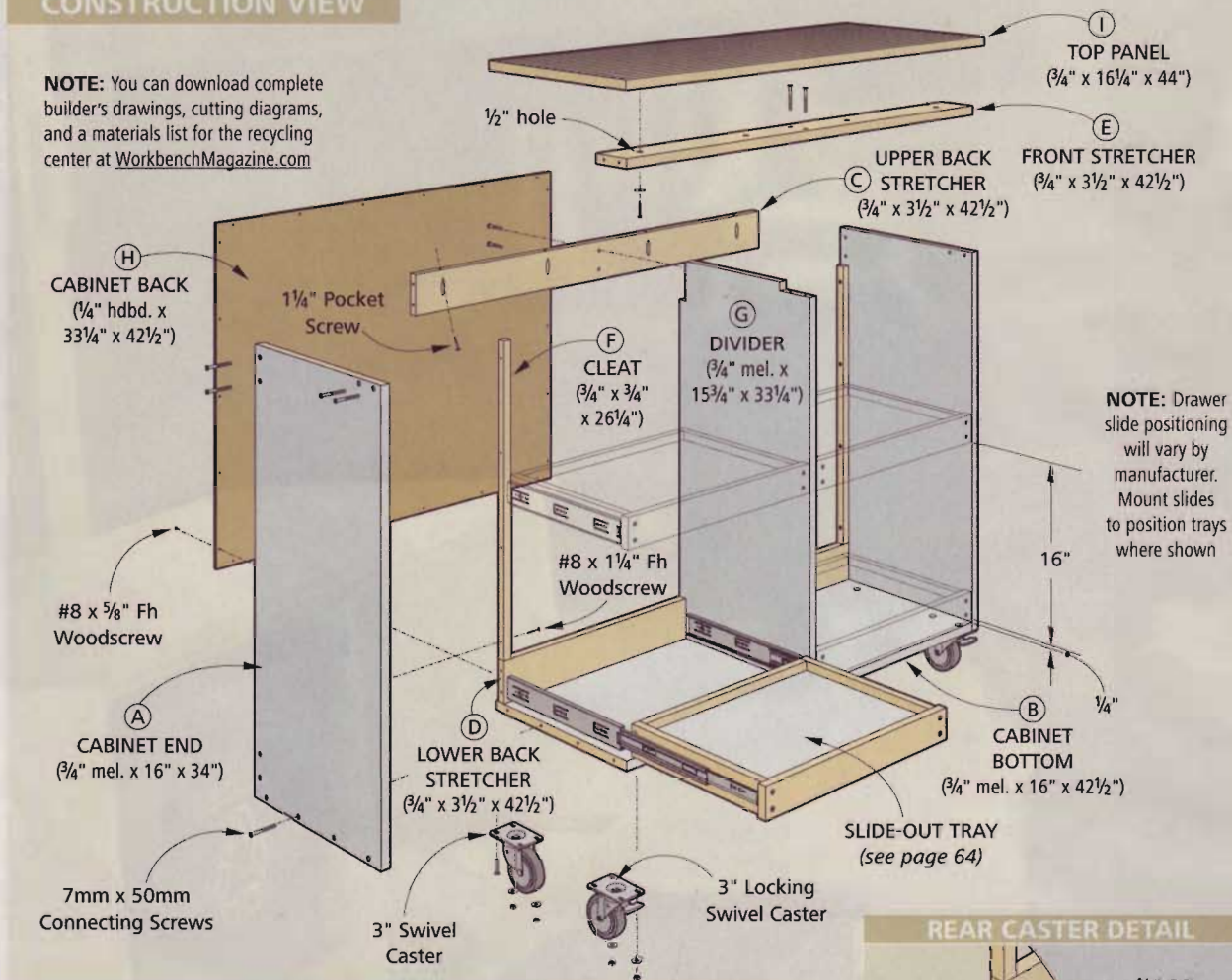
One of the best features of this center, though, is how easy it is to build. The whole thing goes together without any fancy joinery, and all the work is accomplished using fairly basic tools. In fact, if you have a budding builder around, it's a great project to do together *(left)*.





CONSTRUCTION VIEW

NOTE: You can download complete builder's drawings, cutting diagrams, and a materials list for the recycling center at WorkbenchMagazine.com



Building the Cabinet

To support the weight of a full load of recyclables and to stand up to the abuse of being moved around, this recycling center has to be sturdy. But that doesn't mean it has to be difficult to build.

As the *Construction View* above shows, the main cabinet consists of six panels: two ends, a bottom, divider, top, and back. They're connected by stretchers and a couple of cleats, and the whole assembly goes together with screws.

Even getting the supplies you need is simple. Most are available at your local

home center. The melamine pieces, for example, are cut from 16"-wide shelf panels. The pine top comes pre-glued. And the jig for the pocket-hole joinery we used is available at the home center.

You will have to special-order the "connecting screws" that join the cabinet panels. You can learn more about the screws, and why they're worth a special order, on page 63.

Once you have all your supplies on hand, you can get started building the recycling center cabinet.

1] Cut two cabinet ends (A) and one cabinet bottom (B) to length.

2] Now arrange the pieces on the floor, front edge down, and clamp them together in a "U" shape. Align the panels so the front edges are even and the bottom panel sits flush with the end of each cabinet end panel. Then use the stepped drill bit that comes with the connecting screws to bore through the cabinet end and into the cabinet bottom (*Construction View*). With that done, drive in the connecting screws.

3] Cut three stretchers (C, D, E) to length from 1x4 pine. Mark one as the upper back stretcher, and then drill pocket holes in it (*Construction View*). Later, these will receive screws to attach the top panel. (See page 65 for more about working with pocket screws.)

4] Mark another of the pieces you cut as the front stretcher. Then drill four ½"-diameter mounting holes in it.

5] Now attach the two back stretchers to the cabinet. Note that they don't sit flush with the back edge of the cabinet. They're set in ¼", so the back panel can be fit into the cabinet later. The easiest way to account for this inset is to make a couple of spacers from ¼" hardboard, and then use them to position the stretchers as you drill holes for the connecting screws (*Photo, right*). After drilling the holes, drive in screws to secure the back stretchers.

Now you can attach the front stretcher with two connecting screws in each end (*Photo, page 60*).

6] To provide a sturdy mounting surface for the back, cut a pair of cleats (F) to width and length from ¾" pine, and then attach them between the back stretchers.

7] Now cut a divider (G). Rip ¼" from the back (unfinished) edge so that it will fit flush with the inset stretchers. Then use a jig saw to cut three notches that allow the divider to fit around the stretchers.

8] Stand the divider in position, and then drill holes and drive in the connecting screws that attach it to the stretchers and to the cabinet bottom.

9] Measure and cut a hardboard back panel (H) to fit, and then screw it to the stretchers and cleats.

10] Now you can attach the casters to the cabinet. Because the recycling center can be heavy when it's fully loaded, the casters are positioned so they sit under the end panels (*Rear Caster Detail*). That way, some of the weight gets borne by the cabinet ends, not just the bottom panel.



Use spacers to position the upper rear stretcher, and have your helper hold one end of the stretcher in place as you align the other end and drill screw holes.

Each rear caster gets mounted with two screws driven into the cabinet end, one screw driven into the lower back stretcher, plus one bolt through the cabinet bottom. Each front caster is mounted with two screws driven into the cabinet ends, and two bolts through the cabinet bottom.

11] Now you can add the top panel (I). It's made from a pre-glued pine panel that gets cut to size so that it overhangs ¾" in front and ¾" at each end.

12] Before installing the top, apply a coat of water-based polyurethane to all of its surfaces. The reason for this is simple: The top is glued-up from pieces of solid pine. Like all solid wood, the panel will absorb and shed moisture throughout the year. And when solid wood absorbs moisture, it can swell. The finish seals the wood to minimize swelling.

13] Of course, some swelling may still occur. To accommodate that, the top gets mounted tightly only to the back stretcher using pocket screws (*Top Panel Detail*). At the front, the top needs to be able to move if it shrinks and swells. The oversize holes in the front stretcher make that possible.



CONNECTING SCREWS

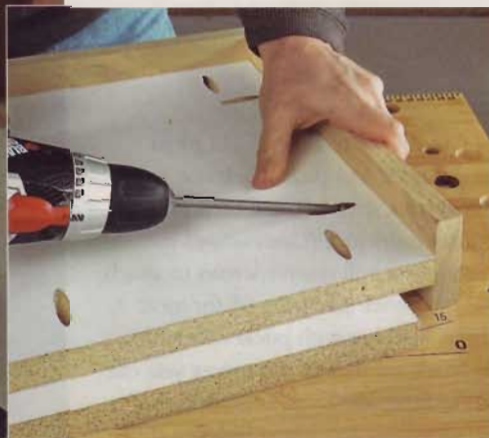
We built this project using melamine panels. They work great, but they have a particleboard core that tends to split when fastened with ordinary wood screws. Even if it doesn't split, the screws still may not grab firmly.

The solution is to use "connecting" screws (*Photo*). They have straight shanks to prevent splitting, and deep threads that grab firmly. A stepped drill bit is used to bore the pilot hole, shank hole, and countersink in one operation.

You can purchase a starter kit (#7050-CSP-A) at McFeelys.com. It has 100 7mm x 50mm screws, caps, and the stepped drill bit for about \$35.



Use a pocket-hole jig to bore holes in the underside of the tray bottom (above). Then position the tray bottom using a spacer, and drive screws to attach the sides (Inset).



tray bottom on the spacer with the pocket holes facing up. Then attach the frame pieces with pocket screws (Inset Photo, above). When mounting the frame front, make sure it overhangs the tray sides evenly.

5] Reinforce the corners of each frame with connecting screws to complete the trays.

6] Next you can mount the drawer slides. Installation techniques vary depending on the manufacturer. Just follow those instructions to position the trays as shown in the *Cabinet Construction View* on page 62.

Once the slides are secured, install the trays, drop in the recycling tubs, and you're set to save the planet without having to give up much storage space. ■

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

Build the Trays

Making a cabinet to store recyclables is a fine idea, but making that storage easy to access is what makes this recycling really work. That's accomplished with slide-out trays.

Each tray consists of a melamine bottom that's surrounded by a frame made from 1x3 pine. The tray bottom is attached to the frame with pocket screws, and the frame gets fastened together with connecting screws (*Tray Construction View*).

The trays ride on full-extension drawer slides so they'll slide out for easy access, even when weighed down with loaded recycling tubs.

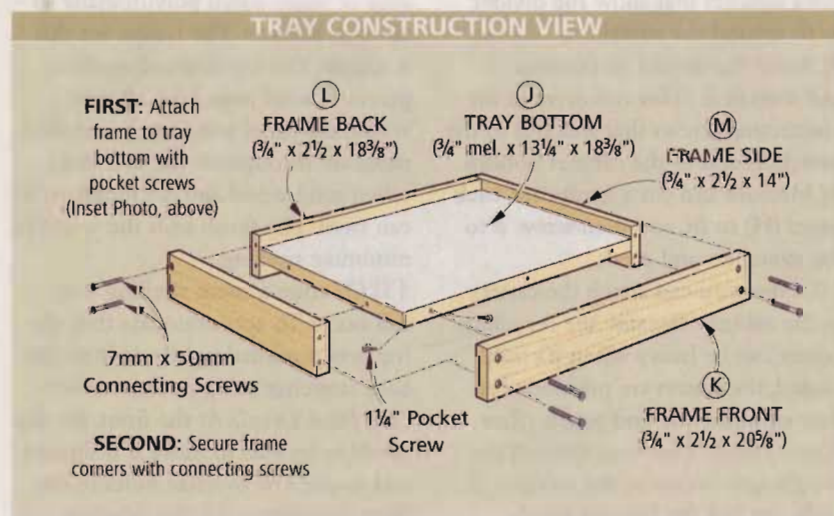
Here's how the trays are built:

- 1] Cut tray bottoms (J) to size from $\frac{3}{4}$ " melamine panels. Then drill pocket holes in one face of each tray bottom (*Photo, above left*).
- 2] Cut frame fronts (K), backs (L), and sides (M) to length from 1x3 pine. Note as you cut these that the sides are identical on each tray. The front and back are different, though. The fronts

are longer, so that they overhang the sides and conceal the drawer slides.

3] Now sand the frame parts and brush on two coats of water-based polyurethane finish. It's easier to do this now than after the trays are assembled.

4] You can assemble the trays in two steps: First, set a $\frac{3}{4}$ " thick spacer on your benchtop or worktable. Lay a



MATERIALS LIST



MATERIAL LIST

Part	Qty	Size	Material	
CABINET				
A	CABINET ENDS	2	¾" x 16" x 34"	Melamine
B	CABINET BOTTOM	1	¾" x 16" x 42½"	Melamine
C	UPPER BACK STRETCHER	1	¾" x 3½" x 42½"	Pine
D	LOWER BACK STRETCHER	1	¾" x 3½" x 42½"	Pine
E	FRONT STRETCHER	1	¾" x 3½" x 42½"	Pine
F	CLEATS	2	¾" x ¾" x 26¼"	Pine
G	DIVIDER	1	¾" x 15¾" x 33¼"	Melamine
H	BACK PANEL	1	¼" x 33¼" x 42½"	Hardboard
I	TOP PANEL	1	¾" x 16¼" x 44"	Pre-glued Pine
TRAYS				
J	TRAY BOTTOM	4	¾" x 13¼" x 18¾"	Melamine
K	FRAME FRONTS	4	¾" x 2½" x 20⅞"	Pine
L	FRAME BACKS	4	¾" x 2½" x 18¾"	Pine
M	FRAME SIDES	8	¾" x 2½" x 14"	Pine

HARDWARE:

- (62) 7mm x 50mm Connecting Screws*
- (8) #8 x 1¼" Fh Woodscrews
- (22) #8 x ⅝" Fh Woodscrews
- (4) #8 x 1¼" Ph Sheet Metal Screws
- (4) ¾" Fender Washers
- (10) #14 x 1¼" Ph Sheet Metal Screws
- (44) 1¼" Pocket Screws
- (6) ¼"-20 Carriage Bolts, 1½" long
- (6) ¼" Locking Nuts
- (6) ¼" Washers
- (4 pr.) 14" Full-Extension Drawer Slides

*Order Starter Kit #7050-CSP-A (includes 100 connecting screws, 100 caps, stepped drill bit, driver bit) from McFeelys.com

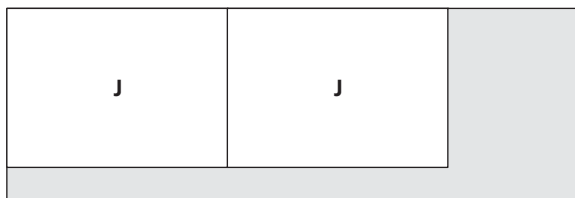
CUTTING DIAGRAM



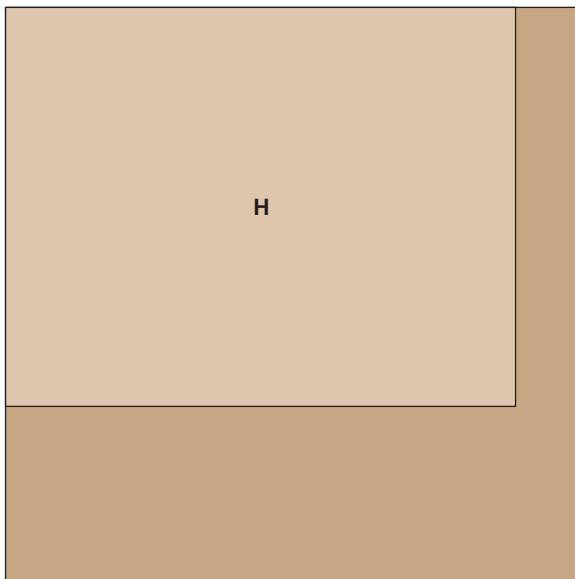
$\frac{3}{4}$ x 16 x 96 MELAMINE



$\frac{3}{4}$ x 16 x 96 MELAMINE



$\frac{3}{4}$ x 16 x 48 MELAMINE

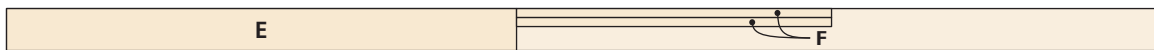


$\frac{1}{4}$ x 48 x 48 TEMPERED HARDBOARD

CUTTING DIAGRAM



1 x 4 x 96 POPLAR



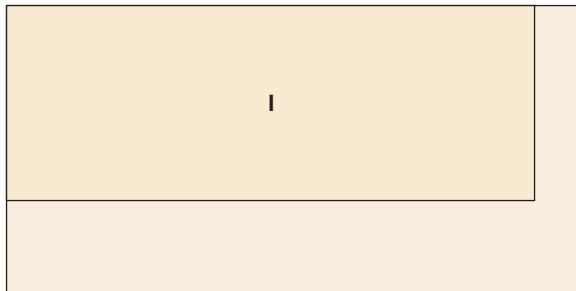
1 x 4 x 96 POPLAR



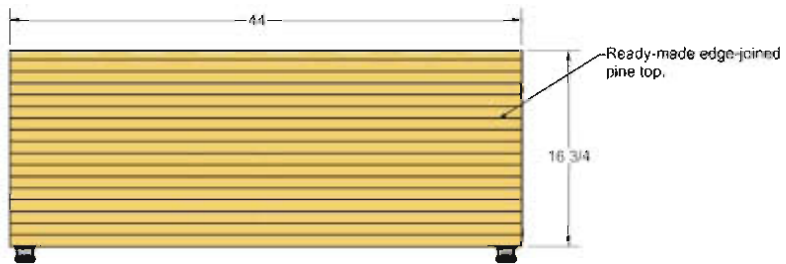
1 x 3 x 96 POPLAR



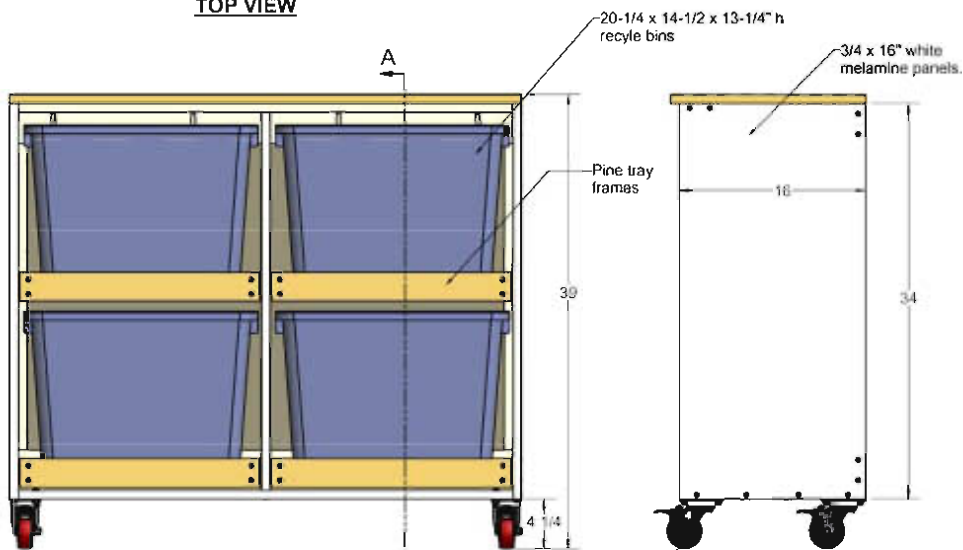
1 x 3 x 96 POPLAR (2 BOARDS)



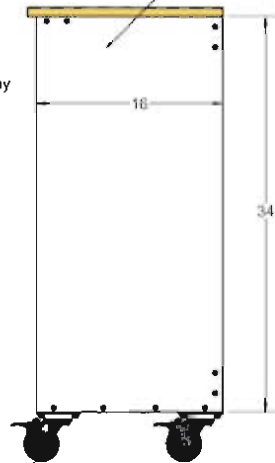
$\frac{3}{4}$ x 24 x 48 LAMINATED PINE



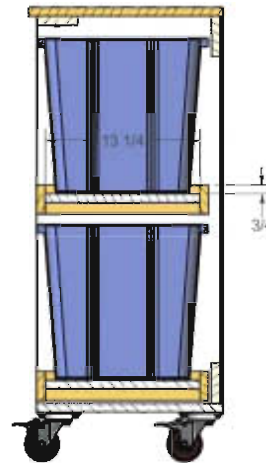
TOP VIEW



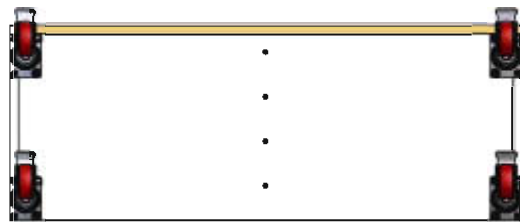
FRONT VIEW



END VIEW

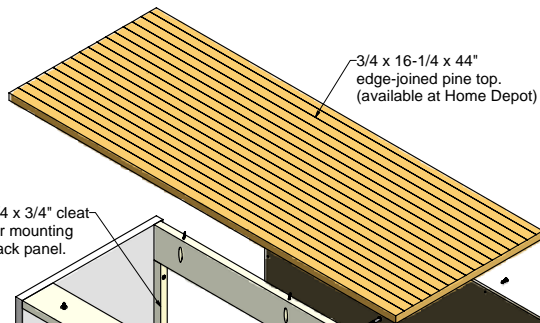


SECTION A-A



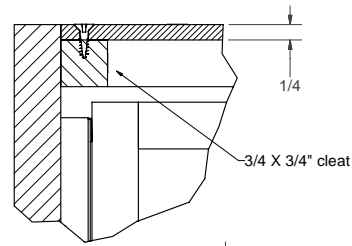
BOTTOM VIEW





3/4 x 16-1/4 x 44" edge-joined pine top. (available at Home Depot)

3/4 x 3/4" cleat for mounting back panel.



DETAIL A

1/4 x 33-1/4 x 42-1/2" hardboard back

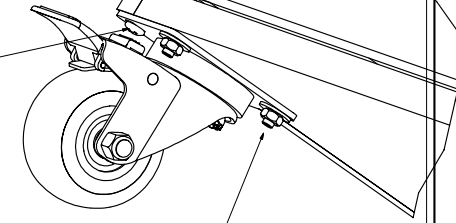
Attach back with #8 x 5/8" FHWS

Attach top with pocket screws along back edge.

Attach top with #8 x 1-1/4" pan head sheet metal screws and fender washers, through 1/2" hole on front stretcher.

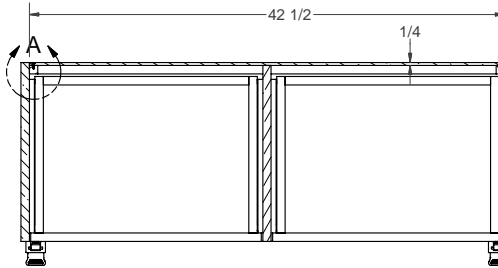
Assemble cabinet with 7 x 50mm confirmat screws (also called cabinet connecting screws) Cover screws with white plastic caps.

#14 PH Sheet metal screws, 1-1/2" long into end panel.

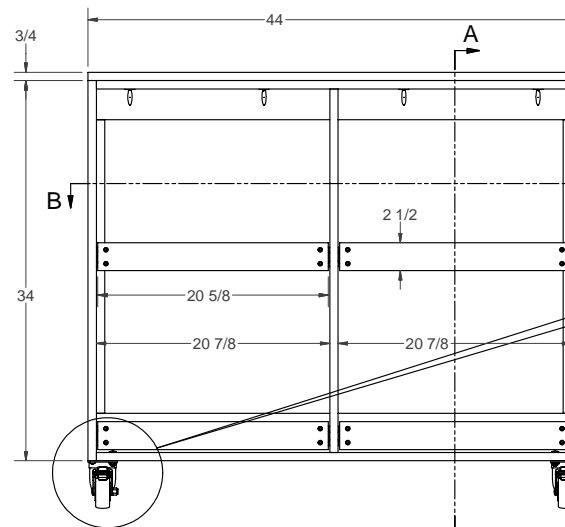


1/4" CB, 1-1/4" long through bottom panel.

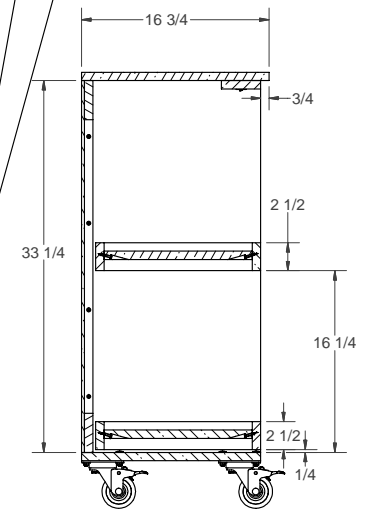
CASTER DETAIL



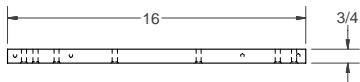
SECTION B-B



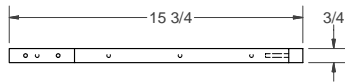
FRONT VIEW



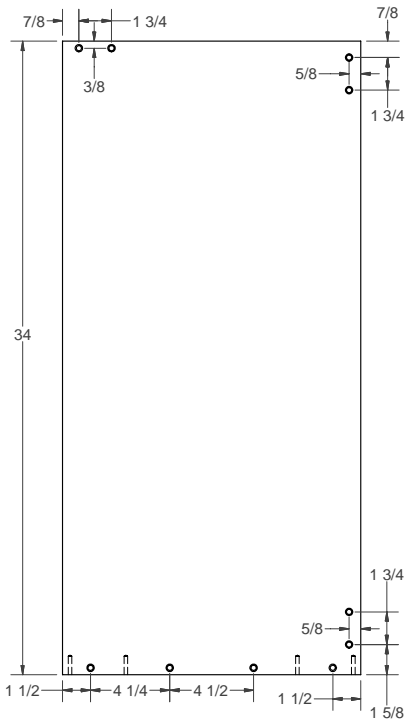
SECTION A-A



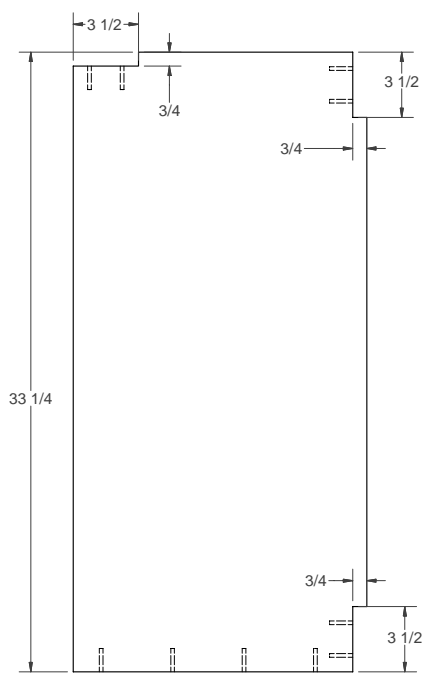
TOP VIEW



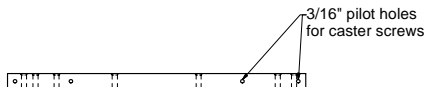
TOP VIEW



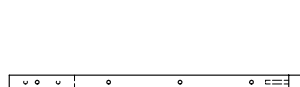
RIGHT SIDE PANEL



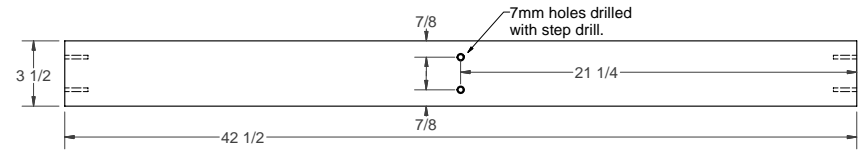
CENTER PANEL



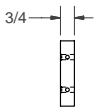
BOTTOM VIEW



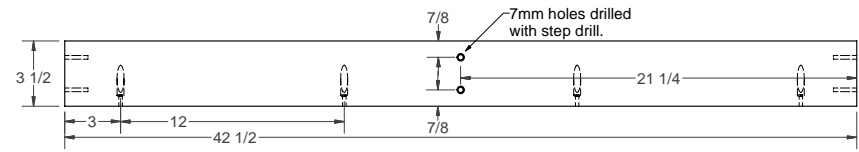
BOTTOM VIEW



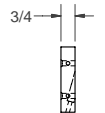
REAR BOTTOM STRETCHER



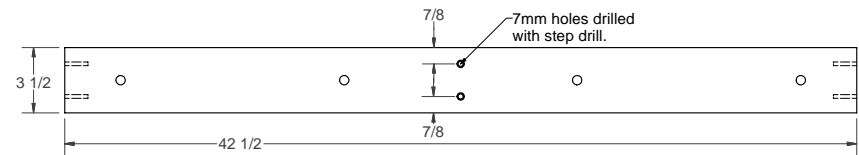
END VIEW



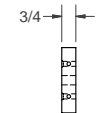
REAR TOP STRETCHER



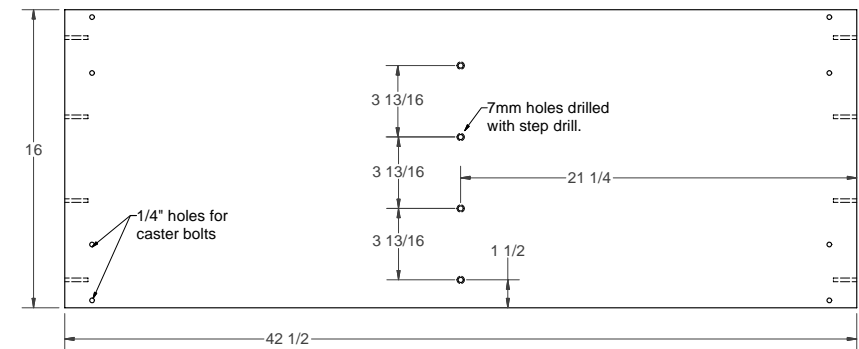
END VIEW



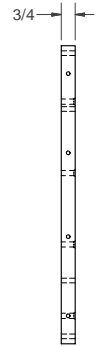
FRONT TOP STRETCHER



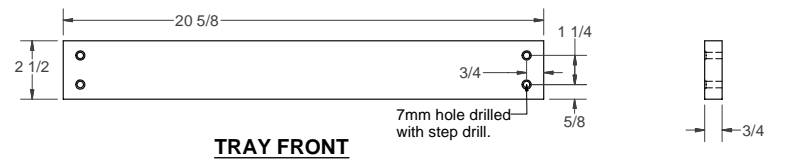
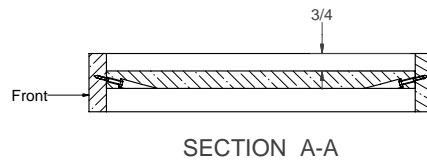
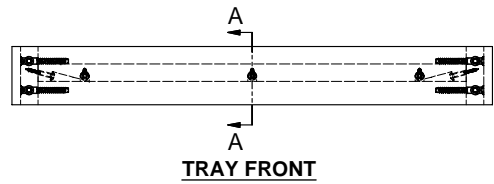
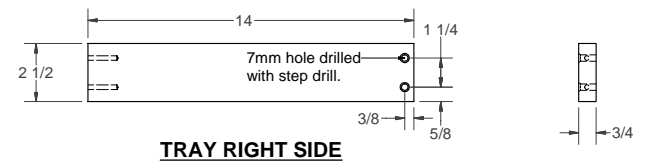
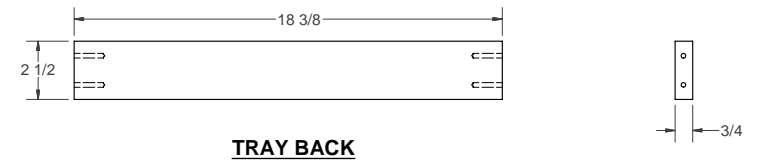
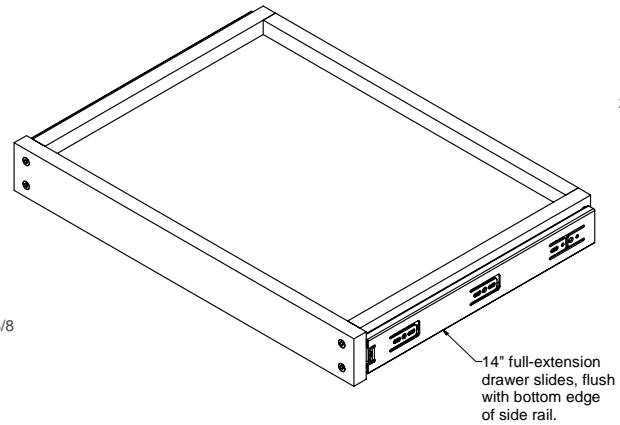
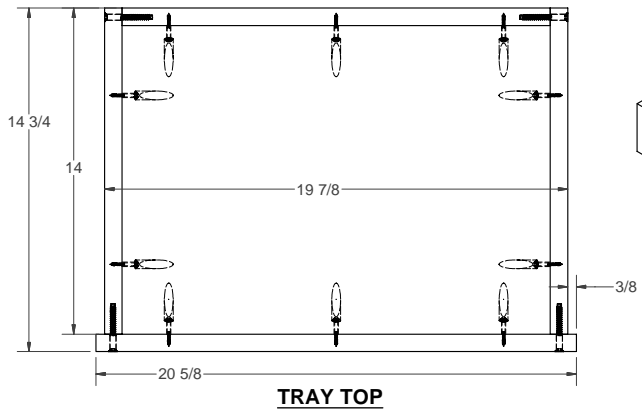
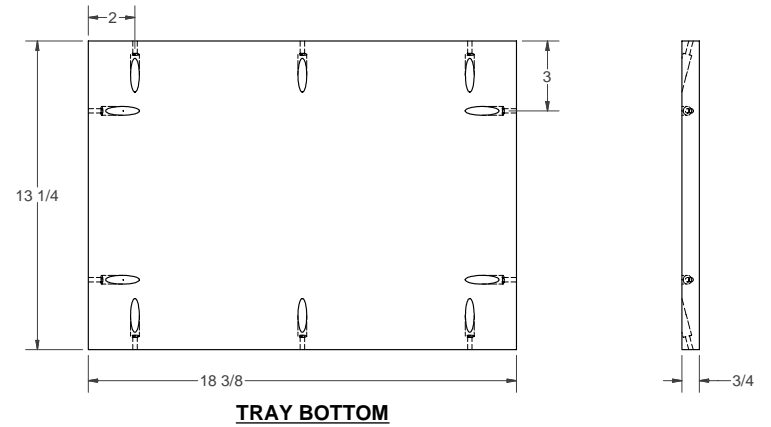
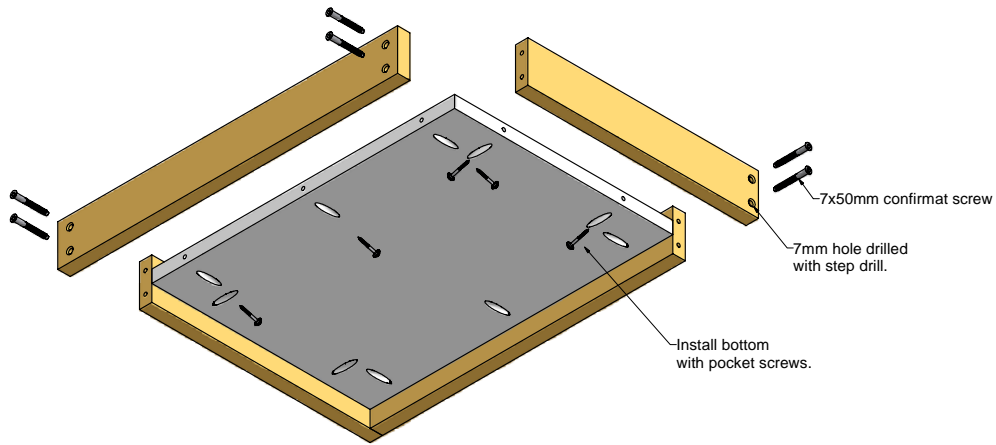
END VIEW



BOTTOM PANEL



END VIEW



Close-Up: Kreg R3 Jig



A POCKETFUL OF FASTENING POWER

To attach the rear part of the cabinet top, and to assemble the trays, we relied on pocket-hole joinery. The reasons are simple: pocket-hole joinery is fast, easy, and sturdy.

If you're not familiar with pocket-hole joinery, you'll want to be. It's a versatile method that can be used in everything from cabinetmaking to deck building (*Photos, above*).

The pocket joint is easy to understand. There's an angled hole (the pocket) in one workpiece that has a smaller screw shank hole at the bottom. By driving a screw into this hole, it pierces the mating workpiece and draws the two tightly together.

Pocket-hole joinery has been around for many years, but one company, Kreg Tools, has made it easy with their well-designed pocket-hole jigs. The company's latest model, the R3 (*Photo, above*), is aimed at do-it-yourselfers and is available at Lowe's.

To use the jig, first adjust the legs to match the thickness of material you're using. Then set a stop collar on the stepped drill

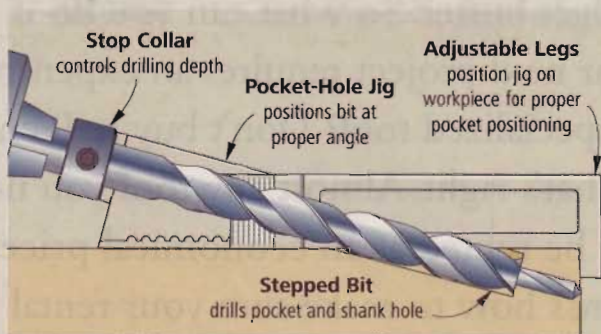
bit. That ensures that the bit will bore the correct depth pocket, and it locates the screw hole centered on the stock thickness.

To use the R3, clamp the jig to one of the workpieces to be joined, slip the drill bit into the sleeve, and then drill until the stop collar bottoms out (*Illustration, below left*). You don't have to drill into the mating workpiece.

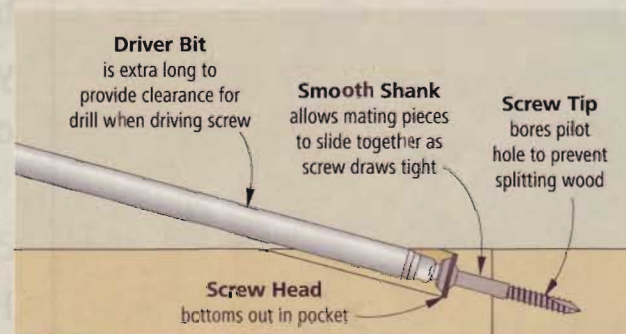
After drilling the pockets, align the two mating pieces, and then drive in the screws. The screw shank is smaller than the hole it fits into, so the screw won't grab the workpiece that has the pocket. The threads bite into the mating piece only. The "washer-style" screw head seats into the bottom of the pocket and pulls the two pieces together (*Illustration, below right*).

Once the screws are tight, the joint is very unlikely to come apart, even without glue (though glue can be used). The pockets can usually be hidden, or they can be filled with a special plug.

For more information on the R3, as well as other pocket-hole jigs made by Kreg Tools, visit KregTools.com.



1] After positioning the pocket-hole jig on the workpiece and setting the stop collar on the bit, drill until the bit bottoms out.



2] To complete the joint, drive a screw into the mating workpiece. This draws the two pieces tightly together.



Tool rental centers are filled with tools and supplies for almost any type of home improvement task, as well as personnel who can show you how to use them.

RENTING TOOLS

SIMPLE STRATEGIES TO SAVE MONEY

Tackling home improvement projects yourself is a great way to save money. But there's a catch: Buying the tools some projects require can be a real budget buster. So what can you do if your next project requires an expensive or specialized tool? Don't buy it. Rent it.

That's right. Almost any tool you need can be rented at an economical price. Here's how to make sure your rental experience goes right.

A Tool for Every Task

If you're going to get serious about home improvement projects, you'll need a good collection of tools. On the other hand, you'll probably never be able to buy every tool you'll need. Some tools are just too expensive, and others are so specialized that you may use them only once or twice, but probably never again.

Thankfully, you don't have to own every imaginable tool to have a complete home improvement arsenal. That's because just about any tool you might ever need is available from a tool rental center. Just a few of the tools you're likely to find are shown in the *Photos* on the next few pages and are listed by category below.

Figuring out the rent vs. own argument is easy. If the cost of purchasing the tool is less than renting it, then buy it. But if the rental cost is less, and it often is, then it probably makes more sense to rent. Take a drywall lift as an example. It's a must-have tool if you have to hang drywall on a ceiling. But a drywall lift costs about \$500. On the other hand, you can rent a lift for about \$25 a day. It's easy to do the math.

But making the right rental decision takes more than just comparing costs. To get the most from your dollar—and from the tool itself—you need to understand how rental centers work, as well as how to make sure you're ready to hit the ground running when you bring your rental tool home. We'll offer our insight on the next two pages.

RENTAL TOOL SELECTION AT A GLANCE

- » **Lawn and garden:** tiller, aerator, power rake, auger, mower, leaf blower/vacuum
- » **Concrete:** mixer, jackhammer, trowel, hammer drill, concrete saw
- » **Cutting:** table saw, miter saw, chain saw, band saw, reciprocating saw, router, rotary tool
- » **Paint and decorating:** paint sprayer, paint mixer, wallpaper steamer, heat gun, texture gun
- » **Flooring:** carpet cleaner, floor sander, buffer, carpet stretcher, tile saw, tile tools
- » **Lifts:** scaffolding, ladder, aerial lift, roof jacks
- » **Heavy equipment:** backhoe, skid loader, trencher, compactor
- » **Moving:** appliance dolly, cart, truck, trailer
- » **Fastening:** hammer, nail gun, screw gun
- » **Other:** extension cord, jobsite light, fan, shop vacuum, pump, insulation blower, hydraulic jack



AUGER (TWO-MAN)
DAILY RENTAL: \$69
PURCHASE PRICE: \$700



FLOOR SANDER
DAILY RENTAL: \$88
PURCHASE PRICE: \$2,000

PHOTOS COURTESY OF HOME DEPOT



TILE SAW
DAILY RENTAL: \$53
PURCHASE PRICE: \$600



TILLER
DAILY RENTAL: \$50
PURCHASE PRICE: \$400

Be Rental Center Savvy

If you're surprised by the number of tools available for rent, then you may also be surprised by the choices you have in tool rental centers. You're likely to find a number of independent rental centers in your area. And Home Depot now offers rental centers in about 1,200 of their stores. But don't base your choice of rental centers on convenience alone.

Seek Out a Center—Once you've decided that you need to rent a tool, you have to figure out where to rent it. The best way to decide is to check out two or three rental centers before making a decision.

First, compare their rental rates. If the market is competitive, rates should be similar for comparable tools. But there aren't any defined standards. If one center's rental rates are exceptionally higher or lower, you'll need to determine why (more on that later).

Also be sure that the center's policies and contract terms are clearly explained. You don't want to get caught by an unexpected loophole in the contract.

Check Out the Tools—That done, take a closer look at the tools themselves. They should be professional-grade models. The tools are bound to show battle scars, but if they look *really* beat up, be wary. Old or improperly maintained tools are likely to function poorly. A reputable rental center will maintain its tools diligently and replace them at regular intervals. You may pay slightly more for these tools, but the extra cost is worth it.

Test Out the Staff—The next thing to check out is the rental center staff. You need qualified people to instruct you on how to use the tools. This will save you money by reducing rental time and ensuring that you stay safe. Ask questions until you are confident the rental center staff is familiar with the tools they carry, and that they can explain *and* demonstrate exactly how each tool works.

Scope Out the Shelves—Also be sure that the center stocks all the supplies and "consumables" that you'll need for the tool. You don't want to have to go to another store to get nails or search to find belts that fit the sander you just rented.

"Make sure the rental center staff is familiar with the tools they carry, and that they can explain and demonstrate exactly how each tool works."

Get Ready to Rent

Once you've figured out why and where to rent, the final step is making sure that you are ready to rent. That way, you'll make the most of the time you have with the tool, and you won't run into any unexpected surprises.

Evaluate Your Ability—First, you need to realistically evaluate your ability to use the tool you are considering. It can be hard to admit it, but if you're not confident in your ability to use a tool properly or safely, then maybe you should call in help. After all, just because you *can* rent a backhoe doesn't necessarily mean you *should*.

Reserve Your Tool—Next, plan what day (or days) you'll need the tool, and then reserve the tool in advance. Call to confirm the reservation the day before your rental.

When you make your reservation, ask whether the tool requires any special handling, or whether you'll need to purchase any of the "consumables" I mentioned earlier. That way, you'll know what to expect when you walk in the door on your rental day.

Prepare Your Work Site—Before your rental time arrives, get everything in order so that you can begin using the tool as soon as you get it home. That means you'll want to prepare your work area, arrange for any necessary helpers,



FLOOR NAILER
DAILY RENTAL: \$31
PURCHASE PRICE: \$400


“Prepare your work area, so you're ready to use the tool as soon as you get it home. That way you won't waste rental time and money while the tool sits idle.”

and make sure you have all the supplies you'll need on hand, so won't waste rental time and money while the tool sits idle.

When the time comes to pick up your tool from the rental center, be sure to arrive on time. Otherwise, you may forfeit your reservation and risk having the tool be rented to someone else. If you can't avoid being late, call the rental center ahead of time.

Synchronize Your Time—Finally, before you leave the rental center, clarify exactly what time the tool is due back, so you don't get charged extra. If you're not totally confident you can complete the project in the rental time allotted, see if it's possible to call and extend the rental. If nobody else has the tool reserved, it's usually not a problem.

The last step in the process is to find out what's expected when the tool is returned. As a general rule, it should be at least as clean as when you picked it up. If the tool is gas-powered, the tank should be full.

With that, you'll be armed with the knowledge and the tool you need to head home and tackle your project. 

—Written by David Stone



PRESSURE WASHER
DAILY RENTAL: \$75
PURCHASE PRICE: \$400



desk v2.0 digital hub

This compact, fold-down organization center will change your concept of the home office. It's designed for fast-paced lives with portable electronics in mind. It is a digital hub for a 21st-century family.

Perhaps to appreciate just what a "digital hub" is, you need to think of it as the natural evolution of the desk. As cell phones get smaller, laptop computers replace desktop models, and iPods take the place of CD players, why do we need a full-size desk to dock all this stuff when we finally slow down long enough to recharge their batteries and ours? The answer, in many cases, is that we don't. So the digital hub is a perfect solution.

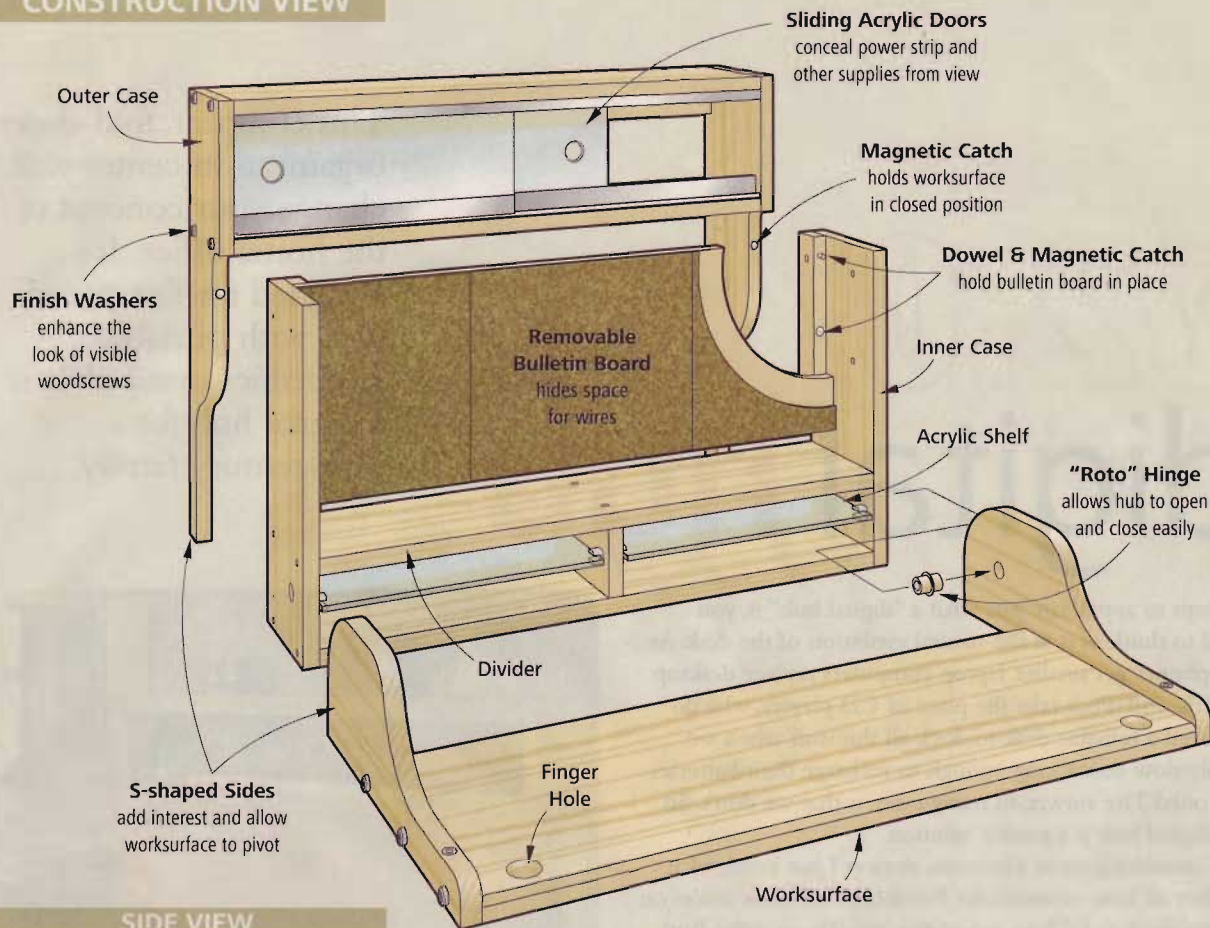
Considering those electronic devices I just listed, what do they all have in common? Portability. So when you're on the go, the hub folds up out of the way (Photos, right). But on those occasions when you do need to stand still long enough to pay a bill, answer an email, or just grab the latest headlines from the internet, the front of the hub folds down to offer a convenient, compact work area. And by mounting the hub at bar height, you can use it comfortably while standing or sitting on a stool (Photo, left).

Then, at the end of each day, the hub provides the perfect cubby to store and recharge all your gadgets. A power strip hidden behind the frosted doors provides plenty of plug-ins. And a removable corkboard in the back of the hub hides all of the inevitable wires.

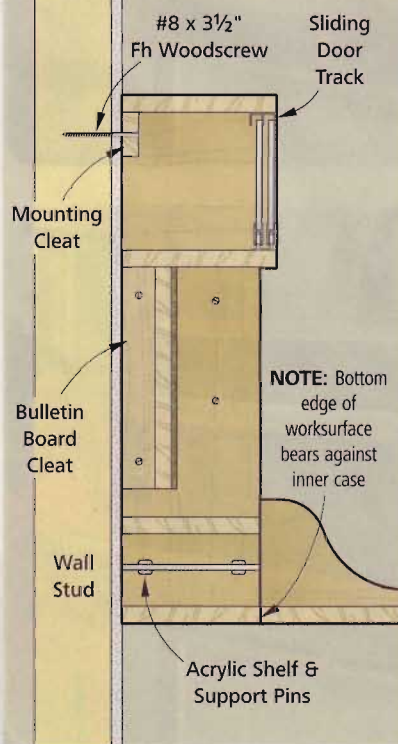
We'll take a closer look at the features and construction of the digital hub over the next couple of pages. And you can go online to WorkbenchMagazine.com to download complete plans and more in-depth instructions when you're ready to build your very own hub.



CONSTRUCTION VIEW



SIDE VIEW



STANDARD MATERIALS & SUB-ASSEMBLIES

Simplify Construction

If this digital hub fits your busy lifestyle, then slowing down to build a complicated project probably doesn't. So we kept things as simple as possible without sacrificing form or function.

The most challenging part of this project is making the S-shaped sides. It's worth the effort, though, because the hub literally hinges on these parts. A special hinge, called a "roto" hinge, joins the two curved pieces and allows the front to pivot down and serve as a work-surface. With the worksurface down, it bears on the bottom of the inner case to provide a sturdy, stable platform (*Side View*). Magnetic catches hold the hub closed when it's not in use.

Clearly, these parts fill several important roles. And with a bit of

jig saw work (*see page 28*) and some template routing, you can make them quickly and accurately (*Photo, page 73*).

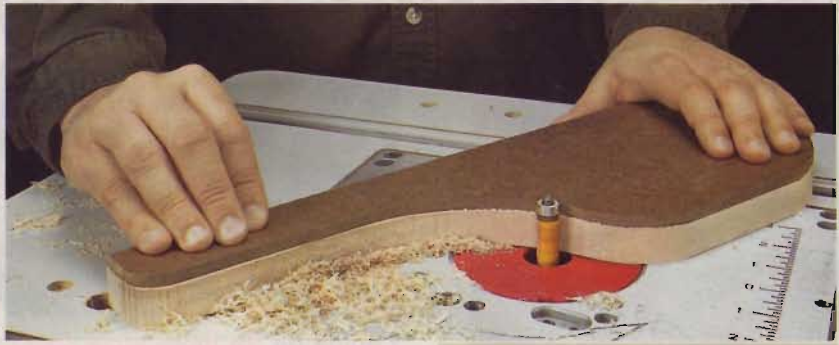
You'll also be glad to know that this project is built almost entirely with "off-the-shelf" materials (*Construction View*). The outer case, inner case, and pivoting worksurface are all constructed from $\frac{3}{4}$ "-thick maple. It's available at any home center, as is the $\frac{1}{4}$ " plywood that serves as the backer for the cork bulletin board and the clear acrylic for the doors and shelves. The cork is available at most office-supply stores.

The few special-order items you need include the "roto" hinges and magnetic catches, as well as the shelf clips and sliding-door tracks (*Construction View*).

Along with the maple and hardware, you'll also need a modest collection of power tools to complete this project. Most notably, a table saw and a router table are required (benchtop models will do nicely). You'll also need a jig saw and a drill/driver. Finally, a random-orbit sander and a few bar clamps, while not essential, would certainly be handy. A complete list of the tools you should have for this project, including drill bits and router bits, is included with the downloadable plans.

The building process is no more advanced than the tool list. The standard board sizes from the home center keep cutting to a minimum. And template routing (which is explained in greater detail in the online plans) ensures absolute accuracy when making the S-shaped sides of the case (Photo, above).

Likewise, we'll walk you step-by-step through the process of aligning and installing the roto hinges for flawless operation. Otherwise, the construction of the digital hub is quite simple to accomplish.



The entire assembly is held together with woodscrews. And wherever the screws are visible, we added finish washers for a dressier look.

Finally, a clear satin finish is applied to highlight the maple. Krylon and Deft both offer versions of this in spray cans.

From there, all that is left is to install the hub in the virtual, if not literal, center of your home. Place a power strip in the upper compartment, hide the wiring behind the removable bulletin board, and let your world begin revolving around your digital hub.

— Written by Bill Link, illustrated by Matt Scott, project designed by Mike Donovan

Template rout the S-shaped sides to ensure a perfect fit between the pieces.

ONLINE RESOURCE:

Additional information available at WorkbenchMagazine.com:

- Complete Project Plans
- Template Routing Article
- Step-by-Step Roto-Hinge Instructions



TECHNOLOGY comes with clutter. Fortunately, the removable bulletin board and frosted doors in this digital hub provide the ideal hiding spots for the tangle of wires that is the byproduct of our modern lives.

CONSTRUCTION DETAILS

I. Required Materials

- a. Built primarily with maple available from any home center or lumber yard
 - i. You'll need two glued-up maple panels, 1" x 12" x 36" (minimum length)
 - ii. Otherwise, select the clearest, straightest maple 1" x 6" and 1" x 8" material you can find.
- b. You'll also need 12" x 12" squares of cork. Home centers may have them. We found them at Target.
- c. Plexiglass for the shelves and sliding doors is another home center item. Find a sheet large enough for all four pieces.
- d. Special-order items are the door track, rare earth magnets, shelf pins, all from Rockler, and roto-hinges from Lee Valley.

II. Required Tools

- a. Table saw or circular saw
- b. Jig saw
- c. Router or router table
- d. Drill/driver
- e. Countersink/pilot bit
- f. Phillips #2 driver bit
- g. 1/4" round-over bit (leading edge of worksurface)
- h. 1/8" round-over bit (finger holes on worksurface)
- i. 1/2" Forstner bit (magnets and cut-out on outer case top)
- j. 3/4" Forstner bit (roto hinges)
- k. 1-inch Forstner bit (finger holes in work surface and glass doors)
- l. 1/4" brad-point or Forstner bit (shelf-pin holes)
- m. 1/8" twist bit (pilot holes for non-countersunk screws)
- n. 1/16" twist bit (for aligning the roto hinge counterbores)
- o. Dowel centers (for aligning the magnets and strike plates)
- p. Clamps
- q. Random-orbit sander

CONSTRUCTION DETAILS

III. Four Sub-Assemblies

- a. Inner Case
- b. Outer Case
- c. Pivoting Worksurface
- d. Miscellaneous Items
 - i. Doors, shelves, hardware, back panel

IV. Inner Case

- a. Cut the bottom, sides, divider, and partition to size from 1" x 8" maple
- b. Drill and cut out wire slot in divider
- c. Drill shelf pin holes in sides and partition
 - i. These are through holes on the partition, so you'll need to support this piece with a sacrificial board underneath it to avoid splintering the hole.
- d. Clamp the assembly together and drill countersinks/pilot holes
- e. Drive #8 x 1¼" Fh Woodscrews

V. Outer Case

- a. Three piece assembly top and two sides
- b. The sides have an elongated "S" curve cut in them
- c. These mate with matching curves in the pivot arms, which are part of the worksurface.
- d. To ensure a good fit, we need to use templates
 - i. Make a pair of templates, beginning with one for the pivot arm. Use the dimensions, or if you have the ability to print on 11" x 17" paper, you can download a full-size pattern from the website
- e. Lay out the template on ¼" ply or hardboard
 - i. Cut and sand it to final shape and size
- f. Now use this template to lay out the template for the outer case side
- g. Cut and sand HINT: Sand until the templates fit together because your final workpieces will fit exactly as the templates do.
- h. Lay the pivot arm template aside for now, we'll come to that shortly

CONSTRUCTION DETAILS

- i. Trace the outer case side template onto maple 1" x 8" x 23 $\frac{3}{4}$ " (twice)
- j. Cut the sides to rough shape
- k. One at a time, attach the template to the rough-cut sides and rout the sides to final shape
 - i. Use a flush-trim bit, set the depth so the bearing rides on the template, and then rout right to left.
- l. Cut the top
- m. Clamp the sides and top together
- n. Drill pilot holes in the sides NOT countersinks
- o. Assemble the outer case with #8 x 1 $\frac{1}{4}$ " Fh Woodscrews and finish washers
- p. Now join the inner and outer cases
- q. Two screws and finish washers through the outside of each outer case side
- r. Four screws in countersinks from the inside of the inner case

VI. Pivoting Worksurface

- a. The templates are already made, so let's start with the sides
- b. Trace and cut
- c. Attach and rout this time, though, feed direction is critical coming at this from the wrong direction will tear out the narrow end. So you'll actually have to *back rout* this at the narrow end. In other words, start routing at the narrow end and rout from left to right. In order to do this safely, you'll need to have a pivot pin mounted in your router table. This will make it less likely that bit will grab the workpiece and pull it out of your grip. Make this cut in very light passes until it is complete. As soon as you rout past the rounded corner. Pull the workpiece away from the bit and finish routing in the proper direction.
- d. Cut the worksurface to length from the glued-up maple panel
- e. Dry clamp the completed assembly
- f. Position over the case assembly (checking for clearance)
- g. Assemble with #8 x 2" Fh Woodscrews and finish washers

VII. Miscellaneous

a. Roto Hinges

- i. Assemble pivoting worksurface and case facedown on benchtop
- ii. Lay out center point of roto hinges on the inside of the case
- iii. Drill a 1/16 hole at this point through the case and just into the pivot arm to locate the hinge holes

CONSTRUCTION DETAILS

- iv. Remove pivoting worksurface assembly from case
- v. Drill counterbores on the OUTSIDE of case and INSIDE of pivot arms
- vi. Disassemble pivot arm and worksurface and leave this way for applying a finish

b. Mounting Cleats

- i. Hanging Cleat cut to size and attach with three woodscrews in countersinks/pilot holes
- ii. Back Support Cleats cut to size and attach with two woodscrews in countersinks/pilot holes

c. False Back

- i. Cut back to size from pre-assembled maple panel
- ii. Mount cork tiles to back panel with spray adhesive (center one tile and then trim two others to fit on each end of the panel)

VIII. Glass doors

- a. Cut to size from plexiglass
- b. Drill finger holes with Forstner bit
- c. Soften edges of holes by sanding
- d. Sand back face of glass doors with ROS to "frost" the glass

IX. Finish

- a. Apply a clear finish

X. Final assembly

- a. Attach pivot arms to case with roto hinge. Glue the hinge into the counterbores and the sides and pivoting arms.
- b. Now reattach the worksurface between the pivot arms to capture the hinges
- c. Assemble the tracks and sliding doors according to manufacturer's instructions
- d. Lay out and drill counterbores for the magnets, cups, and strike plates that hold the pivoting worksurface closed and the cork/backboard in place

ROTO-HINGE INSTALLATION

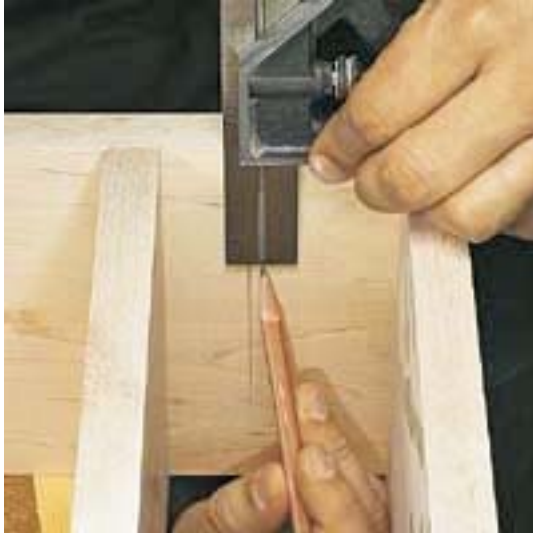


FIGURE 1 On the inside of the case, lay out the center of the Roto-Hinge countersink using the dimensions shown in the Builder's Plans.



FIGURE 2 Hold the pivoting arm in position and drill a $\frac{1}{16}$ "-diameter hole through the inside of the case and just into the pivoting arm (not all the way through it). This will provide perfectly aligned drilling locations on both pieces.

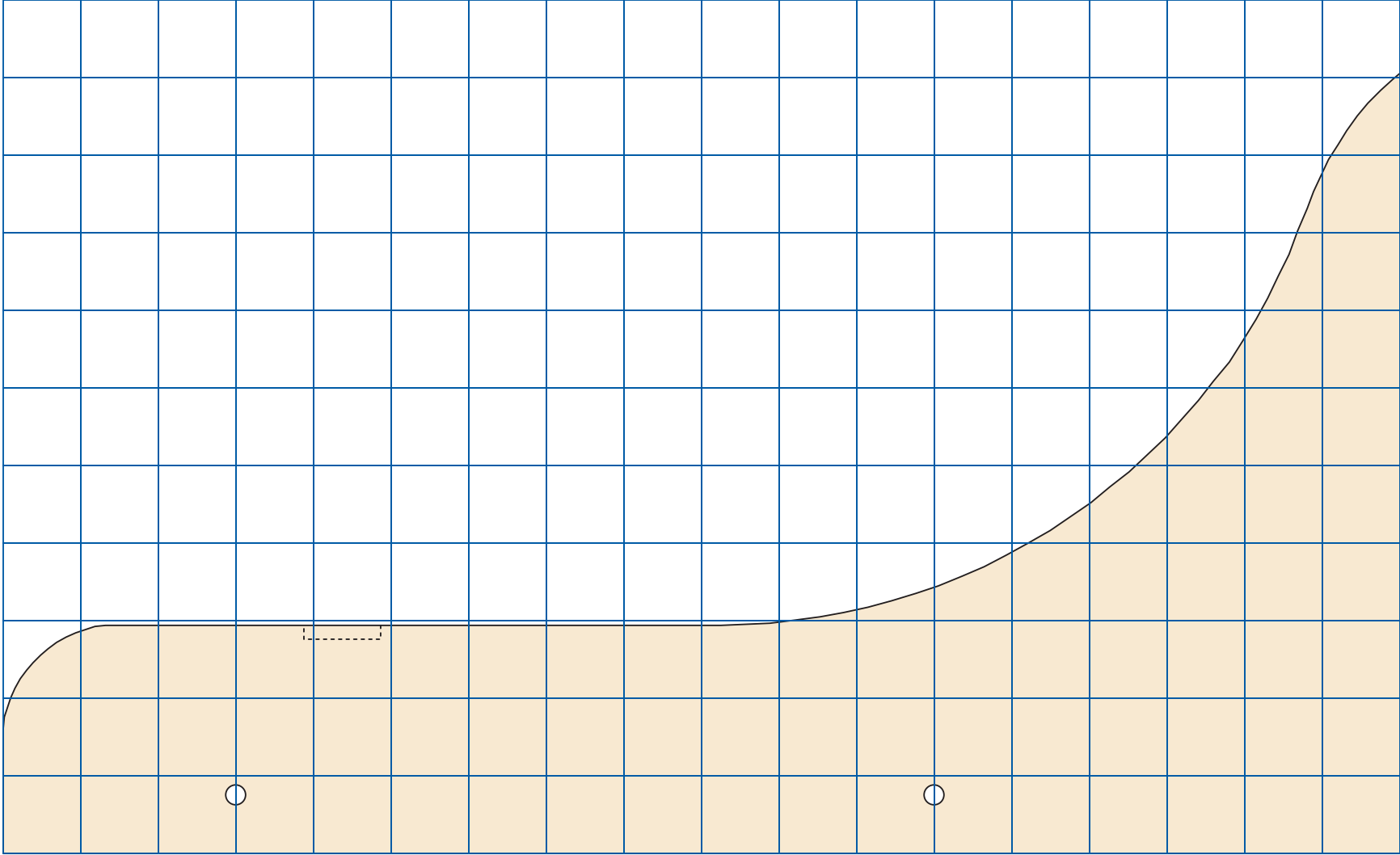


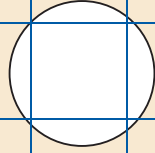
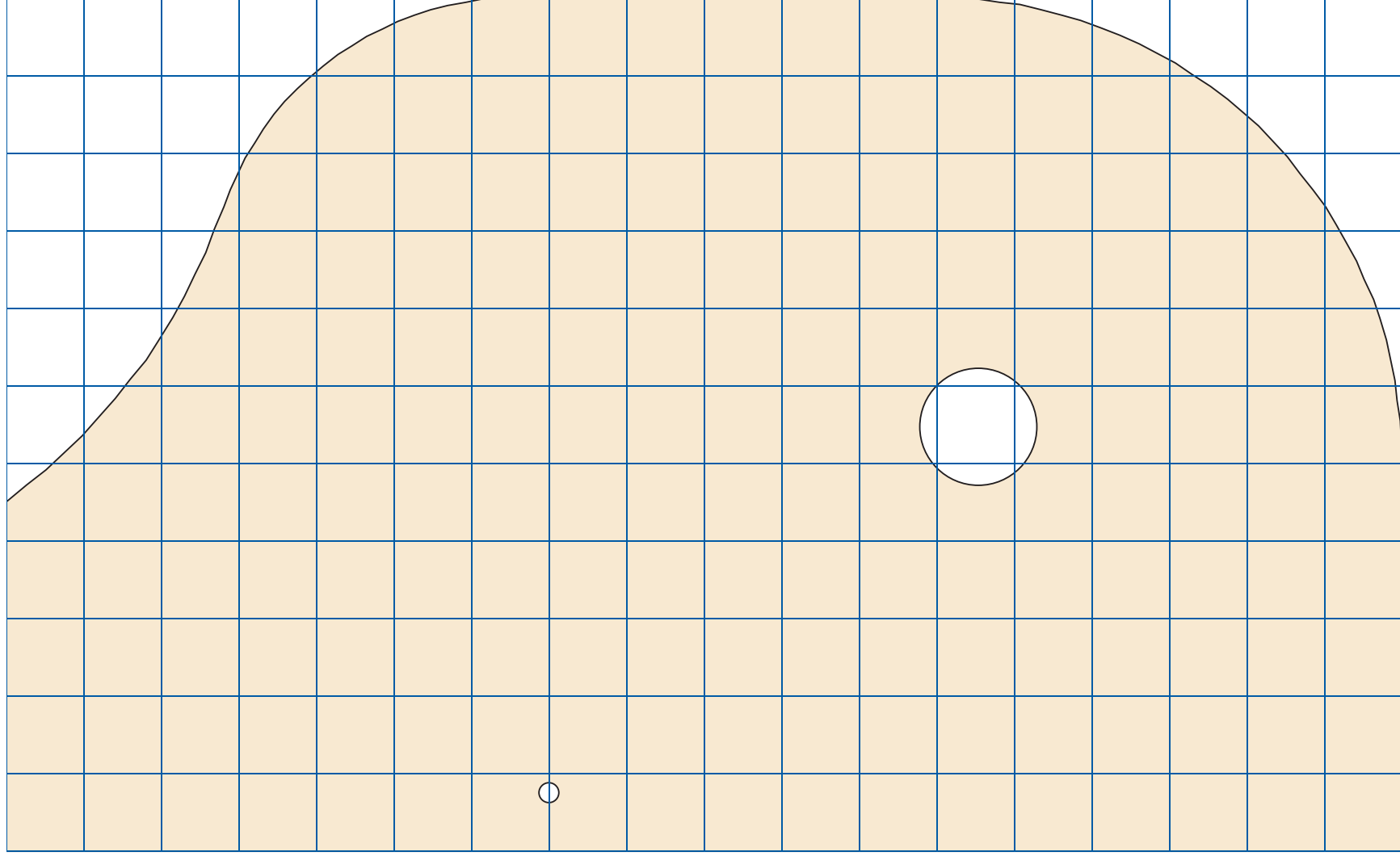
FIGURE 3 Remove the pivoting arm. Now drill a countersink on the outside of the case at the location you just drilled the $\frac{1}{16}$ " hole. Drill the matching countersink in the pivoting arm. The countersinks need to be $\frac{3}{4}$ " diameter and $\frac{9}{16}$ " deep. Glue the hinge into the counterbores.

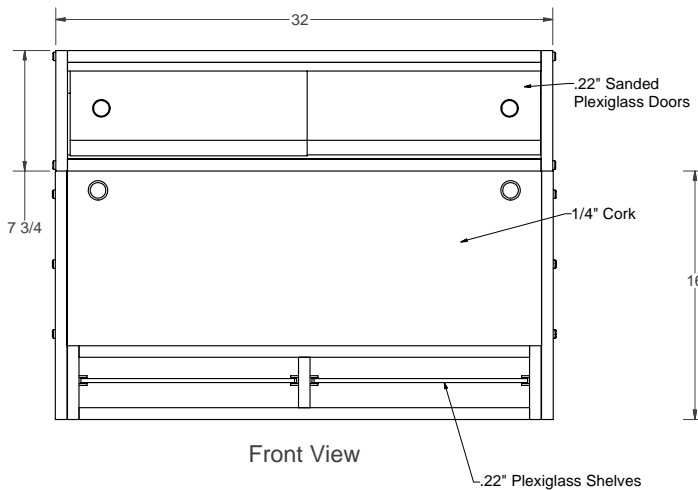
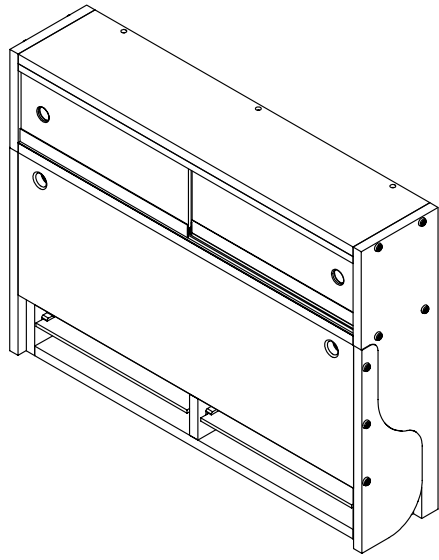


FIGURE 4 With both pivoting arms in place, you can now attach the work surface between them using 2" Fh Woodscrews and finish washers.

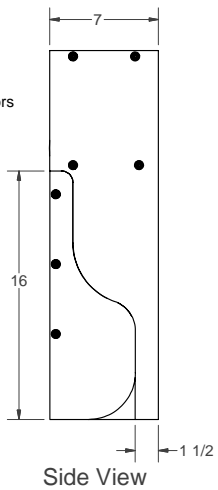
FULL SIZE CUTTING PATTERN



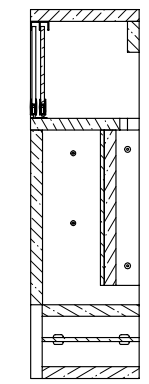




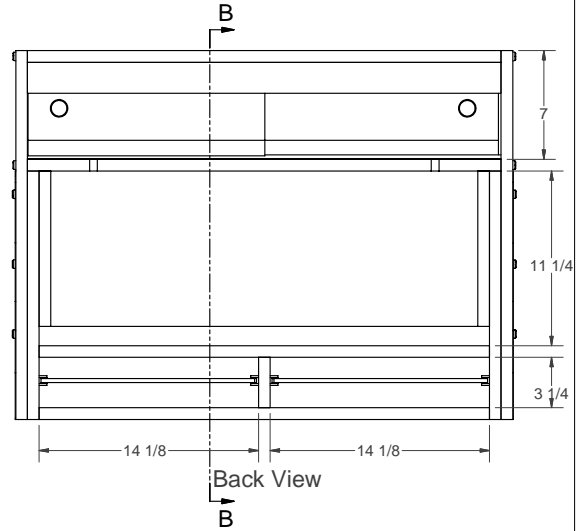
Front View



Side View

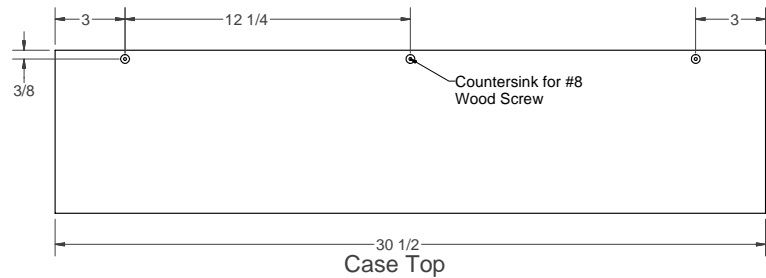


SECTION B-B



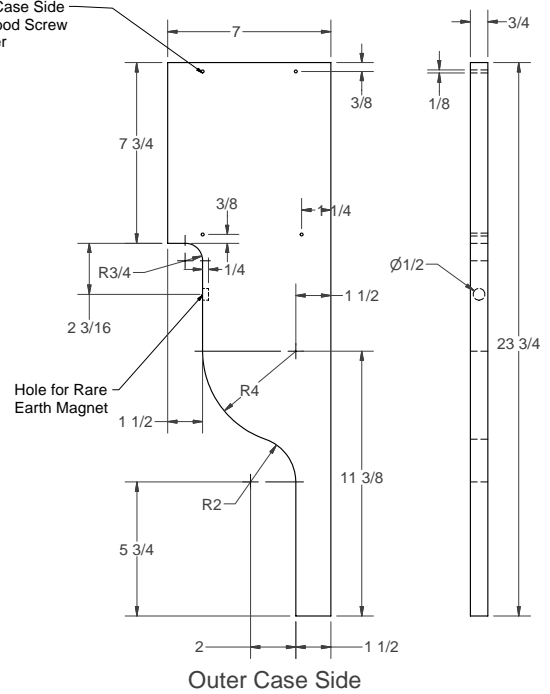
Back View

Workbench	1 eNook	Donovan	DATE 3.29.07	SHEET 1
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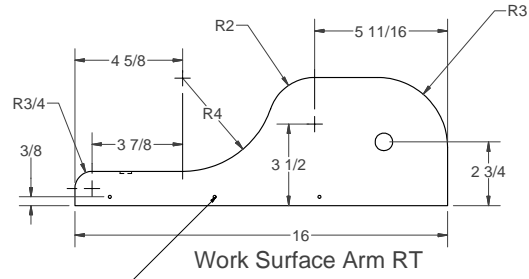
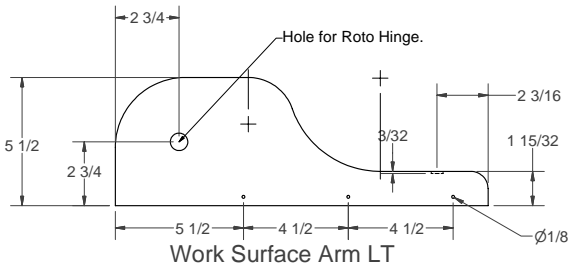


NOTE:
Use #8 x 1 1/4" Woodscrew
Unless Otherwise Specified

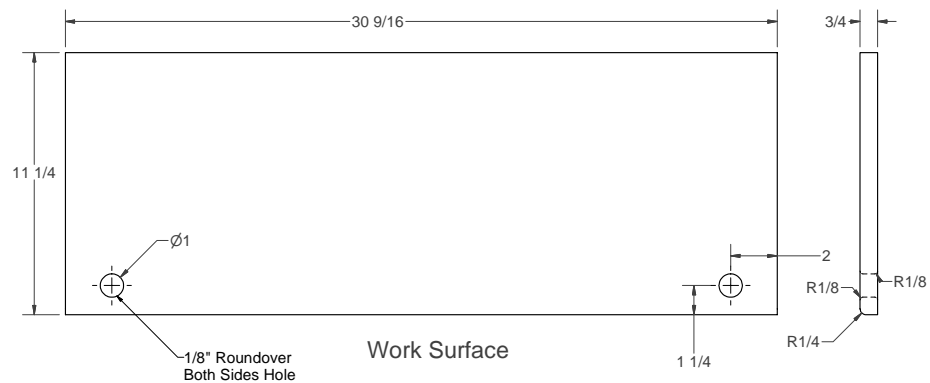
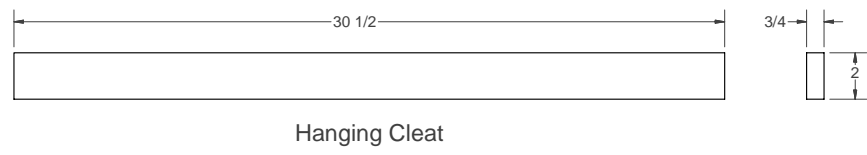
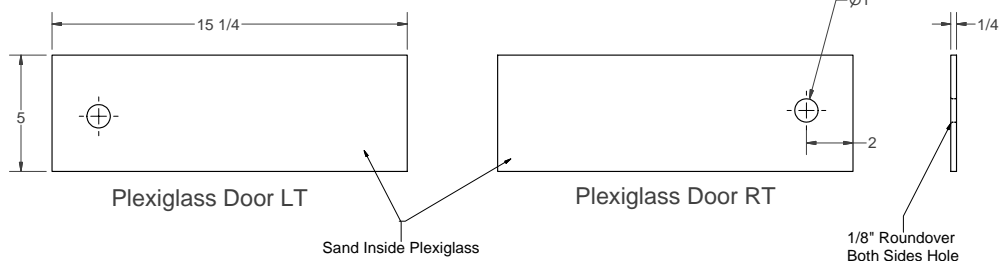
4 Holes on Fixed Case Side
Get #8 x 1 1/4" Wood Screw
With Finish Washer



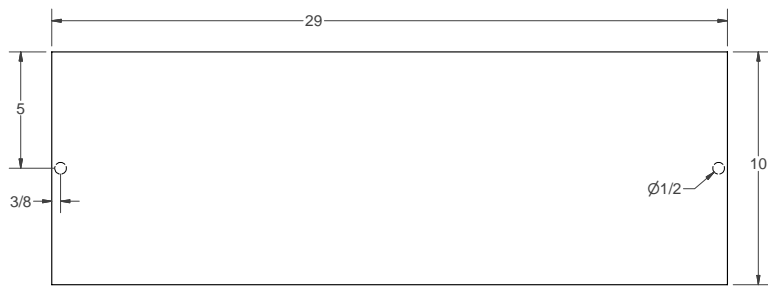
NOTE:
All Material To Be 3/4"
Maple Unless Otherwise
Specified



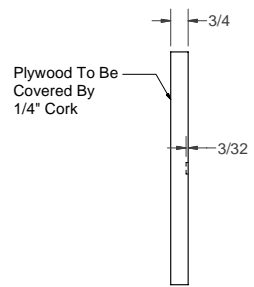
3 Holes On Moving Work Surface
Side Get #8 x 2" Wood Screw
With Finish Washer



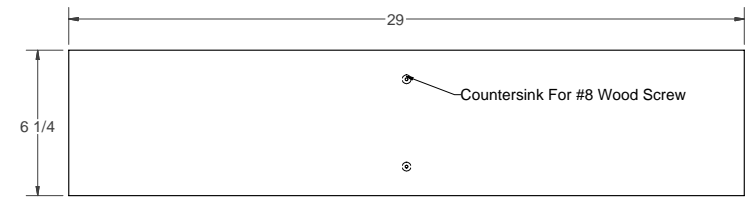
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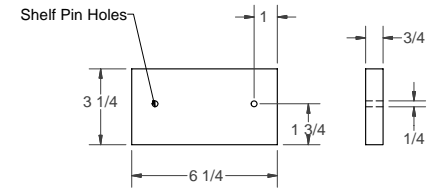
False Back



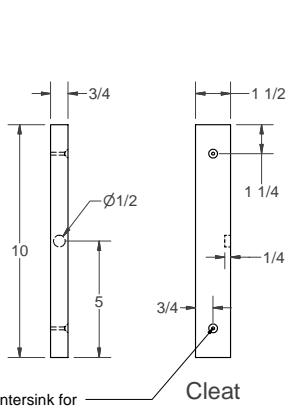
Inner Case Top



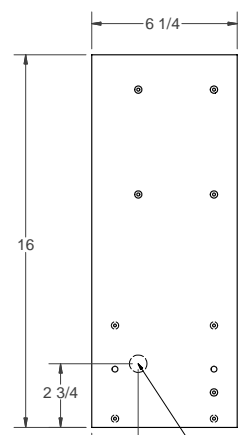
Shelf Top



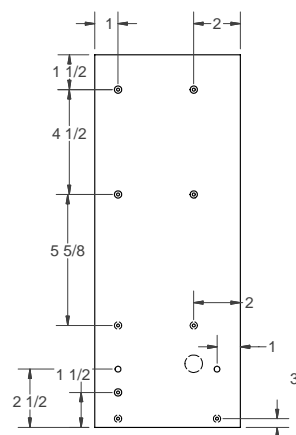
Shelf Divider



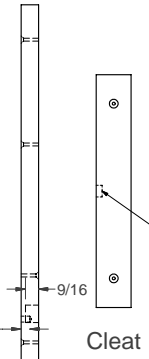
Cleat



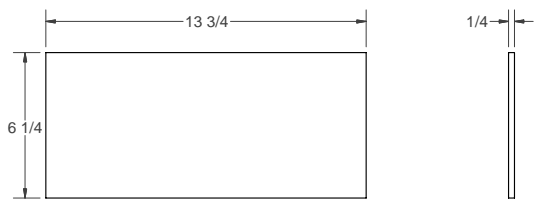
Left Case Side



Right Case Side

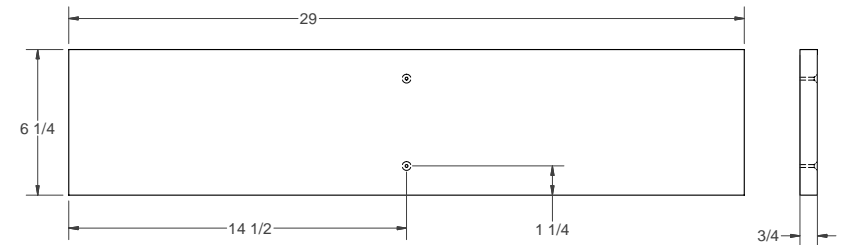


Cleat



Plexiglass Shelf X2

All Material To Be 3/4" Maple Unless Otherwise Specified



Inner Case Bottom

A woman with her hair in a ponytail is kneeling on a light-colored floor, painting a wall. She is wearing a green long-sleeved shirt and blue jeans with paint splatters. She is using a yellow-handled trowel to apply paint to the wall. The wall is partially painted with a light green color, and the rest is white. A blue painter's tape is visible along the base of the wall. In the foreground, there is a silver aluminum tray containing paint and a can of Behr Premium Plus paint. The text "Do you remember finger painting? It was fun, easy, and always turned out beautifully. This faux-painting technique is a lot like that. In this case, though, you use a special trowel to blend several colors of paint together. The result is a dramatic wall finish that appears to have the texture and depth of old-world plaster walls." is written in a serif font on the right side of the image.

Do you remember finger painting? It was fun, easy, and always turned out beautifully. This faux-painting technique is a lot like that. In this case, though, you use a special trowel to blend several colors of paint together. The result is a dramatic wall finish that appears to have the texture and depth of old-world plaster walls.

PAINT POWER >>>





Get an old-world
Plaster Finish
with paint

Proof that opposites attract is all around us. It's especially true in today's decorating trends when it comes to combining traditional and contemporary decorating styles. In the past they were perceived as polar opposites that couldn't mix. But this stylish wall finish proves otherwise. With ordinary latex paint, it replicates a traditional old-world plaster finish that creates a striking background for contemporary furnishings.

// HOW TO GET THE LOOK //



1] Pour three colors into a flat foil pan to prevent the colors from running together.



2] Load the darkest color on one side of the trowel. If some of the adjacent color gets on the knife that's okay. Just blend it on the wall.



3] Apply the paint using random criss-cross strokes. Don't completely cover the wall. Let the primer show in some areas.



4] While the dark color is still wet, apply the medium hue using random strokes. Keep troweling to blend the colors.



5] Trowel on the lightest color, and work it into the wet coats underneath. The more you blend, the softer the look.



6] Once the paint has dried, you can add more contrast, if desired, by troweling on additional light, medium, or dark colors wherever needed.

SUPPLIES

Paint:

Flat latex primer
Behr satin latex:
Mother Nature (#410F-4), Rejuvenate (#410E-3),
Celery Ice (#410E-2)
HomeDepot.com

Tools:

Behr Bellagio
Trowel #721
HomeDepot.com



Other Supplies:


Practice boards
9" x 13" disposable
foil baking pan
Drop cloth
Paint roller
Paint pan

Producing this multi-layered plaster look is easier than you might think. You simply apply three colors of paint—one light, one medium, and one dark. Working in 2-ft. wide strips, trowel on each successive color from floor to ceiling while the paint underneath is still wet. That allows you to blend the colors.

Use the Right Tool—Applying and blending the paint is done with a special tool called a Bellagio Trowel (right). It looks like a putty knife, but it has rounded corners to prevent gouging the surface as you work.

A Few Simple Steps—The *Photos* above walk you through the process step-by-step. But before you begin, you'll want to learn a little more about the effects you can achieve with this versatile painting technique.

Make A Value Judgement—When selecting colors, the first thing you need to do is choose the range of color values that you'll use. We chose colors that are very close in value to produce the subtle effect shown here. If you choose colors with a wider range, the contrast will create a more dramatic result. (To see some other great color combinations and find out more tips, go to WorkbenchMagazine.com.)

Find Your Favorite Blend—You can also change the look by varying how much of each color you use, as well as how much you blend them. We used similar amounts of each color and a lot of trowel strokes to blend the colors thoroughly. Use more of the dark and medium colors, less of the lightest one, and blend them together less to produce a more dramatic result. 



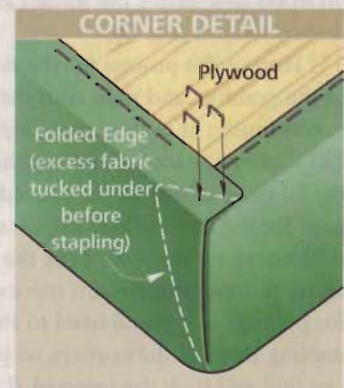
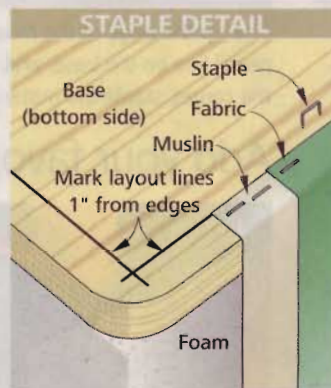
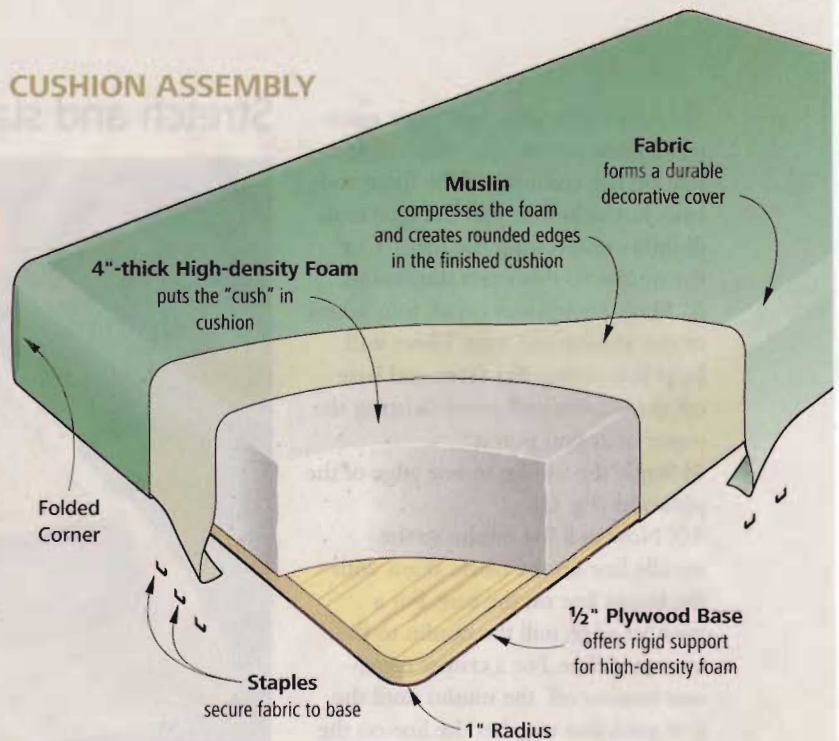
/// NO-SEW SEATING ///

If you can wrap a gift box, you can make your own seat cushions in no time. A few tools and supplies are all you need to create professional-looking results.

Having cushions custom-made is expensive. However, making your own, as we did for this studio couch, will save you a considerable amount of money. And don't worry if you're not handy with a needle and thread—these simple assemblies of plywood, high-density foam, muslin, and upholstery fabric don't require a single stitch (*Cushion Assembly*). Here's how to make yours:

- 1] Determine what the dimensions of the finished cushion need to be, and have the foam cut to match.
- 2] Subtract $\frac{1}{2}$ " from the length and width of the foam, and cut a plywood base to these dimensions. Use a jig saw to cut round corners on the base.
- 3] Mark layout lines on the base 1" in from each edge. These will be a reference when stretching the fabric over the foam and base.
- 4] To determine the length of the muslin (front to back of the cushion), pull a flexible tape snugly around the foam and base to compress the foam (*Fig. A*).
- 5] Transfer that dimension onto the muslin (*Fig. B*). To do that, measure from one end of the muslin, and draw a line. Now draw two more lines, one on each side of the first line, 1" away. These lines will come into play if you need to tighten or loosen the tension on the muslin.
- 6] Now measure 15" beyond the line furthest from the end of the muslin and cut the material here. This extra length will make it easier to grip the muslin as you pull it.

CUSHION ASSEMBLY



Start with plywood, foam, and muslin.



To measure for the muslin, hold one end of a flexible tape on the layout line at one edge of the base, wrap it around the foam to the opposite line, and pull it taut.



After squaring the end of the fabric, transfer the measurement from *Fig. A* to the muslin (middle line). Then mark a guideline 1" on either side of the middle line.

7] Use your flexible tape once again to measure around the width (side to side on the cushion) of the foam and base. Just as before, pull the tape taut, slightly compressing the foam. Cut the muslin to this exact dimension.

8] Mark centerlines on all four edges of the muslin and base. These will help you center the foam and base on the muslin and avoid twisting the material as you pull it.

9] Staple the muslin to one edge of the plywood (Fig. C).

10] Now pull the muslin so the middle line on the fabric aligns with the layout line on the base. For a rounder edge, pull the muslin to the next guideline. For a crisper edge, ease tension off the muslin until the first guideline matches the line on the plywood base. Staple the muslin at the desired tension (Fig. D).

11] Repeat the process for the sides of the cushion, and then trim the excess muslin at each corner (Fig. E).

12] Cutting, marking, and applying the fabric is similar to the procedure used for the muslin. Two important differences are that you'll cut the fabric to exact dimensions (no extra for pulling), and you'll need to stop stapling short of the corners, so you can fold and tuck the material (Figs. F, G, and H).

—Written by Patricia Garrington, illustrated by Matt Scott

Stretch and staple the muslin layer.



Line up the edge of the muslin with the pencil line on the base, and starting in the center, staple the material in place.



Fold excess muslin around a ruler, have a helper pull to apply tension, align a pencil line with the layout line, and staple.



Cut off some of the excess muslin to remove material that would create a bulge in the finished corners.

Add your favorite fabric.



Cut the upholstery fabric to exact size (it's too expensive to allow extra for pulling on). When applying the fabric, stop stapling 4" short of the corners on the front and back edges to allow room for the final corner folds.

Finish up the corners.



Staple the fabric along both sides of the cushion all the way to the corners.



Trim, fold, tuck, and staple the fabric so the opening faces the side of the cushion.

PROJECT SOURCES:

STUDIO COUCH

Target
Online only
Target.com

FABRIC

Robert Allen
Pattern: Geddes; Color: Moss
RobertAllen.com

OTHER TOOLS AND SUPPLIES

1/2" plywood
Muslin
High-density foam
Stapler and staples
Fabric scissors
Flexible tape measure
Straightedge
Pencil and/or dressmaker's chalk

HIGH-STYLE, LOW-MAINTENANCE

Replacement Window Sills

Don't throw good wood after bad. When wood window sills begin to rot, replace them with the latest in PVC lumber.

If you're faced with rotting wood window sills, you'll be glad to know that you now have a simple, affordable, durable alternative to replacing the old wood with new wood.

New Sill-Rite replacement sills are made of low-maintenance PVC, so they aren't susceptible to water damage that results from moisture caused by leaks or condensation. The sills come in white; they're available in two

profiles (*Photos, right*); and they require no priming or painting. However, if white isn't the color you want, you can paint the sills.

Apart from being rot-proof, Sill-Rite sills also resist mold, stains, and warping. They're even backed by a 25-year limited warranty against those problems.

Installing the sills is as simple as scribing them, cutting them to fit, and then gluing them in place with construction adhesive. You



Two styles of Sill-Rite PVC sills are available to fit most common window sizes and wall thicknesses.



can download complete installation instructions from Sill-Rite's website and even watch a video that shows the process.

The sills are available for most standard window sizes in 5" and 7" widths (for 2x4 or 2x6 walls). Prices start at \$25 per sill.

Along with the installation instructions, the website also offers a dealer locator, answers to frequently asked questions about PVC sills, and a photo gallery to help you visualize the sills in your own home. Visit Sill-Rite.com or call 800-503-2334.



Concrobium Mold Control literally gets to the root of mold, which makes it better than bleach. After cleanup, a thin layer of Mold Control, which can be painted over, will prevent future mold blooms in the same area.

GOT MOLD? DON'T REACH FOR BLEACH, TRY

Concrobium Mold Control

Bleach is rarely the best solution to combat visible mold on walls or other surfaces. It may kill the mold on the surface, but it does a poor job of preventing the mold from coming back.

Concrobium Mold Control, on the other hand, not only kills the existing mold but also provides an invisible, odorless, non-toxic film that prevents mold from reoccurring.

To kill existing mold, simply spray the area with Mold Control. Remove the excess solution with a dry cloth. Then allow the area to dry completely. The next day, the mold will have changed colors (it usually turns brown or fades, depending

on the original color), and you can clean it off the surface with another application of Mold Control or any household detergent. Finally, mist the cleaned surface with Mold Control again and allow it to dry to a thin film to prevent future growth. You can even paint right over the treated areas to hide any stains that remain without worrying that the mold will take root under the paint.

A one-gallon jug of Mold Control sells for about \$40, and a 32-ounce spray bottle costs about \$11 at HomeDepot.com. For more information about Mold Control, visit Concrobium.com or call 866-811-4148.



EVOLUTION

KEYLESS HOUSEHOLD SECURITY

KwikSet SmartScan

Besides having a very high “cool” quotient, unlocking your front door with your fingertip is very practical.

For example, we’ve all lost keys, but have you ever misplaced a finger? Or how about fumbling for your keys with an armload of groceries? Now you can simply press your finger to the biometric scanner, and you’re in.

And don’t worry about those “spare” keys that you never seem to get back. With the KwikSet SmartScan, you can add profiles for up to 50 users and assign varying levels of access. Set family members for 24/7 access and provide temporary access to guests, contractors, and housesitters.

The SmartScan lockset is easy to install and completely self-contained (no



Your keys aren’t just *at* your fingertips, they *are* your fingertips with the new SmartScan from KwikSet.



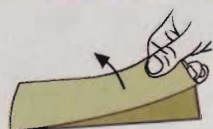
wiring required). It’s powered by four batteries and allows for a key backup.

Expect to pay around \$230 for a deadbolt set. Visit KwikSet.com or call 800-327-5625 for more information.

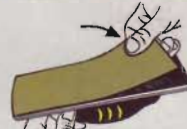
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PEEL



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SAND

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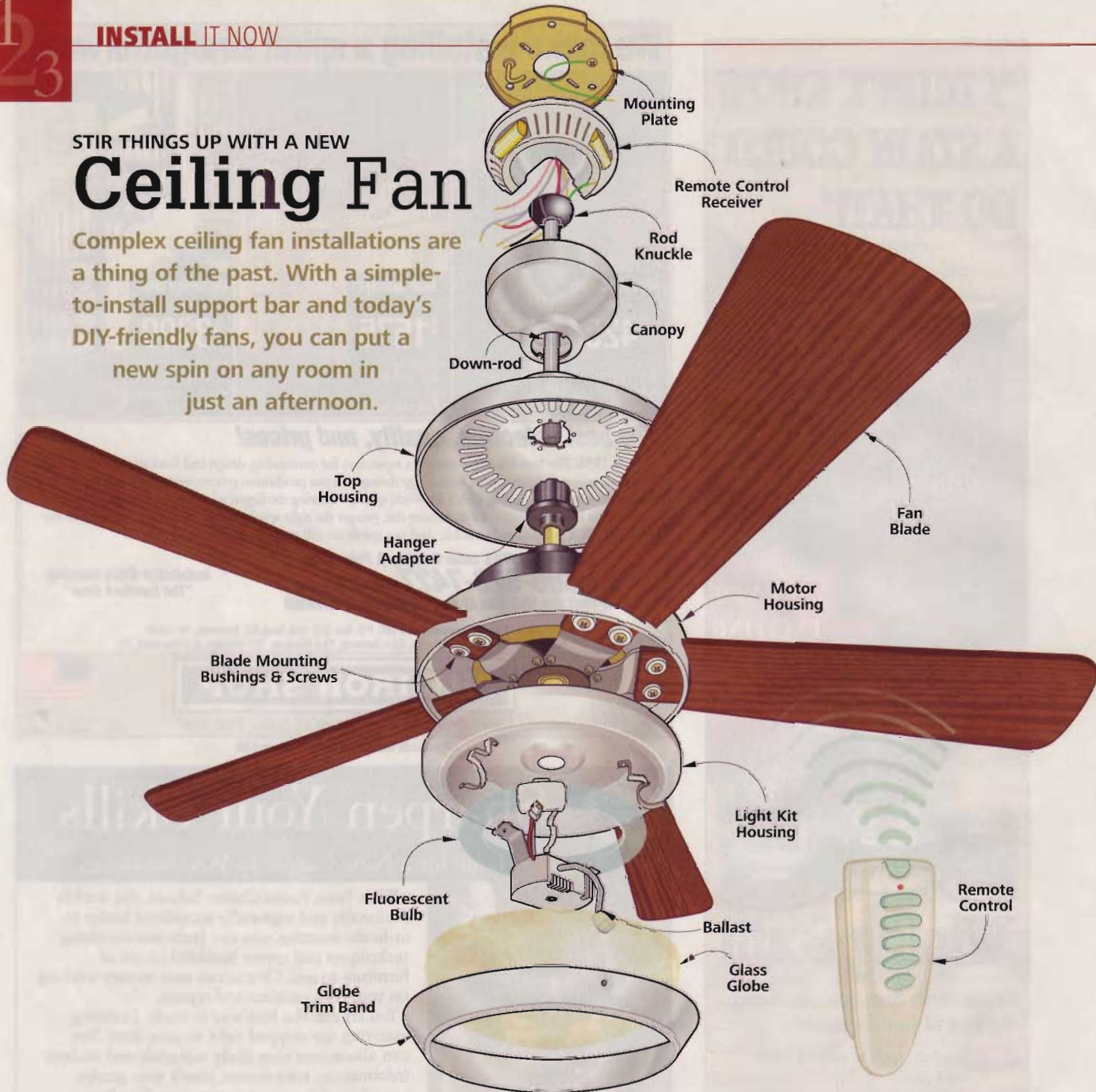
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STIR THINGS UP WITH A NEW Ceiling Fan

Complex ceiling fan installations are a thing of the past. With a simple-to-install support bar and today's DIY-friendly fans, you can put a new spin on any room in just an afternoon.



Several years ago, after installing a ceiling fan for the first time, I swore I'd never install another one. In fact, I did a lot of swearing that day. But as often happens, the passage of time dimmed my memory of that particular DIY trauma, and I recently found myself agreeing to install another ceiling fan.

As it turns out, I'm not the only DIYer who has been nearly derailed by the complexities of a ceiling fan. And in the years since that ill-advised first installation attempt, fan manufacturers have heard our cries of frustration and have responded by dramatically simplifying the installation process.

A good example of that is installing fan supports. A ceiling fan needs solid mounting. And if you're lucky enough to have a junction box that's firmly attached to

a joist, or if you're replacing an existing ceiling fan, then you've already got this covered. But if you're mounting a new fan or replacing a light fixture, you'll have to ensure there's adequate support above the ceiling. That used to mean installing 2x4 blocking between joists and then attaching the electrical box to that. But now, with the advent of the expandable support bar (*Sidebar, page 87*), this step has been dramatically simplified.

Another simplification is a hanging hook that eliminates the step where you have to simultaneously support the entire fan while splicing all of the wiring together.

Finally, if you're not using existing switches, and you'd rather not go to the trouble of running the wiring and

installing separate switches to control the fan and the lights, simply select a fan with a remote control, and skip this complication altogether.

Before we delve any deeper into the specifics of installing a ceiling fan, we should first discuss how the size and shape of your room will dictate what size fan you should buy. And we'll look at how ceiling height impacts the performance of the fan.

Room Dimensions—It stands to reason that the larger the room, the larger the fan you will need to effectively circulate the air in the room. The following guidelines will help you match the diameter of your fan to your room. Remember that you should size your fan based on the *largest* room dimension. Keeping that in mind, use a:

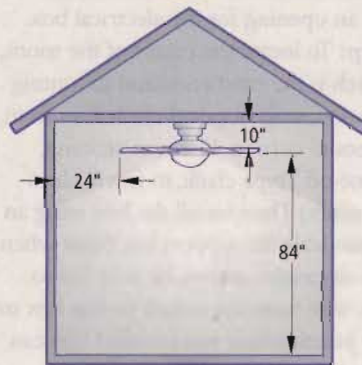
- 36" fan if the largest room dimension is 12 feet or less.
- 42" fan if the largest room dimension is 12 to 15 feet.
- 52" fan if the largest room dimension is 15 to 18 feet.
- For rooms larger than 18 feet, consider multiple fans.

One important exception to these rules is that there shouldn't be any obstruction within 24" of the blade tips, so you may have to downsize your fan if bulkheads or a vaulted ceiling make this an issue (*Illustration*).

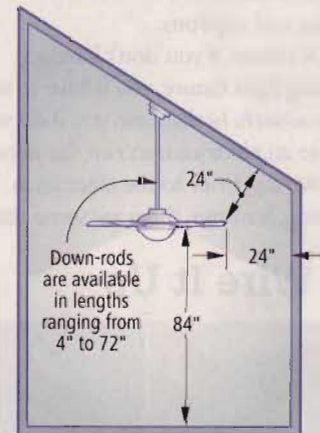
Ceiling Height—Clearances below and above a ceiling fan are two more important considerations. If there's less than 7 feet between the blades and the floor, the fan presents a safety hazard. In fact, most building codes set this 7-foot standard as a minimum. Above the fan, too little clearance between the blades and the ceiling will make it difficult for the fan to circulate air efficiently. As a rule, 10" between the blades and the ceiling is a minimum, 12" is better, and 18" is ideal. Many fans will include various "down-rods" to accommodate a variety of different ceiling heights.



HOW TO SELECT THE RIGHT SIZE FAN



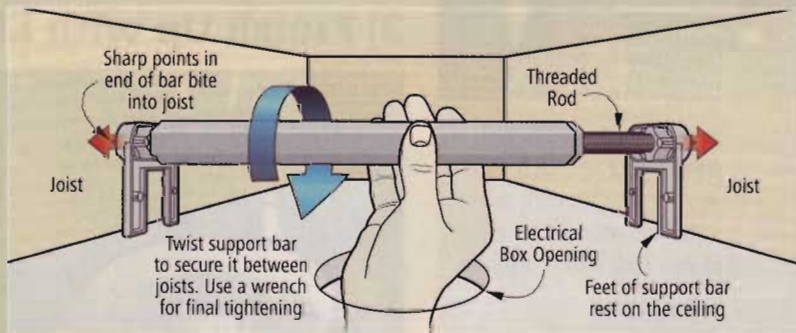
FLAT CEILING



VAULTED CEILING

FAN SUPPORT BAR

This expandable support bar will fit through an opening in the ceiling as small as the junction box it will ultimately brace. Then, with the feet of the brace resting on the top of the ceiling, you can expand the brace by twisting the hexagonal body by hand. When the bar is expanded to span between the joists, a few more turns with a 1" wrench will embed the points into the wood to secure it firmly. You can then attach the junction box using a U-bolt, flange, nuts, and washers, all of which are included with the support bar.



CEILING FAN INSTALLATION

The specifics of your ceiling fan installation may vary slightly from the one we detail here, but the following steps provide a general guideline for what to expect. A thorough reading of the instructions that come with your fan will reveal any differences between your fan installation and ours.

Of course, as with any electrical project, the first step is turn off the power at the breaker/fuse box.


Once that's done, you can remove the existing fixture and proceed with the installation as detailed in the *Photos* and captions.

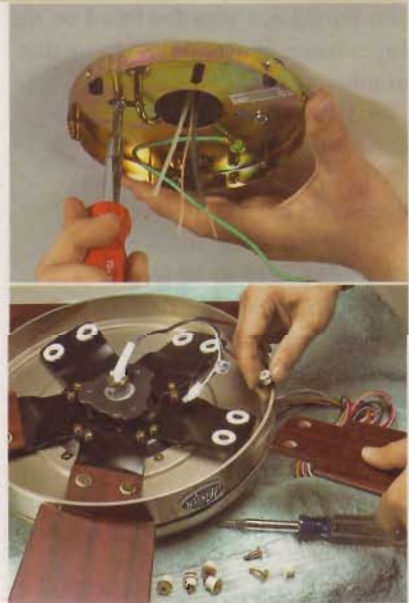
Of course, if you don't have an existing light fixture, you'll have to start from scratch. In that case, you'd do well to hire an electrician to run the necessary wiring. Prior to the electrician arriving, however, there are some things

1] Start with a Solid Ceiling Mount



After ensuring that the power is off, remove the existing fixture. Then insert the expandable support bar, and tighten it between the joists. Now install the junction box, and attach the ceiling plate. Assemble the fan according to the instructions.

you can do to get ready. For example, you can decide on the exact location where the fan will be installed and cut an opening for the electrical box. (**Tip:** To locate the center of the room, which is the most common mounting location, snap diagonal chalk lines from opposite corners. Use non-staining, "dust-off" type chalk, so it will clean off easily.) Then install the box using an expandable fan support bar. Now when the electrician arrives, he only has to run wire from the switch or fuse box to the junction box you installed. You can take it from there. 



—Written by Bill Link, illustrated by Kurt Schultz

2] Wire It Up



Hang the fan from the hook on the mounting plate. If your fan has a remote control receiver, attach it to the mounting plate, and connect the wires according to your fan's wiring diagram.



3] Finish Up with Lighting



Attach the light fixture kit if your fan includes one, make any final electrical connections, and install the light bulb. Finally, attach the glass globe and trim ring over the light fixture. Your light fixture may vary.

Tool Report

Two router table options, a clamp for all occasions, and a sharpener that gives you the edge.

ROUTER TABLE CHOICES—If you're shopping for your first router table, or maybe just need to replace a benchtop router table that's seen better days, you'll want to consider two new offerings from Ryobi.

Ryobi's entry-level router table, model **A25RT01**, features a 28" × 14" tabletop with an adjustable fence, built-in dust port, miter-gauge slot, and miter gauge. The intermediate table, model **A25RT02 (1)**, has a larger 32" × 16" tabletop and also adds aluminum T-track to the fence for holding accessories. Both tables have a laminated MDF top with pre-drilled, drop-in inserts that accept many popular router models. Look for both models at Home Depot. The A25RT01 sells for \$70, while the A25RT02 goes for \$100.

THIRD HAND TRIFECTA—The new **Dremel Multi-Vise (2)** combines features of a portable vise, rotary tool holder, and small bar clamp into one tool.

A round base unit attaches to any worksurface up to 2½" thick. On top of the base is a die-cast ball and socket that rotates 360 degrees and tilts 50 degrees to each side.

With the vise attachment connected to the base, the unit will hold almost anything you can fit within the 7½" jaw opening, including round and odd-shaped pieces. Soft clamping jaws protect delicate pieces from damage. By removing the vise attachment, it can double as a quick-adjusting bar clamp that stands on its own.

An adapter ring that also comes with the Multi-Vise lets you mount your Dremel rotary tool in place to serve as a stationary sander, grinder, or polisher. The Dremel Multi-Vise retails for about \$35 and can be found most places where Dremel rotary tools are sold.

WORK SHARPER, NOT HARDER—Professional Tool Manufacturing, best known for its line of Drill Doctor drill bit sharpeners, has set its sights on woodworking tools, namely chisels, plane irons, carving tools, and lathe tools. With the introduction of the new **Work Sharp WS3000 (3)**, the company hopes to make sharpening these items quick and easy, just as they have done for drill bits.

The WS3000 is essentially a specialized, low-speed bench grinder with a flat, horizontal sharpening wheel. An innovative heat sink that's built into the sharpener uses air drawn in by the motor to keep blades cool without a messy water reservoir.

Out of the box, the WS3000 comes with two double-sided tempered glass wheels that accept ordinary 6" self-adhesive sanding discs (a small assortment of discs in four grits is included). Or you can switch to a slotted "see-through" wheel (also included), which allows you to see the cutting edges of lathe tools as you sharpen them.

Complete instructions and a DVD come with the Work Sharp to get you sharpening quickly and accurately. Expect to pay about \$200 for the WS3000. Check the company's website for retail locations and to see a streaming video of the sharpener in action.

NICE SHOOTIN', TEX—DIYers have never had great choices for applying their own wall or ceiling texture. Aerosol cans of texture are unreliable and not well-suited



1 Ryobi
A25RT02



2 Dremel
Multi-Vise



3 Work Sharp
WS3000

FOR MORE INFO:

Ryobi
RyobiTools.com
800-525-2579

Dremel
Dremel.com
800-437-3635

Work Sharp
WorkSharpTools.com
800-597-6170

Wagner
WagnerSprayTech.com
800-328-8251

Skil
SkilTools.com
877-754-5999

to projects larger than patchwork. And unless you have several rooms that need texturing, renting or buying a professional texture gun, along with the air compressor these tools require, isn't very practical.

Now, however, Wagner has put texturing well within the reach of DIYers. The new **Wagner Power Tex All-In-One Texture Sprayer (4)** is reasonably priced at about \$100, does not require a compressor, and makes preparation and cleanup a snap.

A built-in air turbine provides all the air pressure the Power Tex requires, and the tool can be powered by any standard wall outlet. The sprayer also comes with a 1-gallon hopper that snaps on and off for easy cleaning and can be positioned two ways for spraying either ceilings or walls. Three spray nozzles also allow you to select from various spray patterns.

The Power Tex works with standard texture materials, including unaggregated and aggregated texture, as well as diluted joint compound. Look for the Wagner Power Tex wherever Wagner paint sprayers are sold.

SHOP MATH SIMPLIFIED—For those of us with an aversion to even simple geometric calculations, Skil offers the **2100DAF Digital Angle Finder (5)**. This simple tool not only finds the precise angle at which walls, floors, and ceilings intersect, but more importantly, it will tell you what angle to set your miter saw (or miter gauge) to make a complementary cut. Having found that angle, a "hold" button ensures that you won't lose the measurement as you walk between the project area and the saw. The tool also functions as a horizontal and vertical level, as well as a 12" steel ruler. Suggested retail is \$60.

4 Wagner
Power Tex



5 Skil
2100DAF



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Product Information Number 242

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Product Information Number 253

grasscloth style

Add a natural touch to home furnishings and accessories with grasscloth wallpaper. Tip: Buy remnants to save money.



desktop revival

IDEA Add contemporary style to a writing desk with an arrangement of geometric shapes cut from grasscloth.

COST \$26

TIME One hour

HOW Lay out the desktop design on Kraft paper. Cut grasscloth pieces to shape (Fig. 1). Adhere the grasscloth to the Kraft paper with spray adhesive, and add a glass top.

SUPPLIES **Desk:** Hudson Computer Desk, Target.com; **Grasscloth:** WallpaperStore.com; **Glass:** Purchased locally



1 Cut the grasscloth pieces so that the adjoining pieces overlap by 1/4".

ginkgo dreams headboard

IDEA Create an atmosphere of serenity with a headboard displaying a ginkgo-leaf motif using contrasting colors of rustic-weave grasscloth.

COST \$61

TIME Two hours

HOW Cut two 12"x18" panels and one 12"x 32" panel from 1/2" MDF. Cut two different color pieces of grasscloth for each panel 1" longer and wider than the panels. Also cut a Kraft paper template that matches the size of each panel.

To create the leaf design, print as many leaves as desired from our website (see "Supplies," below). Cut out the leaves, and arrange them on the Kraft paper template as desired. Then trace and cut the leaves with a craft knife (Fig. 1).

Stack each pair of grasscloth sheets, tape them together, then tape your Kraft paper template to the backside of the grasscloth stacks. Cut the leaf shapes, slicing through both layers of grasscloth (Fig. 2).

Next, apply the grasscloth pieces with the leaf cutout openings to the MDF panels using spray-mount adhesive (Fig. 3). Then simply glue the cutout leaves into the openings (Fig. 4).

SUPPLIES Grasscloth: Waverly.com Ginkgo-leaf Pattern: WorkbenchMagazine.com



1 Cut ginkgo-leaf shapes out of the Kraft paper to create a template.



2 Stack and tape two grasscloth layers, then trace and cut out the leaves.



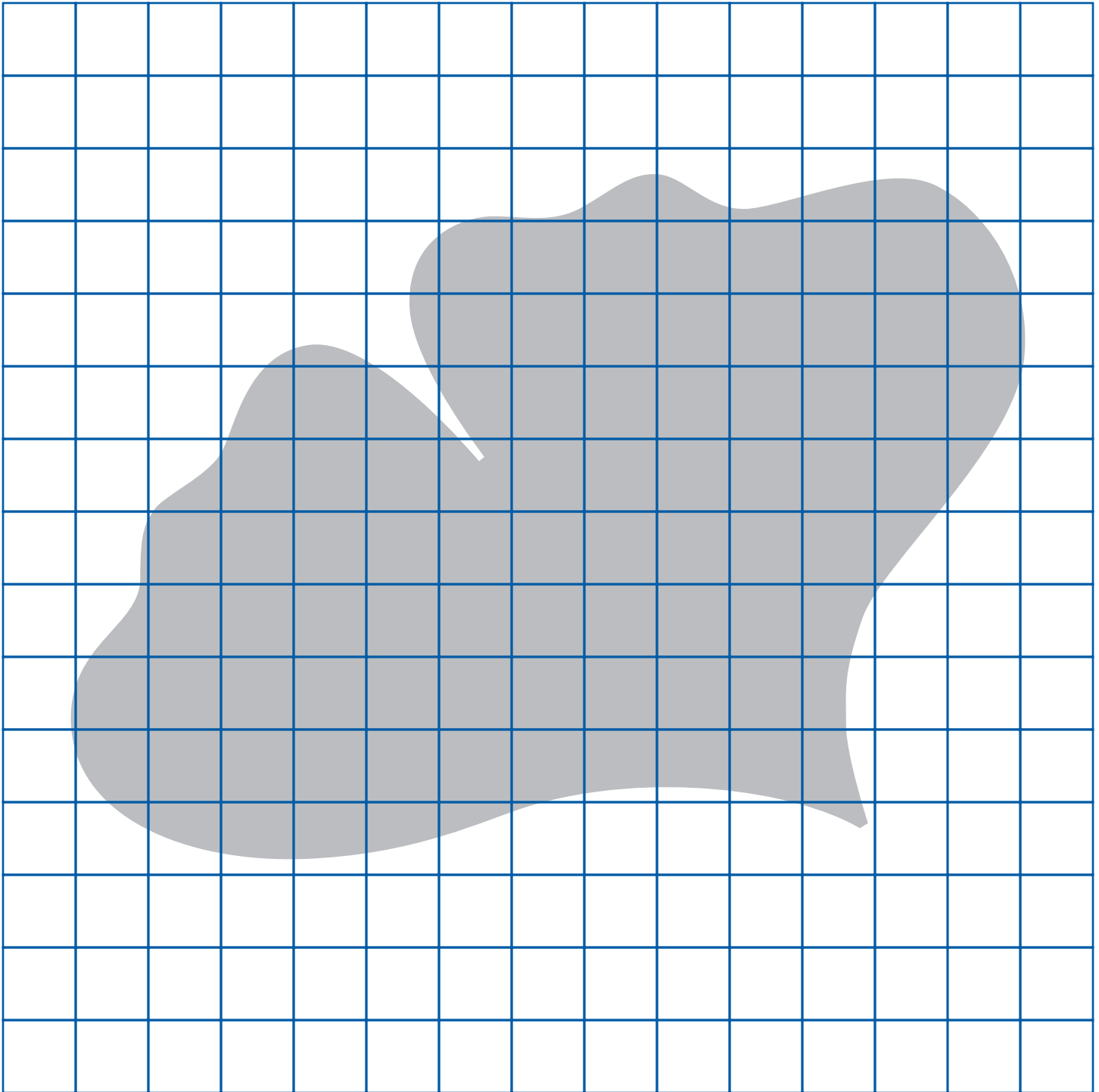
3 After attaching the grasscloth to the MDF panels, carefully wrap the edges.



4 Glue the cutout ginkgo leaves in place in each pre-cut opening.



Pattern at 100%



simple & stylish display shelf

IDEA Decorate the back of an open display shelf with two contrasting colors of grasscloth, running the "grain" in opposite directions.

COST \$11

TIME One hour

HOW Attach a back made from 1/8" plywood to the display shelf with screws. Then, use a marker to trace the openings (Fig. 1). Remove the back and cut grasscloth pieces to fit the openings. Attach the grasscloth with spray adhesive, and then screw the back onto the shelf.



After screwing the back to the display shelf, use a marker to trace the openings so that you can cut the grasscloth pieces to fit.

SUPPLIES Display Shelf: Target.com; Grasscloth: Waverly.com.

