

TIGHT BUDGET? CHECK OUT OUR LOW-COST KITCHEN RENO

CANADIAN Home Workshop

THE DO-IT-YOURSELF MAGAZINE

START HERE:
EASY CABINET
DOORS
PAGE 40



October 2013

\$5.95

Practical KITCHEN PROJECTS

Plans & tips
from the pros

WHAT'S
COOKIN'?

High-tech
options for your
new
kitchen!

PAGE 46

Build this
classic
Spice Cabinet
page 16

BUILD A
TV CONSOLE
Perfect for your
flat-screen!

From farm to forest,
Husqvarna handles
any job with ease.

© 2013 Husqvarna AB. All rights reserved.



Husqvarna chainsaws have always met the high demands of professional users and our newest all-round saws continue this tradition. They feature powerful and efficient X-Torq® engines, Air Injection™ air cleaning and LowVib® vibration reduction. With a range of models to choose from, it's easy to find a saw that suits your needs. For a limited time, receive a bonus saw box and camo cap with the purchase of select Husqvarna chainsaws. Ask your dealer for details.

To find out more about our chainsaws, or find a dealer near you, visit husqvarna.ca



Offer expires Dec. 31, 2013.
Estimated Retail Value
\$68.98



**PERFORM
LIKE A PRO**

WITH HUSQVARNA

WorldMags.net


Husqvarna

CANADIAN Home workshop CONTENTS

OCTOBER 2013



46



34



40



16



28

DIY PROJECTS

16

Spice Up Your Life

A Colonial-style spice box can house a variety of treasures.

—Rick Campbell

28

Entertainment Complex

A sleek stand displays—and hides—all your home theatre necessities.

—Gary Walchuk



34

Crush It!

Squash recycling chores with this pneumatic can crusher.

—Ryan Shervill

HOME IMPROVEMENT

24

Down The Drain

Replace your sink's garbage-disposal unit in an afternoon. —Gary Rudy



40

Kitchen Makeover

A fast and budget-conscious facelift. —Michel Roy



46

What's Cookin'?

Six must-have features for a new kitchen. —Tara Nolan

DEPARTMENTS

4 Editor's Notebook

A budget-conscious contractor.

—Douglas Thomson

7 Letters

Inspired students.

14 Toolbox

Classic cabinets.

—Steve Maxwell

50 Paul's Place

How cooking and carpentry don't mix. —Paul Rush



New tool reviews, time-saving tips, expert how-to advice and workshop news

9 **Chain Reaction** An extensive chainsaw collection

9 **Ask a Pro** Setting up a new workshop

12 **Having a Blast** Dry ice that is used for restoration projects

13 **Testimony** DeWalt right-angle attachment



For more projects, tips & techniques, visit us at
canadianhomeworkshop.com

**Rout precise
grooves for
perfect
plywood
joints.**

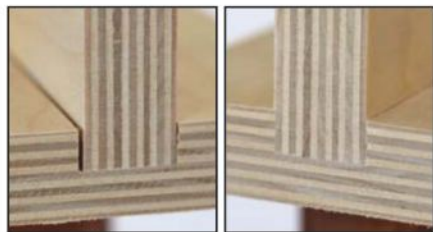


When it comes to plywood, thickness isn't what you'd think it should be. So-called, 1/4", 1/2" and 3/4" sheet goods always measures significantly thinner than the numbers, and this is why Freud invented the Three Piece Undersized Plywood Bit Set.

It meets the challenge of routing dado joints so they accept standard plywood and sheet goods tightly, resulting in ultra-smooth, precise dados in plywood and sheet goods construction.

A PERFECT FIT

As with all our router bits, we use commercial-grade TiCo Hi-Density Carbide in our plywood bits. TiCo carbide holds an edge longer than standard carbides, especially working in the abrasive conditions of plywood, particle-board and MDF. And though we could have used 1/4" shanks for these bits, our beefier 1/2" size is much better. It eliminates flutter during each cut, producing dead-straight groove edges every time.



Regular Bit

Undersized Bit

The NEW Freud Undersized Plywood Bit Set – available to order or purchase NOW at your local dealer.

freud
Precisely the best.



Editor's Notebook

BY DOUGLAS THOMSON

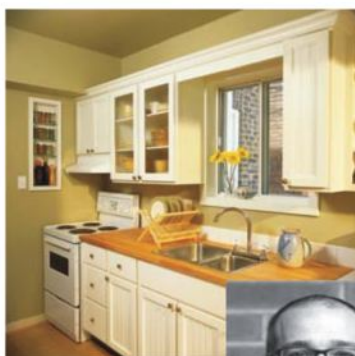
“Look for a contractor who spends your money like they're spending their own.”

Money-Saving Reno Tips

Start with a budget-friendly contractor

IF MICHEL ROY, the contractor featured in the kitchen makeover on page 40 of this issue, looks familiar to you, that might be because he's the same guy who completed another stylish, but low-budget reno: “From Boring to Beautiful” in our October 2003 issue. (Of course, he's a regular contributor too!). Obviously, Michel has learned a lot about kitchen renos in these past 10 years on the job, but his overall goal seems to have remained unchanged—making big improvements on a small budget.

Simply spending less on a reno without a lot of forethought often yields a



CIRCA 2003: Michel Roy's first project for CHW was a budget-conscious reno



room that looks half-done. On the other hand, planning carefully and spending where it makes sense is typical of how Michel approaches his projects. Do you really need a \$1,500 sink or a \$750 faucet? Maybe. But not if it comes at the expense of compromising the quality of the cabinets, for instance. (In fact, as a cost-saving measure, Michel often simply refaces cabinets with new doors and drawer fronts if the cabinet structure is still solid). To my eye, that's smart spending. Having worked with Michel on my own budget kitchen reno a few years ago, I know he's skilled at helping to make good use of a small budget. He's careful about

keeping layout changes to a minimum, for example. As Michel says, “moving walls and plumbing costs a lot of extra time and money.” Surprisingly, I've found that a cost-conscious renovation is a bit of a lost art with contractors these days. Maybe it's all those TV “reality” shows that manage to pull off spectacular makeovers overnight (or so it appears) or the “everyday” kitchens in decor magazines that must have had a \$100,000 budget. Whatever the reason, the fact is it's hard to find a contractor who is willing to work with you to save where you can. Many contractors do great work, but they work with spectacularly huge budgets. Don't get me wrong, a beautiful kitchen reno isn't easy to pull off—even with a big budget—but it's a good deal harder to pull off on a conservative budget. That's where guys like Michel shine.

As Michel advised me several years ago: “Look for a contractor who spends your money like they're spending their own.”

That, to me, is sound advice. ■

Finally, a blade that delivers ultimate smoothness, even without a backer board!

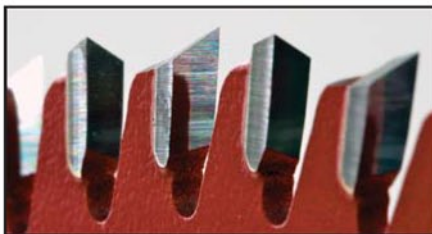


The true test of any precision saw blade is how well it cuts without special help to prevent splintering. Diablo's 10" and 12" ULTIMATE FLAWLESS FINISH BLADES cut smooth and chip-free, all on their own.

Your choice of saw blades is the single most important decision you'll make when it comes to success as a woodworker. That's because saw blades affect everything you make in the shop. Diablo's Italian-made, Ultimate Flawless Finish blades include unique design features you won't find in lesser blades.

PRECISION SHEAR™ POINT

Sharp, steeply-angled teeth. This is what PRECISION SHEAR POINT™ means. These teeth are like remarkably honed knives, made to slice wood with virtually no tearout. This goes even for chip-prone veneered ply and melamine. Even just picking this blade up you can feel the difference.



AXIAL SHEAR FACE™ GRIND (ASFG)

Angled cutters slice wood better because they shear. This is the genius behind the AXIAL SHEAR FACE™ GRIND tooth pattern. Look down on the teeth from above and you'll see how each tooth face angles one way or the other from the direction of travel. This is more challenging to manufacture, but the results are worth it.



When it comes to saw blade performance, seeing is believing. The superior results of the ULTIMATE FLAWLESS FINISH BLADE show up as astonishingly smooth cut faces and far crisper edges than competing blades deliver.



DIABLO

ADVANTAGE

Vs

STANDARD BLADE CUTS



The NEW Diablo Flawless Finish Saw Blade – available to order or purchase NOW at your local dealer.

"I never would have thought that a blade could cut this smoothly. No chipped edges, even on veneered ply. This blade works just as well in a chopsaw as it does in a tablesaw, and it even handles heavy cuts well."

Robert Walton – Cabinetmaker

The NEW ULTIMATE FLAWLESS FINISH BLADES are available in 10" x 90-tooth and 12" x 100-tooth models and are ideal for tablesaws and all types of mitre saws.



Keeps Paint Out. Keeps Lines Sharp.®



FrogTape® is the only painter's tape treated with PaintBlock® Technology. PaintBlock forms a micro-barrier that seals the edges of the tape, preventing paint bleed. This means less time spent prepping and touching up, and more time for other jobs.

Visit FrogTape.com to see PaintBlock in action, get painting tips and more!



FrogTape.com



877-FROGTAPE
(376-4827)

©2013 FrogTape, LLC. All rights reserved.

GUARANTEED RELIEF FOR DRY HANDS THAT CRACK & SPLIT

Before



After



- The leading hand cream for people who work with their hands.
- Odorless & Non-Greasy

Made in USA

www.OKeefesCompany.com

100% Money Back Guarantee

© 2013 O'Keefe's Company

1.800.275.2718

CANADIAN Home workshop

OCTOBER 2013 VOLUME 37, NUMBER 1

Editor-in-Chief & Brand Manager Douglas Thomson

Senior Editor Tara Nolan

Art Director Amy McCleverty

Technical Editor Steve Maxwell

Contributing Editors Charise Arcsott, Karen Bertelsen, Rick Campbell, Len Churchill, Cathy Dalrymple, Stephen MacEachern, Glenn McBride, Michel Roy, Paul Rush, Ryan Shervill, Jay Somerset, Dave Starrett, Hendrik Varju, Gary Walchuk, Roger Yip

Publisher Al Zikowitz

Director of Marketing & Advertising Randy Craig

National Sales Manager Robert McClatchey

Advertising Account Managers Greg McLeod, Margot Pengelly, Rosemary Bubanovich

Retail & Classified Account Manager Katie Hunt (on leave)

Acting Retail & Classified Account Manager Mylène Tomkin

Advertising Coordinator Rizielle Roculan

Production Manager Jodi Brooks

Assistant Production Manager Denise Gray

Circulation Director Sarah Watt

Circulation Manager Nancy Parker

Circulation Coordinator Amanda Beattie

Canadian Home Workshop® is published by

Cottage Life Media, a division of Blue Ant Media Partnership

President Al Zikowitz

Chief Operating Officer Terry Sellwood

Director of Content Development Penny Caldwell

Assistant to the President Rena Bennett

Controller Laureen Chung

Senior Accountant Albena Ianakieva

Accounts-Receiveable Administrator Theresa Cressatti

Junior Accountant & Office Assistant Jennie Monluk

Office & Merchandise Manager Dawn Yager

Editorial Consultant Wendela Roberts

Canadian Home Workshop (ISSN 1485-8509) is published six times a year (Winter, March, April/May, Summer, September and October) by Cottage Life Media Inc.

Subscription rates: Canada \$24 for 1 year (6 issues) plus tax; U.S., add \$15 per year; foreign, add \$35 per year. Single-copy price: \$5.95. Send name, address and cheque or money order to:

Canadian Home Workshop, P.O. Box 715
Markham, ON L3P 7V1

Subscription inquiries

Telephone: 1-800-465-6183 (Canada and U.S.)

Toronto (905) 946-0406

Email: subscriptions@canadianhomeworkshop.com

Editorial office

54 St. Patrick St., Toronto, ON M5T 1V1

Telephone: (416) 599-2000; Fax: (416) 599-0500

Email: letters@canadianhomeworkshop.com

CANADIAN POSTMASTER: Return undeliverable

Canadian addresses to Canadian Home Workshop,
P.O. Box 715, Markham, ON L3P 7V1

Canada

We acknowledge the financial support of the Government of Canada through the Canada Periodical Fund (CPF) of the Department of Canadian Heritage.

canadianhomeworkshop.com

Printed in Canada

Distributed by Coast to Coast Newsstand Services Ltd.

© 2013 Canadian Home Workshop Magazine. All rights reserved. Reproduction of any article, photograph, or artwork without written permission of the publisher is strictly forbidden. The publisher can assume no responsibility for unsolicited material. While all precautions have been taken to ensure accuracy and safety in the execution of articles, plans and illustrations found in Canadian Home Workshop, we accept no responsibility for errors herein, nor liability for accidents, material losses or injuries resulting from the use of information supplied in these articles, plans and illustrations.

Publications Mail Agreement No. 41927026

GST Registration #815439914

Magazines
Canada

[C S M E]
Canadian Society of
Magazine Editors

CCAB
CANADIAN CREDIT
AGENCY

WorldMags.net

canadianhomeworkshop.com /// OCTOBER 2013 **7**



Gas Axe

> An oxygen-fuelled torch, a.k.a. a "gas axe," typically is used for cutting metal. It cuts by heating the material to its kindling temperature (essentially, its ignition point). The burnt material then flows out of the cutting kerf as liquid slag.



PHOTOGRAPHY BY JUAN LUNA

The experts give you the right advice
for your DIY and woodworking projects

askapro



Ryan Shervill

One of *Canadian Home Workshop's* best-known project builders, Ryan also is a master woodworker, designer and a do-it-yourself expert. He lives near the shores of Georgian Bay in Ontario.

FAVOURITE TASK It has to be the planning/designing/prototyping stage of each project. Both DIY and woodworking, I love being able to take the picture out of my head and watch it become something physical.

LEAST FAVOURITE Anything involving bristles! Painting, finishing, sweeping... if 15 years of doing this has taught me anything, it's that any task that involves bristles is not going to be fun.

SETTING UP SHOP

☑ I'm thinking of setting up a workshop in my basement, about 300 square feet. I'd like to be able to do some basic woodworking, as well as some home-improvement projects. Can you give me an idea of the tools you would recommend as a start? Maybe you could tell me the "must haves" and the "nice to haves"? My budget is not unlimited; but, since I'll be setting up my shop over time, cost isn't a huge factor at this

➤ CONTINUED ON PAGE 10

CHAIN REACTION

A chainsaw collector's portion of Canada's logging history BY **SUSAN PETERS**

MIKE ACRES HAS lost count of the number of chainsaws he owns. But the Burnaby, B.C., man thinks about 700 top some 20 pallets in the warehouse next to his small-engine company. "I like the machines, the designs, how different manufacturers approached the same problems," he says.

Storing a chainsaw collection, or finding a museum to take them, can be a challenge. Acres started collecting as a teenaged power-saw mechanic; he now is 74. His collection includes mammoth, two-man saws designed to cut six-foot-thick West Coast trees.

The trees are smaller now, while the saws are more powerful. They also have grown lighter over the past 70 years, machined in materials such as cast iron, steel, magnesium, aluminum and now, plastic. "Pound for pound, the plastic saws are as strong as magnesium and aluminum," Acres says firmly. Back when a dozen companies manufactured chainsaws in Canada, different models were popular in each region, including saws with 13-inch bars used to log smaller trees in Newfoundland, or the tiny saws developed to cut fence posts in Saskatchewan.

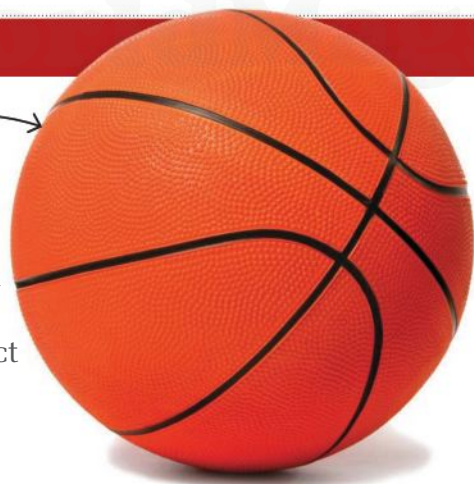
Acres estimates there are more than a 100 collectors in Canada, often in areas where logging was a major industry. His website, Chain Saw Collectors Corner (find the link on acresinternet.com), attracts collectors from across North America and further afield. (Acres recently attended a chainsaw convention in Sweden.)



A SAW for every tree—well, almost! Mike Acres (yes, that's his real name) has saws ranging from huge two-man saws for big-tree logging to small, light saws specifically designed for trimming Prairie fence posts

fast fact

SWISH! That's the sound of air escaping from your home. According to Direct Energy, if you added up all the air leaks, cracks and small openings in an older home, you'd have a hole in your wall about the size of a basketball! As autumn approaches, seek out and seal air leaks that could be lurking around windows and doors.



HAVING A BLAST!

Dry ice proves to be useful when applied to restoration projects BY JAY SOMERSET

YOU'VE HEARD OF sand blasting, and you're likely aware of soda blasting—abrasive-blasting techniques for removing grease, paint, mould, grime and other contaminants. But did you know dry ice also can do the job, albeit in a much more controlled manner with virtually no waste, residue or cleanup?



ICE BLASTING removes material quickly and requires no cleanup

First patented in the late 1980s, dry-ice blasting involves shooting dry ice in the form of pellets or “snow” through a highly pressurized nozzle. Upon impact, the substance transforms from solid to gas almost instantly, killing or removing what needs to go but with minimal abrasion and zero water.

“You could use it to remove ink from a business card,” says Mike McGraw, owner of EcoJet, a dry-ice blasting company based in Keswick, Ont. Recently, his company was hired to clean a delicate art sculpture, worth about \$5 million, at the University of Toronto. “Most of our business is in disaster renovation,” he says. “Dry ice is ideal for removing mould; it actually

kills it on contact. We fix a lot of grow-op houses.”

Using dry ice also is great for fixing smoke-damaged buildings, stripping paint and brick restoration, and, unlike sand or soda, leaves virtually no trace of itself, which means no cleanup. Made from recycled CO₂, dry ice also is the greenest choice.

So, why isn't this process better known? For one, it's expensive. McGraw charges about \$250 an hour, with a four-hour minimum. Two, it's not easy to source dry ice—at least in Ontario, where you have to drive to London to get it.

But mainly, it's an image problem. “Nobody has heard of it,” says McGraw. “I spend most of my time trying to get people to believe what I do and call me back.”

point.
Thank you for your suggestions.

Peter Miller
Victoria

To be honest, yours is one of the most difficult questions to answer, as it really depends on what kind of woodworking you are hoping to do. For instance, someone who works with rough-cut solid lumber is going to have very different needs than someone who is working mostly with sheet goods. Once you add in the requirement for home-improvement tools, the list changes again.

First, the most important thing to consider for a basement shop isn't tools at all; rather, it is effective dust collection and lighting. My suggestion would be to budget for these first, and then start to acquire tools.

I work primarily with solid wood and do a lot of DIY/home-improvement projects, so I'll offer my “must have” recommendations based on these. The “nice to have” category will evolve as you go, so it's best to purchase those as your needs develop.

In the “must have” woodworking category, I have:

1. A sturdy bench
2. A tablesaw and assorted blades
3. A multi-base router and table
4. Quality chisels
5. A random-orbital sander
6. A bandsaw (or jigsaw)

➤ CONTINUED ON PAGE 12



**PULLS ITS
OWN WEIGHT.**

**TWICE
OVER.**

**WITH 11,300 LB. MAX. TOWING†,
YOU CAN COUNT ON F-150
TO GET THE JOB DONE.**

**NO WONDER F-SERIES IS CANADA'S BEST-SELLING*
TRUCK LINE 47 YEARS RUNNING.**



2013 F-150 shown. Vehicle may be shown with optional equipment. *F-Series is the best-selling pickup truck in Canada for 47 years in a row based on Canadian Vehicle Manufacturers' Association statistical sales report, December 2012. †When properly equipped, max. towing of 11,300 lb with 3.5L EcoBoost V6 4x2 and 4x4 and 6.2L 2-valve V8 4x2 engines. ©2013 Ford Motor Company of Canada, Limited. All rights reserved.

H Testimony



ALL THE RIGHT ANGLES

A multi-use device for both woodworking and DIY

I RECENTLY TESTED a new right-angle

attachment from DeWalt. While we've all seen right-angle drills and attachments for regular drills, I've never seen one this compact—measuring only 1¾"



from back to the tip of a 1" driver bit. Even more impressive, it's designed for use with an impact driver. I tried it with my 20-volt DeWalt lithium-ion impact driver and it drove screws directly

into hard European beech with no pilot holes.

Although I am right-handed, I used my left hand to power the impact driver so I could exert greater force on the attachment with my right hand. This gave me all kinds of leverage to drive screws into hardwood.

I tried the attachment all over my workshop and even in between floor joists in our crawl space. This tool really is useful, not only for furniture-building (inside of cabinets and drawers, for example) but also for general DIY work, carpentry and home renovation. This tool also would help when installing heating ducts, pipes or electrical wires in tight spaces. A handy magnetic ring holds screws in place too. The tool works with hex-shanked drill bits, nut drivers, etc. It's tiny but clearly, made to last. I expect to use this tool a lot. For more information, visit dewalt.com.

—Hendrik Varju



for cutting curves

7. Quality measuring and marking tools

With the above items there are not many projects you can't build. If you are branching into using rough lumber, add a planer and jointer to the list.

My home-improvement "must haves" include:

- 1.** A cordless drill/driver
- 2.** A small compressor and 18- or 23-gauge nailer
- 3.** Quality levels in 6", 24" and 36" to 48" lengths
- 4.** A stud finder
- 5.** A 6 1/2"-diameter or larger circular saw
- 6.** Basic hand tools, including a hammer, flat bar, countersinks, utility knife, screwdrivers and assorted pliers.



GOT A WORKSHOP QUESTION? Send us a question via email to askapro@canadianhomeworkshop.com and we'll make a random draw to win Kreg's new rip-cut jig! **IT'S WIN-WIN!**

MAIL

ASK A PRO, *Canadian Home Workshop*, 54 St. Patrick St., Toronto, ON M5T 1V1

EMAIL

askapro@canadianhomeworkshop.com



ON A ROLL

A team from France designs a wooden bicycle

AS YOU PONDER potential woodworking projects, have you considered building a bike? Claude Saos and Thierry Boltz, a couple of designers—and cycling enthusiasts—from Strasbourg, France, recently created the WOOD.b (bsgbikes.com). The frame on this sleek-looking urban bike is made partly from ash plywood and is compatible with standard steel components. We recommend you stick to plastic for the helmet.

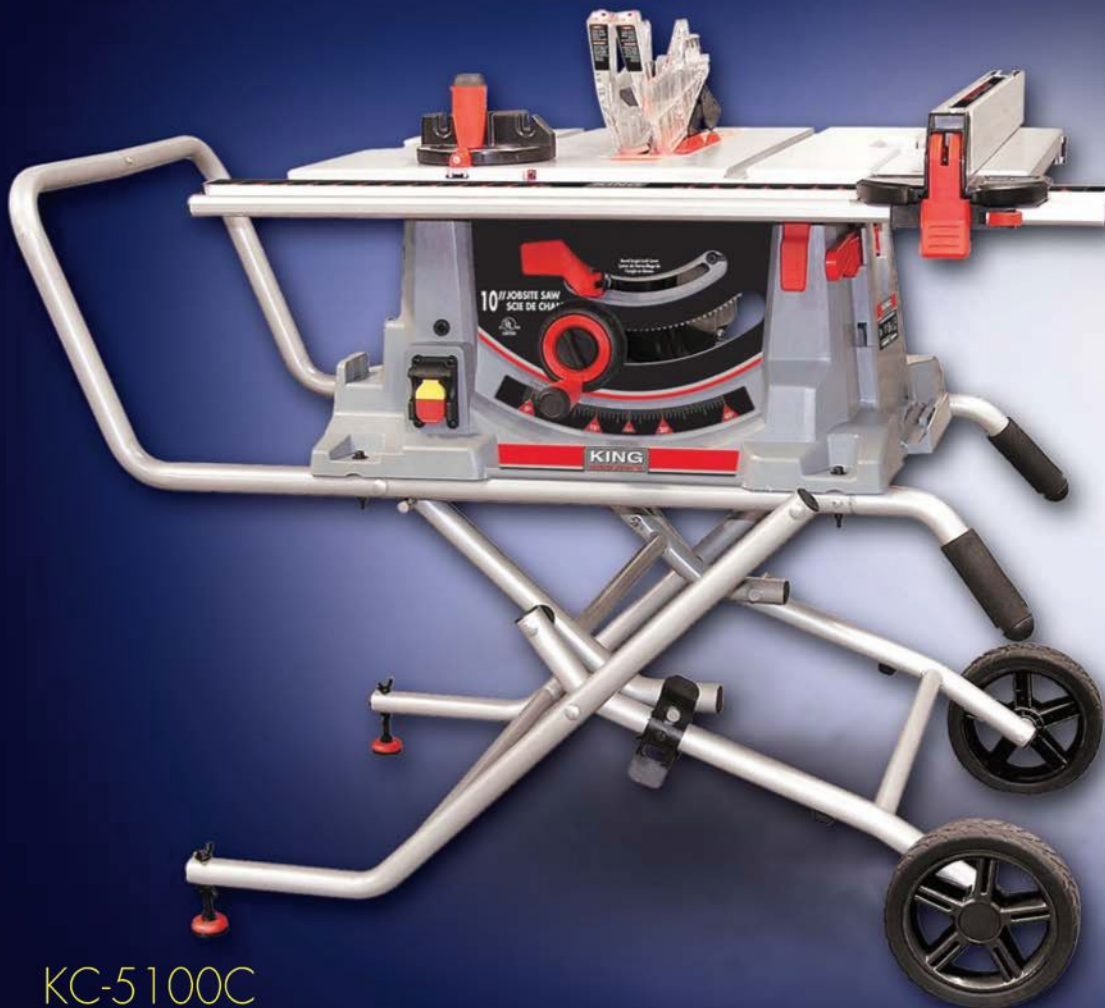
—Tara Nolan

Stands alone in its class!

...and then quickly folds away.

Introducing the all new King Industrial 10" Jobsite Saw with Folding Stand.

This new jobsite workhorse features a powerful 15 amp, 4,400 RPM.



The folding stand has large 8" wheels for maximum portability and folds up in seconds.



KC-5100C

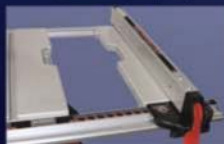
Blade guard with riving knife and anti-kickback fingers



2 1/2" dust port for connection to standard shop vacuum



Large 21" x 30" cast aluminum table with extendable rails – up to 25" rip capacity



Rip fence with micro-adjustment



On-board storage secures accessories during transport



KING CANADA

www.kingcanada.com

2 YEAR WARRANTY



See your nearest King dealer to find out more!



Toolbox
BY STEVE MAXWELL

Of all the ways a workshop can improve your home, building kitchen cabinets offers the biggest benefit. It's a lot of work, but it also pays off in big ways



STEVE'S OWN kitchen cabinets are made with the same solid-wood techniques he learned 25 years ago. Raised pine panels cover birch-veneered inner boxes, with carved elements (above) in front of the sink

Classic Cabinets

A time-tested recipe for real wood kitchens

TWENTY-FIVE YEARS AGO this month, I unloaded my tools onto a workbench in a small commercial workshop alongside four other cabinetmakers who were busy at work. The team I joined was building custom-made, solid-wood kitchen cabinets, and this is where I learned to work with wood, veneered plywood and the best hardware and joinery to make furniture-grade kitchens. While many of today's store-bought kitchen cabinets look good superficially, they're actually built using the cheapest materials and hardware available and held together with questionable joinery. As a home workshopper, you can do better—while also saving big bucks.

I've used the same three-part approach I learned in that cabinet shop many times over the years: combining solid-wood stiles, rails and raised panels to create a classic look in a practical way. The trick

involves building a plywood box, then using it as the foundation for securing stiles, rails and panels, followed by trim and doors. You get the accuracy of sheet goods with the unmistakable beauty of authentic frame-and-panel construction. Trust me, it's a super combination.

You'll find that $\frac{3}{4}$ "-thick birch-veneered plywood is the best material for building foundation plywood boxes. Size your parts so the lower cabinets put the top of the countertop 36" up from the floor, with an overall finished interior depth of 22" to 23", as measured from front to back. Upper cabinets usually measure 12" deep inside and should be tall enough to extend from 18" to 20" above the countertop and within 12" of the ceiling.

Glue and 2"-long finishing nails are all you need to secure butt joints in the box corners, but there's something you need to do before

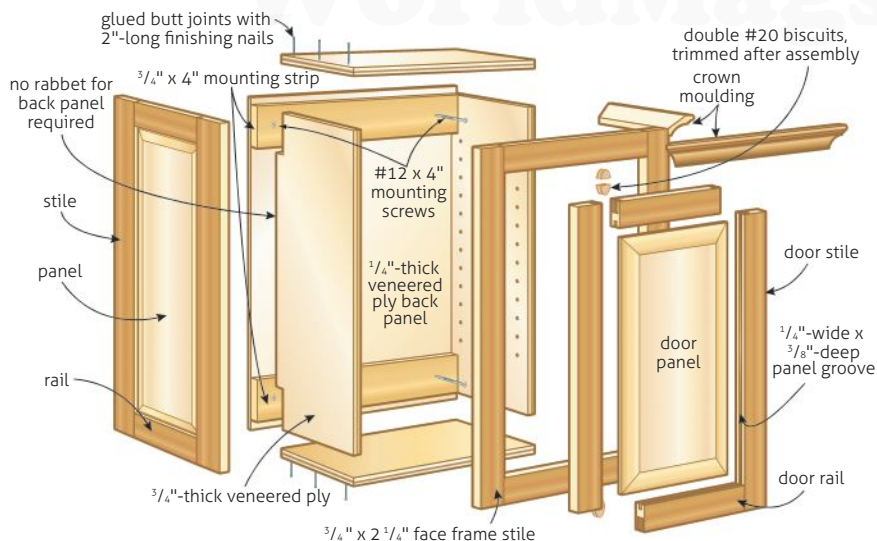
assembling the box parts. Notches cut in the rear edges of the sides for $\frac{3}{4}$ "-thick x 4"-wide pieces of pine offer a place to drive 4"-long deck screws into underlying wall studs, so you can anchor your cabinets to the wall later. You'll also save a lot of trouble by finishing the inside surfaces of the box parts now, before assembly. Just be sure to mask joint areas so that the glue sticks.

I like to enclose the backs of the kitchen cabinets with $\frac{1}{4}$ "-thick veneered plywood to keep dust out, but there's no need to cut grooves to make room for these backs. Just extend the solid-wood stiles and rails you'll add later out past the plywood sides, creating a rabbet-like place for the back panels to sit.

FRAME IT

With the boxes complete, it's time to create frame and panel elements. This is the classiest way to work

PHOTOGRAPHY: STEVE MAXWELL



solid wood into kitchen cabinets, and it involves three parts. Stiles and rails are the vertical and horizontal members, respectively, that surround every solid-wood panel. Optimal stile and rail width for kitchen cabinets range from 2 1/4" to 2 1/2", with wider bottom rails best on the bottom edge of the upper cabinets. You also should make upper rails wide enough to expose 2 1/4" of rail width if you're also installing crown moulding or top trim.

One advantage to building solid-wood details around a plywood box is the ease of fastening stiles and rails securely and with minimal joinery. Simply cut, glue and clamp stiles and rails to your plywood boxes with butt joints. Use nails only in those places that will be covered later by trim. Wait for the glue to dry, and then plunge biscuit slots across the assembled face frame's joints from the top and bottom surfaces. Glue biscuits into these slots, then trim them flush. As you work, remember to leave one stile or rail off until the raised centre panel has been slipped into place.

Raised panels require edges thin enough to fit into dados routed into the inside edges of the stiles and rails. There are two ways to shape panel edges to make this happen. You could mill the edges with a

table-mounted router equipped with a panel-raising bit; but my favourite method requires nothing more than a tablesaw and a hand plane. Why? These tools let you make wider and more gently tapered edges that look better.

After trimming panels to length and width, run them across your tablesaw on edge, with the blade tilted 18° to 20° from vertical. This roughs out the bevelled edge of the panel, although the surface will be too rough and too thick. A sharp hand plane makes it easy to smooth

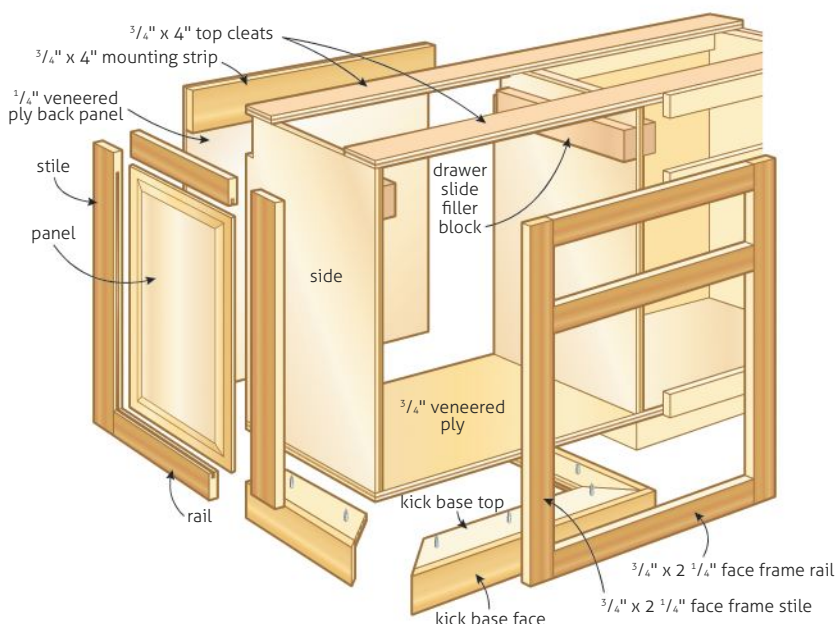
the sawn, bevelled edges and brings them down to fit into 3/8"-wide dados milled into the edges of the stiles and rails. Plane a little, test-fit the panel into a stile or rail dado, then plane again until you arrive at the perfect fit.

Before you assemble stiles and rails around the panels, wipe stain along the edge-grain edges of the panels before assembly. This eliminates the risk that light, unstained, bright wood will be visible if the surrounding wood shrinks.

Trim is the last step before finishing, and it involves installing some kind of crown moulding around the top of the upper cabinets. Semicircular bullnose trim applied around the perimeter of door and drawer openings makes your cabinets look great and hides slight misalignments between doors, drawers and the surrounding face frames.

Of all the ways a workshop can improve your home, building kitchen cabinets offers the greatest benefit. It's a lot of work, but, visually and structurally, it pays off. ■

Steve Maxwell is a woodworking expert and CHW's technical editor.





Spice Up *your* Life

A Colonial-style spice box can house a variety of treasures BY **RICK CAMPBELL**

“I saved a few dollars by constructing the drawers’ sides, back and bottoms from economical poplar, but there’s no reason you can’t use maple here too.”



STRIKING SPALTED maple drawer fronts get their streaks of colour from fungus growth just beginning to set into the logs before they are sawn into boards

IT’S HARD TO fathom now, but during colonial times, spices such as pepper were so valuable, they were kept by the well-to-do in locked “spice boxes” and not on the kitchen table in a grinder for anyone to use. Then, as world trade became more commonplace and spice prices dropped, these fancy cabinets were reassigned to other tasks, such as storing jewelry or treasured family heirlooms. My version of the Colonial-style spice box is constructed mostly from solid maple. I ebonized the divided cabinet with black aniline dye and used richly figured spalted maple to accent the top, base and drawer fronts. I saved a few dollars by constructing the drawers’ sides, back and bottoms from economical poplar, but there’s no reason you can’t use maple here too.

PHOTOGRAPHY: FELIX WEDGWOOD



DIVIDED OPENINGS

To start, strap on a dust mask and head over to the thickness planer to begin milling enough 1/2"-thick material to make the main cabinet box, the back panel slats and the interior drawer partitions. Cut these parts to size on the tablesaw, then switch to a stacked dado blade to prepare the joints. The corners of the box are connected together using 1/2"-wide x 1/4"-deep rabbets. To prepare these joints, clamp a sacrificial board to the saw's fence, which will prevent damaging the blade's teeth when the fence is positioned flush against the blade.

The next step is to prepare the parts for the cabinet back. Look at the plans and you'll see the back is made of three vertical slats, each one recessed flush with the back of the cabinet box. Overlapping tongues located at the junction of the slats allow for seasonal expansion and contraction without revealing any gaps.

First prepare 1/2"-wide x 1/4"-deep rabbets on the adjoining edges of the slats to form the lap joints, then mill 1/4"-wide x 1/4"-deep rabbets on the outer edges of the slats and on the rear interior lip of the cabinet sides, top and bottom to recess the back panel flush with the rear of the cabinet.

Don't remove that dado blade just yet; you have got another series of cuts to make. This time, prepare 1/2"-wide x 1/8"-deep dados to receive the ends of the drawer partitions. These dados are located at 3" intervals on the interior walls of the cabinets and on both sides of the horizontal partitions. Measure carefully and complete all the dados for a given setup before adjusting the fence. This ensures the corresponding dados end up perfectly aligned. When you're done, sand all parts using 120-, 150- and 180-grit papers to prepare for final assembly.

Before you get out the glue bottle, test-fit so you're sure all pieces fit properly. If everything checks out, apply glue to the joints and work

→ You Will Need

PART	MATERIAL	SIZE (T x W x L*)	QTY.
Cabinet sides	hard maple	1/2" x 8" x 14 1/2"	2
Cabinet top/bottom	hard maple	1/2" x 8" x 10 1/2"	2
Horizontal partitions	hard maple	1/2" x 7 1/2" x 10 1/4"	3
Vertical partitions	hard maple	1/2" x 7 1/2" x 3 1/4"	8
Outside back panel slats	hard maple	1/2" x 3 7/8" x 14"	2
Centre back panel slat	hard maple	1/2" x 3 1/2" x 14"	1
Top/base	spalted maple	3/4" x 9 3/4" x 12"	2
Foot pegs	maple finials	5/8"-dia. x 1 1/2"-long	4
Drawer fronts	spalted maple	1/2" x 3" x 3"	12
Drawer backs	poplar	1/2" x 2 1/2" x 3"	12
Drawer sides	poplar	1/2" x 3" x 6 7/8"	24
Drawer bottoms	poplar	1/2" x 2 1/2" x 7 1/2"	12
Knobs	Lee Valley #02W43.02		12

*Length indicates grain direction



RECOMMENDED TOOLS

Thickness planer, tablesaw, dado blade, table-mounted router, finishing sander, bandsaw, drillpress, clamps



FOOT PEGS give this project a lighter overall look, while also offering a more stable stance than a flat base. The pegs were cut down from longer, factory-turned ones

quickly to assemble the cabinet box with the drawer partitions in place. Hold off installing the back panel until after the finish has been applied. Before you leave the box to dry, check for square and make sure all drawer partitions are perfectly flush with the front edge of the cabinet.

TOP AND BASE

These parts are identical, so it makes sense to make both at the same time. Start by preparing two 3/4"-thick blanks, each measuring 9 3/4" wide x 12" long. I used spalted maple for my panels because I like the striking appearance of

→ PLANS FOR THE SPICE BOX

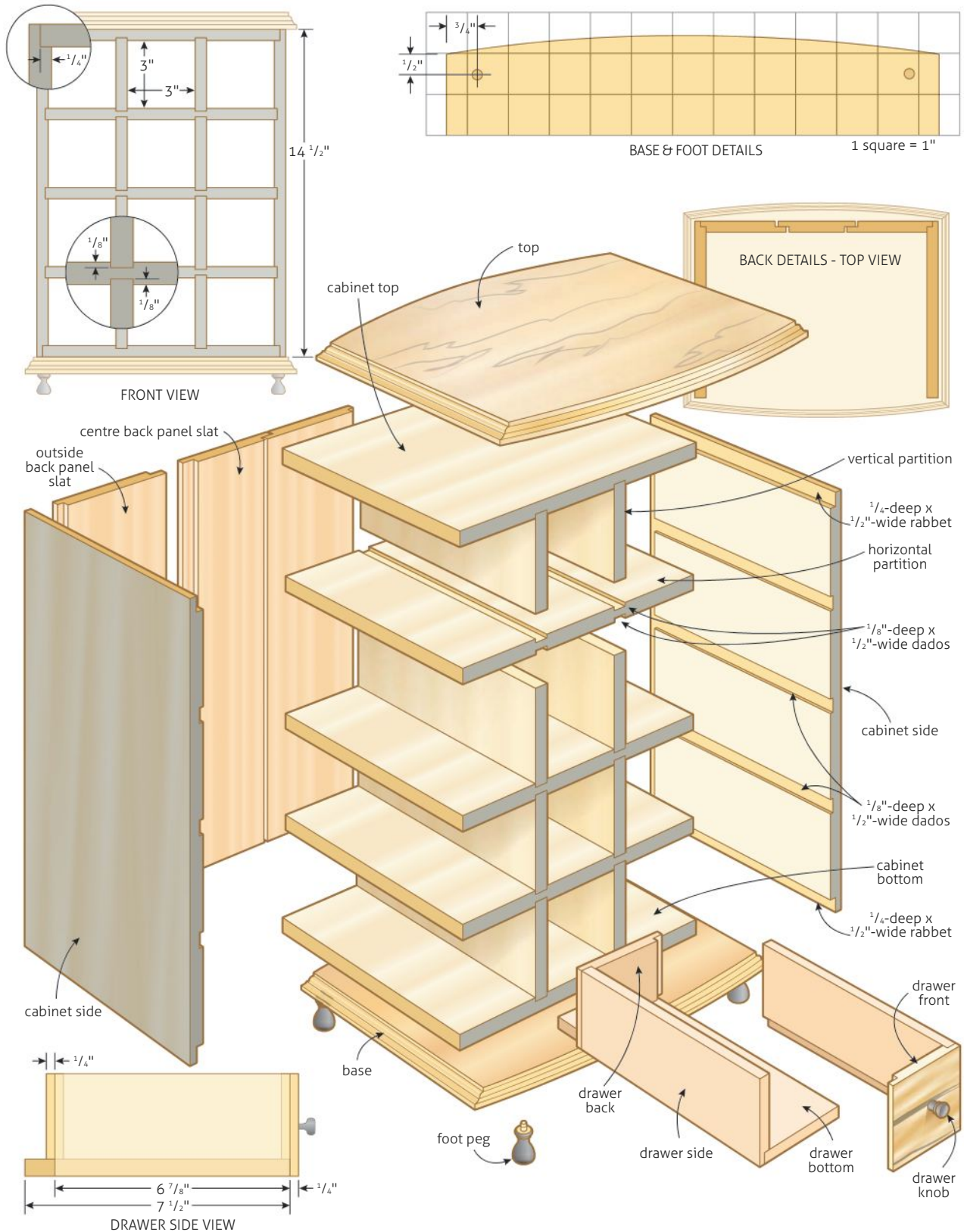


ILLUSTRATION: LEN CHURCHILL



CHOOSE YOUR best wood for the top. The curved front edge adds a look of elegance and is easy to complete. Maple is especially prone to burning when routed, so shape decorative edges in stages, with the final pass being particularly light and fast

this deeply figured wood. Spalting is the term used to describe the discolouration that sometimes happens when trees are invaded by fungi. Spalted maple costs a little more than regular maple, but the spectacular look of the richly figured grain makes it worthwhile.

After cutting the blanks to size, prepare a full-size cardboard template to lay out the curved profile on the front and rear edges. (All the information is in the plans.) Trace the pattern onto your blanks, and then make the

cuts using a bandsaw. Remove any sawmarks with a sanding block, then mill a decorative profile along the edges using a router. I used a bearing-guided Roman ogee bit, but choose whichever profile you like best.

Regardless of the bit you choose, always mill the end-grain first; this way, any tearout is removed later when you rout the sides. Another tip is to start with a couple of shallow passes before making a run with the guide bearing travelling fully against the wood. This

technique reduces the chance of splintering and helps to prevent burn marks by putting less stress on the bit. Here's one last routing tip: after completing the final pass, lightly smooth the area of the panel lip that makes contact with the guide bearing using your sanding block. Now, return to the router table to take one more run. The slight amount of material removed in the sanding process should be just enough to smooth any areas where chattering or burning has occurred. If not, repeat the entire

WATCH OUR **PRECISION CUTTING VIDEO**



**ANYTHING
LESS THAN
FLAWLESS
JUST DOESN'T
CUT IT**



Safety guard removed for demonstration clarity only. Always follow recommended safety instructions.

IRWIN Marples Woodworking Series: Extended Life. Flawless Finish.

IRWIN® Marples® Woodworking Series saw blades deliver the precision and accuracy needed for fine finish work in a wide range of materials. Made in Italy, these laser-cut, thin kerf blades feature over-sized resharpenable carbide teeth for long life. Designed with the quality craftsmanship that has been consistently associated with Marples woodworking tools since 1828, the new Marples Woodworking Series saw blades stand for superior performance and deliver the flawless finish true craftsmen demand.

WorldMags.net

**IRWIN®
Marples®**

www.irwin.com

process a second time.

Choose the panel with the best appearance for the top and set it aside for now. Then take the bottom panel and mark the location of the foot pegs on the underside. (The plans show the correct placement.) Chuck a ¼"-diameter bit in the drillpress and bore ¼"-deep holes at the marked locations to receive the ends of the foot pegs.

Rather than turning fancy foot pegs on the lathe, I used some small, manufactured maple finials I had kicking around the shop. The finials were too long for my purpose, so I cut off part of the profile on the ends using a bandsaw. You may not find the exact same design at your hardware supplier, but something similar will be available. Dry-fit the pegs in the mounting holes but don't glue them in place until after the finish is applied.

BUILDING EACH DRAWER

The drawers for this project are basic, four-sided boxes assembled with rabbets, and are a cinch to make. Get started by cutting all the drawer fronts to size. I used more of that spectacular spalted maple for the drawer fronts, to match the top and base panels. Try cutting the drawer fronts in sequence from the same board so the grain and spalting patterns flow continuously from one drawer face to the next. It may take a bit more planning, but the look is well worth the effort.

After preparing the fronts, cut corresponding sides, bottoms and backs to size from ½"-thick poplar or whatever material you've chosen. Reinstall your dado blade in the tablesaw and prepare the ½"-wide x ¼"-deep rabbets that will be used to assemble the joints. Rabbets are required on the inside edges of the drawer backs and on the inside bottom edges of the front and side pieces. (Refer to the plans for more details.)

You may have noticed that the bottom panels are going to protrude slightly from the back of the drawer

boxes when they are assembled. I'll explain the reason for this a little later. Once all the rabbet joints are prepared and you have given all the parts a final sanding, glue each drawer box together, then clamp. Once everything is dry, remove the clamps and slide the drawers into the openings to see how they fit. If they're too snug, make adjustments by sanding the sides, top and bottom with the stationary sander. Your goal: drawers that slide smoothly into place without binding.

THE FINISH LINE

It's much easier to apply a finish to this project before the top and bottom panels are permanently fastened to the cabinet box. The trickiest part of the finish: applying the black aniline dye to the cabinet box, back panel slats and foot pegs. It's not an overly difficult process, but don't take any shortcuts if you want eye-catching results.

Aniline dye typically comes as a powder that you mix with distilled water. Don't use regular tap water; minerals and chemicals found in some drinking water will cause problems with the finish. Warm up the water in the microwave before diluting the dye powder in the mixture, then let the solution cool to room temperature before applying the finish to the wood.

As you may expect, the grain is going to expand as soon as the finish touches the wood. The easiest way to control this problem is to raise the grain intentionally, first by brushing on plain distilled water with a damp cloth. After the wood dries, give the surfaces a light sanding with 220-grit paper to smooth the rough areas. You may need to repeat this process a couple of times before the grain remains flat.

After conditioning the wood with plain water, apply the dye with a foam brush. A couple of coats may be necessary to get a uniform finish. The top and bottom of the cabinet should be left unfinished to create a bond with the top and base panels

that'll be glued in place. Also, keep the dye out of the rabbets on the rear of the cabinet.

After leaving the finish to dry for at least 24 hours, protect the exposed surfaces with three to four coats of wipe-on poly. To keep the drawers sliding smoothly, I don't recommend finishing the interior of the drawer compartments or the sides and bottoms of the drawer boxes.

When the final coat has fully cured, install the feet, back panel slats, top and base with glue and clamps. Place some soft pads made from scrap fabric under the jaws of the clamps to prevent marring when pressure is applied. When you're ready to install the centre slat of the back panel, apply glue to just a 1"-long section in the middle of the top and bottom edges to allow for seasonal expansion.

With the cabinet back installed, you may discover that the drawers are too long for the openings. That's because we left those tabs protruding from the back of the drawer boxes. These tabs allow for adjustment and ensure the drawers sit perfectly flush with the front of the cabinet when closed. Install the drawers backward, with the ends of the drawer bottoms protruding from the front of the cabinet. Mark a pencil line on each drawer bottom where they meet the cabinet's front face, then trim using the tablesaw with a mitre gauge. Next, install the drawer pulls before returning the boxes to the openings. Otherwise, you may have difficulty getting the drawers back out. I purchased black knobs for my project to tie in with the overall colour scheme.

Now, all that remains is to fill the drawers with fragrant spices or glittery treasures. One thing has always confused me about the idea of colonial settlers securing their spices under lock and key: what was stopping the spice thief from carrying off the entire cabinet? ■

ONE CAN. DOUBLE DUTY.

OLYMPIC® MAXIMUM® STAIN + SEALANT IN ONE.

Olympic® Maximum® Exterior Stain combines stain and sealant in a single can. Every brush stroke waterproofs, protects and beautifies your wood at a great price. It's no wonder people insist on Olympic® Stain. Learn more at Olympic.com

INSIST ON OLYMPIC

AVAILABLE AT
FINE RETAILERS
ACROSS CANADA

© 2012 PPG Architectural Finishes, Inc.
OLYMPIC and MAXIMUM are registered trademarks of PPG Architectural Finishes, Inc.



SNAP THIS TAG TO
LEARN MORE ABOUT
OLYMPIC® STAIN.



Down the Drain

Replace your sink's garbage disposal unit in an afternoon BY **GARY RUDY**



IF YOU HAVE an in-sink garbage disposer, sooner or later, you're going to need to replace it. Whether the motor wears out, the activation switches fail or the cutting blades get dull to the point of inefficiency, the unit will need to be changed eventually. Thankfully, installing a new one is a pretty easy DIY project. • There are two basic types of disposers: those activated by a switch mounted on an adjacent wall; and those that are turned on or off by the drain stopper. In either case, the replacement procedure is almost the same. • As with all DIY projects, preparation is key—and even more so in this case because it involves your kitchen drain, not something you want to be without for long.



1. Begin by turning off the circuit powering the disposer at the panel. Use a voltage tester at the disposer to ensure you've shut down the right circuit



2. Disconnect the disposer outlet drain, as well as the dishwasher drain line at the disposer (inset). Have a small container on hand to catch any water remaining in the dishwasher line



3. Once the drain connections are detached, turn the disposer's mounting ring (located between the sink's bottom and disposer top) counterclockwise to release the disposer. Support the disposer with your free hand as it's being released



4. Turn the disposer upside down, remove the electrical cover plate (inset) and disconnect the electrical supply and ground wires



5. Although it's sometimes possible to reuse the mounting hardware, the hardware on this disposer was rusted and leaking, so I replaced it. To remove, loosen the three screws and push the old sink flange up from the bottom



6. Apply a wide bead of plumber's putty to the underside of the new sink flange (don't be tempted to reuse the old gasket)



7. Set the flange in from above, and then secure the mounting bracket from below. Have a helper (positioned above) ensure the flange stays properly aligned and flat as you tighten the mounting screws from below, tightening each screw by a bit at a time



8. Knock out the dishwasher drain plug using a screwdriver, and then make the electrical connections (above) before lifting the new disposer unit into place



9. Lift the disposer into place and turn the mounting collar so that the disposer hangs securely from the flange. The disposer should now hang by itself



We found this cool, silver-coloured Sharpie brand marker in the plumbing department of our local big-box hardware store. It's excellent for making highly visible alignment lines on the ABS prior to cementing. When constructing an ABS drain arrangement, be sure to dry-fit all the joints first, then disassemble before cementing each joint by aligning the marked lines



10. Reconnect the disposer's primary drain plumbing, as well as the dishwasher drain line (inset). If the disposer has changed in overall height or its position is not exactly the same as the unit being replaced, turn the mounting collar so that the disposer hangs securely in the right position. ☑

Entertainment Complex

A sleek stand displays—and hides—all your home theatre necessities BY GARY WALCHUK



NEEDED TO CHANGE the channel on your current TV stand? This sleek, low-profile cabinet can be built from almost any type of hardwood-veneered plywood or economical, paint-grade plywood. Whichever material you choose, the design features an adjustable shelf in the centre, with space for all your electronic add-ons and accessories and room for DVDs or whatever else you want to display.



“Door stiles and rails are almost always made from solid wood. That said, I thought it would be a great idea to make them from the same sheet of plywood as the rest of the cabinet”

LOW-PROFILE YET complete, this refined design uses crisp workmanship and tasteful details to create a beautiful focus for home entertainment

I started this project with a single 4x8 sheet of cabinet-grade plywood with quartersawn, red-oak veneer applied at the factory. This gives a stunning ray-fleck pattern similar to quartersawn white oak but finer. Unlike for other projects, even these doors are made from the same sheet of plywood. I also used $\frac{3}{8}$ "-thick plywood for the back panels. Since these panels are painted, even particleboard or MDF will work just as well.

As you'll soon see, one of the unusual construction techniques here involves the way I joined the veneered plywood in the corners. Beyond that, you'll also need to make clean, accurate cuts with crisp joinery and square assembly.

BEGIN WITH THE BOX

Start with some careful planning and an accurate layout to get the best-looking results from your sheet of plywood. Cut the top, bottom and two sides to the measurements specified in the materials list. A few raw plywood edges need to be capped with solid stock, so it's a good idea to make all the edging strips you'll need at once. These strips should be $\frac{5}{16}$ " thick x $\frac{3}{4}$ " wide. You'll need about 10' of strip material in all.

Cut four pieces of edging strip to $15\frac{3}{4}$ " lengths, then glue and clamp one to each end of the top and bottom plywood parts. This should make the top and bottom exactly 60" long—the full width of the cabinet. If you don't have enough clamps to tackle this job, apply glue to the plywood edges, then use masking tape every 2" to hold the strips. After the glue has dried, scrape away any excess glue and check that the strips are flush with the ply.

Finish-sand the inside surfaces of all four parts and then place the top and bottom parts on your bench, with the inside surfaces facing up. Measure and mark 15" from each end, then use a square and a sharp pencil to scribe two lines across the surface. These will mark the placement of the cabinet partitions.

Now rout the edges of the plywood parts for the joinery. I used a table-mounted router with a featherboard and a 1"-diameter straight bit and fence for this work. First, rout the inside surfaces of the top and bottom ends to create a $\frac{7}{16}$ " deep x $\frac{3}{4}$ " wide rabbet at each corner of the cabinet.

PHOTOGRAPHY: FELIX WEDGWOOD



GROOVED FACE frames add important visual interest and extra thickness to the front edge of the cabinet body



BLACK PAINT makes these simple, shop-built door pulls stand out as important design elements



JUST FOR looks, both base blocks are made from veneered ply and solid edging to create a 1"-thick design element

Note that after routing, the ends of these parts will end up covered with $\frac{5}{16}$ " x $\frac{5}{16}$ " solid wood strips.

Next, rout a $\frac{3}{8}$ "-wide x $\frac{7}{16}$ "-deep rabbet on the inside edges of all four plywood parts to accommodate the $\frac{3}{8}$ "-thick cabinet back panels.

Now it's time to glue and clamp the top and bottom to the sides to

You Will Need

FOR THE MAIN BODY	MATERIAL	SIZE (T x W x L ^{**})	QTY.
Top and bottom	oak ply	3/4" x 15 3/4" x 59 3/8"	2
Sides	oak ply	3/4" x 15 3/4" x 13 3/8"	2
Edging strip	oak	5/16" x 3/4" x 120"***	1
Side back panels	birch ply	3/8" x 13 3/8" x 15 3/16"	2
Centre back panel	birch ply	3/8" x 13 3/8" x 29"	1
Partition	oak ply	3/4" x 14 5/16" x 12 1/2"	2
Long face frame parts	oak	5/8" x 1 1/4" x 60"	2
Short face frame parts	oak	5/8" x 1 1/4" x 14"	2
Door guides	oak	1/2" x 3/4" x 58 1/2"	2
Fill strips	oak	1/2" x 3/4" x 11 1/2"	2
Shelf	oak ply	3/4" x 14 5/16" x 28 3/8"	1
FOR THE DOORS			
Rails	oak ply	3/4" x 2 3/8" x 14 3/4"	4
Stiles	oak ply	3/4" x 1 3/4" x 6 5/16"	4
Door edging strip	oak	1/8" x 3/4" x 168"***	1
Moulding	maple	5/16" x 5/16" x 72"***	1
Door pulls	maple	5/8" x 3/4" x 2"	2
Glass	tinted	3mm x 6 5/8" x 11 1/2"	2
Sliding-door hardware	Lee Valley#00B10.26		2
FOR THE CABINET BASE			
Long inner base	pine	3/4" x 4" x 56 1/2"	1
Short inner base	pine	3/4" x 4" x 13"	2
Outer base sides	oak ply	3/4" x 4" x 13 3/4"	2
Outer base front	oak ply	3/4" x 4" x 57 3/8"	1
Base end edging strips	oak	5/16" x 3/4" x 4"	2
Block fronts	oak ply	3/4" x 4" x 5 3/8"	2
Block edge caps	oak	5/16" x 3/4" x 4"	4
Block sides	oak ply	3/4" x 4" x 11 1/16"	4
Block fillers	plywood	1/4" x 4" x 4 1/2"	2

**Length indicates grain direction



RECOMMENDED TOOLS

Tablesaw, table-mounted router, biscuit joiner, chisel, drillpress, clamps

create the four-sided box of the cabinet. To avoid any panic during this operation, I glue and clamp joints such as this one at a time. Just make sure each corner joint is square before setting it aside to dry.

Cut and dry-fit the three panels for the back, drilling a few holes in the centre back panel for ventilation. Tape the panels in place for now.

Next, prepare the partitions, but don't install them yet. Glue edging strips to their front edges, then sand the surfaces. Measure 4" up from the bottom edge and drill shelf-pin holes 1" apart, 1 1/2" in from the front and rear edges (six holes per column). As you work, make sure to drill the holes so you get one left- and one right-hand partition.

Continue with the face frame parts, cutting them to width but an inch or two longer than listed. Set your tablesaw to cut 1/4" from the fence 1/8" deep, then make a kerf 1/4" in from the inside edges of each frame part on the front face along the entire length of each one. This bit of visual embellishment adds a lot to the look of the project. Mitre the ends of the face-frame parts, then glue and clamp them to the front edges of the cabinet, with the outside edges flush.

Cut the door guides and fill the strips to size now. These strips are applied around the inside perimeter of the cabinet, directly behind the face frame.

Before installing the door guides, cut a 1/8"-wide x 1/4"-deep dado along

→ PLANS FOR THE MODERN TV STAND

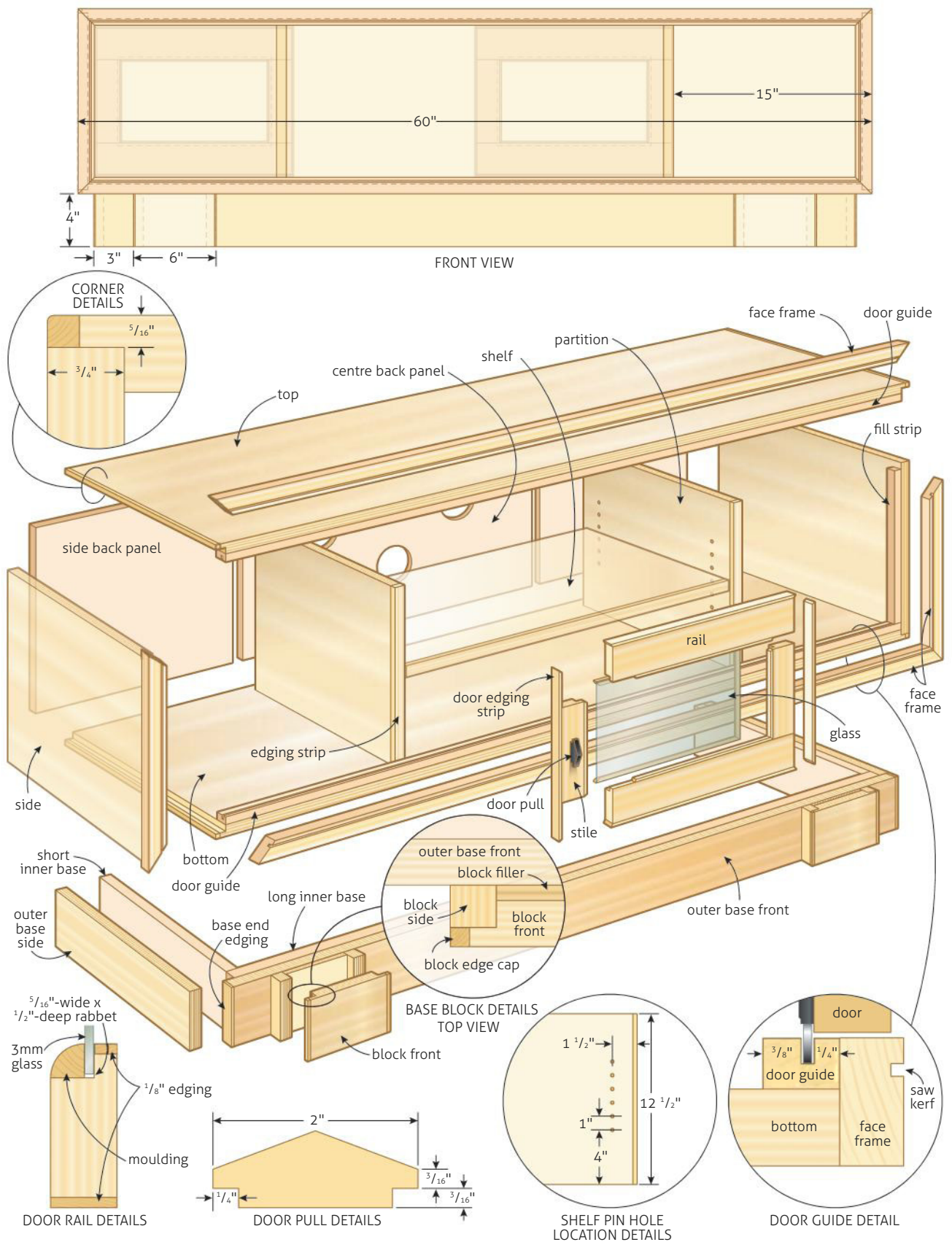


ILLUSTRATION: LEN CHURCHILL



ROLLER HARDWARE allows the doors to slide easily from side to side. Moulding securing the door glass is painted black

their exposed faces. These dados create tracks for the sliding doors and they need to be cut $\frac{3}{8}$ " in from the rear edge. With the dados cut, glue the door guides to the top and bottom and the ungrooved fill strips to the cabinet sides.

Remove the back panels, slide the partitions in from the back and line them up with the previously marked lines. There should be $28\frac{1}{2}$ " between the partitions. Ensure the parts are oriented so the shelf-pin holes line up with and are facing each other. Use three counterbored 2" screws to secure each joint, driven from the cabinet top and bottom into the partition edges. Fill the holes with tapered plugs, then pare the plugs flush.

Cut the shelf to size and add an edging strip to its front edge. Finally, finish up the box with a $\frac{3}{32}$ "-radius roundover bit to ease the sharp edges of the cabinet before a final sanding.

THE DOOR DILEMMA

Door stiles and rails are almost always made from solid wood, but I thought it would be a great idea to make them from the same sheet of plywood as the rest of the cabinet. As it turns out, it would have been so much quicker just to make door parts from solid oak; but there are advantages to the plywood option. I already had the wood, the grain matches, and the stain and finish will take on the exact appearance of the cabinet shell. Plywood door parts also remain stable over time, so the sliding doors are more likely to keep sliding nicely. Each finished

sliding door needs to measure $\frac{3}{4}$ " thick x $11\frac{5}{16}$ " high x 15" wide.

Cut the rails and stiles to size. I used double #20 biscuits to join these parts, chiselling away any protruding biscuit parts. After that comes the solid-wood edging to hide the plywood laminations. For this application, I cut and used $\frac{1}{8}$ "-thick x $\frac{3}{4}$ "-wide oak edging strips. Scrape away excess glue, then rout the rear inside edges of the door openings to create a $\frac{5}{16}$ "-wide x $\frac{1}{2}$ "-deep rabbet for the glass. Prep the quarter-round moulding that holds the glass in the doors, but don't install the glass until the door frames are finished.

Make the door pulls from $\frac{5}{8}$ "-thick maple, then paint them; I went with black. Install the sliding-door hardware and give the doors a test run. Tweak as necessary for a smooth sliding action, then remove the hardware until finishing operations are complete.

ADD THE BASE

Begin by building a three-piece inner framework. Since these parts won't be seen, they can be crafted from any type of solid wood. I used standard $\frac{3}{4}$ "-thick pine. Cut the three inner base parts to size, then assemble them using two screws per butt joint. Attach one end of the short inner base parts to the rear surface of the long inner base, creating a U-shaped assembly that's $13\frac{3}{4}$ " wide x $56\frac{1}{2}$ " long.

Cut the outer base front to size, cap the raw plywood ends with $\frac{5}{16}$ "

x $\frac{3}{4}$ " x 4" solid-wood strips, then attach this part to the front of the inner base structure before adding the outer base sides. This approach makes a double-layer base structure that measures $1\frac{1}{2}$ " thick.

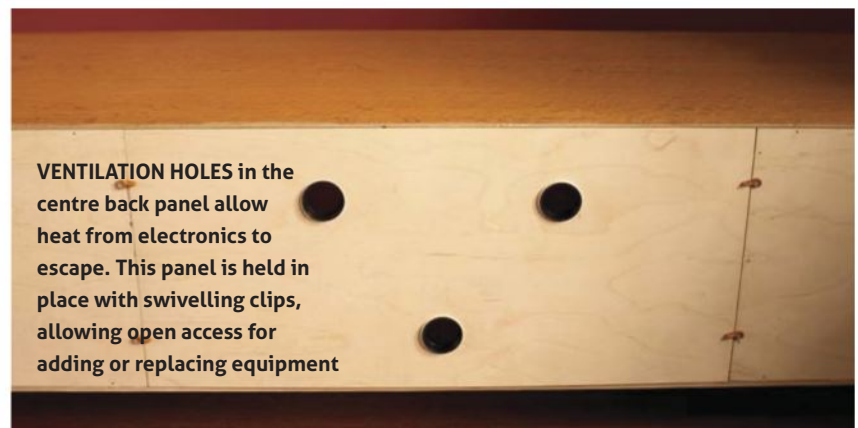
The only thing left to do is to make the decorative base blocks. Cut the block fronts to size and cap them with solid wood. Rout a rabbet in each rear face to accept the block sides, then cut a $\frac{1}{4}$ "-thick filler piece for each block. The block assemblies measure a full 1" thick when all parts are together. Glue and clamp each block to the base, 3" in from each corner.

Finally, centre the completed base unit on the underside of the cabinet, with the rear ends of the base flush with the cabinet back. Use glue and clamps to hold it solid until the glue dries.

FINISHING UP

I finished the cabinet, base and doors with Minwax Puritan Pine stain, followed by three coats of semi-gloss polyurethane. I also painted the inside surfaces of the back panels satin black. The two smaller side back panels get nailed in place, while the centre section remains removable, held in place with retaining clips to allow access for installing equipment.

Set the door glass in place, then attach the sliding-door hardware and you are done. Hook up your entertainment gear, grab the remote and enjoy more than just a screen for years to come. 



VENTILATION HOLES in the centre back panel allow heat from electronics to escape. This panel is held in place with swivelling clips, allowing open access for adding or replacing equipment



WHERE ENGINEERING *Meets Artistry*



Tyler Florence, Culinary Artist

— and —

*Lisa Switkin, NYC High Line Designer
Landscape Architect*

Watch them talk form and function on Trex.com

When engineering meets artistry,
deck frames become steel.

Trex Elevations® steel framing is a powerful support for the beauty above, and delivers everything wood can't — unmatched design flexibility, stronger, safer structure, a flatter decking surface, and fewer posts for better views. And only Trex has it.

Special Financing Available

Subject to credit approval.

Minimum monthly payments required.

See Trex.com for details.



©2013 Trex Company, Inc.

Crush It!

Squash recycling chores with this pneumatic can crusher BY RYAN SHERVILL

THIS WAS ONE of those projects that reminded me why I love spending time in my workshop—sheer joy. I built this project because it was fun and it allowed me to explore pneumatics while reducing the space our household recycling takes up. Having never built with pneumatics before, I found them both incredibly useful and easy to work with. • This project began with a chance sighting of a pneumatic cylinder on sale. I saw it shortly after looking at a hand-operated can crusher, and a light bulb went off. Could a durable aluminum crusher be built from wood? After a couple of prototypes, I came up with this plan. Get ready to crush.

START WITH THE SIDES

These are the most complex parts of the project because they require the dados to be machined precisely. Start by ripping and cross cutting the two side pieces from $\frac{1}{2}$ "-thick Baltic birch plywood, cutting each piece to $3\frac{1}{2}$ " wide x 19" long. Nothing else quite equals the strength and density of Baltic birch, so don't substitute.

Next, install a $\frac{1}{4}$ "-wide dado blade in your tablesaw, then raise the teeth to $\frac{1}{4}$ " above the table. Set the fence $\frac{3}{8}$ " away from the blade and cut a dado parallel to each long edge on the inside face of both sides. These dados will house the $\frac{1}{4}$ "-diameter threaded tension rods that hold the whole crusher assembly together.

Next, machine a $\frac{1}{2}$ "-wide x $\frac{1}{4}$ "-deep dado across each side member, which will later accept the centre baffle for mounting the pneumatic cylinder. Carefully mark the location for these dados $10\frac{5}{8}$ " from one end of each side, as measured from the cylinder end. Cut your dados with several passes over the dado blade, then check for fit and adjust as required. Finally, cut a 1"-deep x $1\frac{3}{4}$ "-wide notch in the end of one side member in the cylinder end, using a handsaw and a chisel. This notch will allow access to the air valve after assembly and also serves as an exhaust port for the model of valve I used.

MAKING THE CENTRE BAFFLE

This baffle holds the air cylinder in place and is made with $\frac{1}{2}$ "-thick Baltic birch ply cut to a final size of 3" wide x $3\frac{1}{2}$ " long. Mark and drill a $1\frac{1}{2}$ "-diameter hole in the centre of the baffle, using a Forstner bit, to accommodate the shaft that extends and retracts from the air cylinder. Next, mark locations for the four $\frac{3}{8}$ "-diameter mounting bolt holes and drill them. Finish up by cutting $\frac{1}{4}$ " x $\frac{1}{4}$ " notches in the corners of the baffle to allow the threaded rods to pass through.

THE BOTTOM, END CAPS AND SACRIFICIAL PLATEN

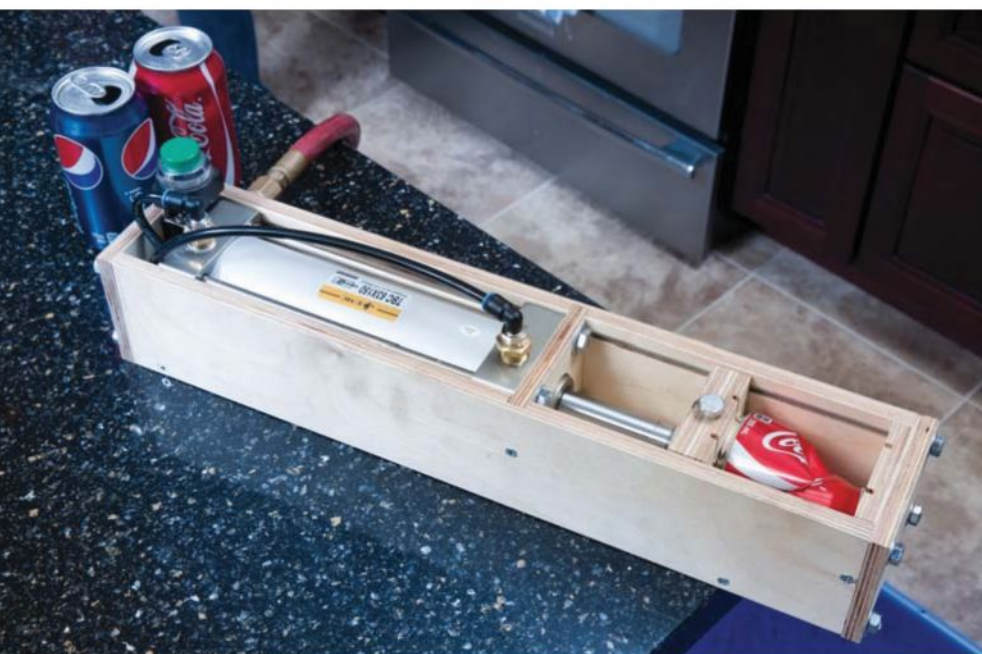
Cut the bottom piece to 3" wide x $16\frac{1}{2}$ " long and the two end caps to $3\frac{1}{2}$ " wide x 4" long. Then, drill four $\frac{1}{4}$ "-diameter holes in the end caps to accept the tension rods. Next, cut a sacrificial platen for the cans to mash against at the end



PHOTOGRAPHY: DAVE STARRETT



“With the cylinder in place, it’s time to install the air lines. Thanks to “push-lock” fittings, this couldn’t be easier”



A WORD ON FITTING SIZES

PNEUMATIC FITTINGS come in many sizes, and determining which size you need can be more confusing than you’d expect. Why? Because fitting sizes never measure what you think they would. Let me explain: when you see a fitting in the store labelled, for example, “1/4” NPT”, the NPT stands for “national pipe taper,” which is the universal thread type for air fittings. The confusing part is with the 1/4”, as a 1/4” fitting actually measures slightly more than 1/2” in diameter. A 1/8” NPT fitting? Its diameter is actually closer to 5/16”! So, choose your components based on the printed size rather than measuring the diameter of the fitting to save a lot of return trips to the store.



AIR PRESSURE makes quick—and fun—work of the can-crushing chore. Air pressure operates the ram (top), reducing the can to a small metal pancake ready to drop into the recycling bin (below)

of the crusher. Making this platen a separate, replaceable component means it can be replaced easily later, when it eventually wears out—same for the ram head. The sacrificial platen measures 3" wide x 3½" long and has two ⅛" x ⅛" vertical dados cut in the inward face (to prevent air being locked in the can when it's crushed). The ram head also is grooved and made of two layers of ply, 2⅞" x 2⅞" square, glued together.

To keep the plywood ram head in place while also allowing it to be easily removed and replaced, I mounted it with a jam-style bolt rather than attaching the ram head directly onto the end of the pneumatic cylinder, as is usually done with pneumatics. To make this anchoring system work, drill a ⅝"-diameter hole centred in the cylinder-facing face of the ram head so it will slip over the shaft of the cylinder. Remember that the ram head is a double-thickness of ½"-thick ply, so bore only a little more than halfway through.

Next, drill another hole down through the top edge of the plywood ram head, centred so it just intersects with the first hole, using a 2⅞"-diameter bit. Why this size of bit? It's the perfect size to cut threads for a ⅝"-diameter x 1¼"-long lock bolt. Start the bolt into the hole by hand, then work it in with a ratchet. The bolt will cut its own threads into the plywood, allowing you to attach the ram head securely in place on the cylinder shaft.

ASSEMBLY LINE

Now, the fun part—putting it all together. Begin by gluing the centre baffle into the vertical dados in the side pieces, keeping the baffle flush at the top. Then, install the pneumatic cylinder using four ¾"-long x 10mm bolts and washers. Install the bottom panel now, keeping it flush to the end cap at the cylinder end. The gap at the other end will allow crushed cans to fall into a recycling bin. Attach the bottom with a few #8 x 1"-

You Will Need

FOR THE BODY	MATERIAL	SIZE (T x W x L)	QTY.
Sides		1/2" x 3 1/2" X 19"	2
End caps		1/2" x 3 1/2" x 4"	2
Centre baffle		1/2" x 3" x 3 1/2"	1
Bottom		1/2" x 3" x 16 1/2"	1
Ram head layers		1/2" x 2 7/8" x 2 7/8"	2
Sacrificial platen		1/2" x 3" x 3 1/2"	1

All body parts are made of Baltic birch plywood

FOR THE PNEUMATICS

Cylinder	Princess Auto #8188310	63mm x 150mm	1
Control valve	Princess Auto #8190472		1
Push-lock fitting		1/8"-dia. x 90° male	3
Push-lock fitting		1/8"-dia. male straight	1
Quick-release fitting		1/4"-dia. male*	1
Reducer bushings		1/4" to 1/8"-dia.	2
Pneumatic flex line		1/4"-dia. (outside) x 18"-long	1
Teflon tape			

*Most workshop compressors use Type M

MISCELLANEOUS HARDWARE

Threaded rod		1/4"-dia. x 20 3/4" long	4
Self-locking nuts/washers		1/4"-dia.	8
Bolts/washers		10mm-dia. x 3/4"-long	4
Bolt		5/16"-dia. x 1 1/4"	1



RECOMMENDED TOOLS

Tablesaw, drill, handsaw, chisel, utility knife, wrenches

long screws driven into predrilled countersunk holes in the sides.

With the basic assembly done, insert the four lengths of threaded rod into the horizontal dados you milled earlier into the sides and leave them protruding at each end. The end caps then slide over these rods, held in place with self-locking nuts and washers. Don't tighten these completely since you'll need some slack to install and connect the valve.

MAKING THE PNEUMATICS WORK

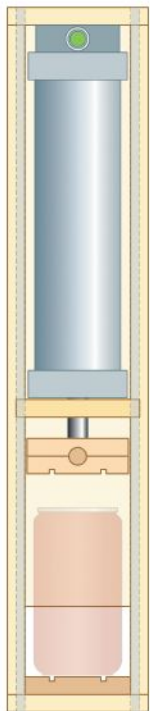
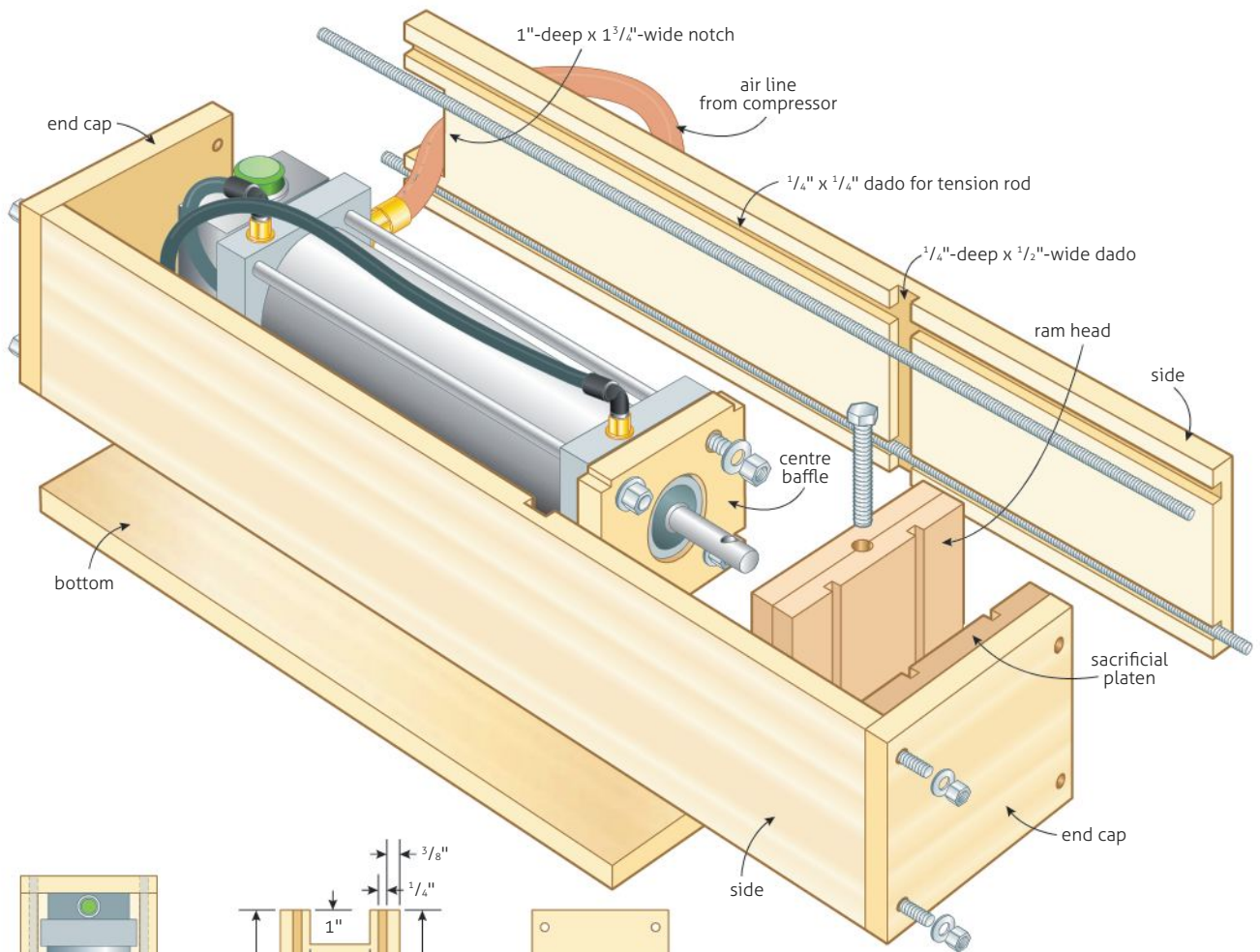
With the cylinder in place, install the air lines. Thanks to "push-lock" fittings, this couldn't be easier. The fitting at one end threads into the cylinder; at the other end, a leak-free seal is created around the plastic air line simply by pushing the line into place. Don't forget to seal the threads before tightening the fittings into the air cylinder. Use Teflon tape or liquid automotive thread sealant on the threads before assembly. Threads alone are never airtight, so they will

leak if they're connected without some kind of sealant.

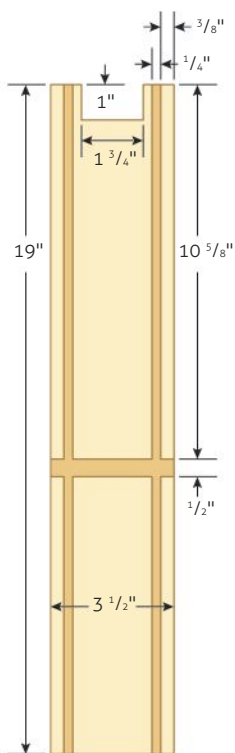
To connect the valve, begin by tightening a ⅛"-diameter straight push-lock fitting into the bottom hole, a ⅛"-diameter x 90° fitting in the upper hole and a male ¼"-diameter quick-release air line fitting in the hole on the other side of the valve body. This last fitting is the same kind that's typically found on air nailers. Ignore the small holes in the valve on either side of the ¼"-diameter fitting. These are simply exhaust ports that allow air to escape.

Slide short pieces of ¼"-diameter air line into the push-lock fittings, making each piece about 10" long or so. (You'll trim these later.) Next, insert the valve body into the crusher behind the cylinder with the quick-release fitting sticking out through the notch in the side pieces. The valve body is held in place by friction only; so, at this point, snug up the nuts on the threaded rods to ensure the valve doesn't move. If there's some movement of the valve,

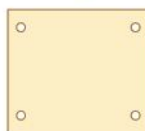
→ PLANS FOR THE CAN CRUSHER



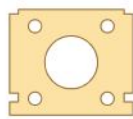
FRONT VIEW



SIDE DADO
DETAILS



END CAP



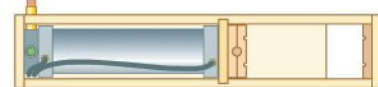
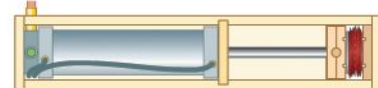
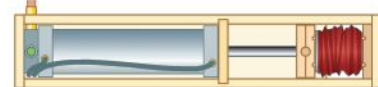
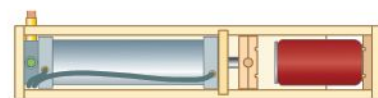
CENTRE BAFFLE



RAM HEAD



SACRIFICIAL PLATEN



CRUSHING SEQUENCE



A QUICK-RELEASE fitting and hose delivers air to the crusher, just like for any other pneumatic tool. The green button on top controls a valve that drives the cylinder to open and close

SEALING THREADS 101

WHEN IT COMES to pneumatics, an air-tight seal is of paramount importance. Leaks can lead to reduced performance of your assemblies, excessive compressor wear and, of course, the annoying hiss of escaping air. Since the most common source of air leakage is a threaded joint, whenever you are using a threaded connection, it's always a good idea to use a sealing product to keep the air inside the lines where it belongs.

When it comes to sealing threads, there is a plethora of products available that will do the job, but determining the correct product for your application can be challenging. All thread sealants do essentially the same thing: they fill the tiny spaces left between the threads when a connection is made.

For non-critical applications, such as for this can crusher, the most common types of products fall into one of two categories: liquid sealants or Teflon tape. Liquid sealants (such as Loctite 545) work by coating the threads and then curing them in place. These products work very well but can be messy. For my can crusher, I chose to use Teflon tape. It's easy to use (just wrap a few layers around the male threaded piece), clean and inexpensive. Teflon tape is slightly more prone to improper sealing, however, so check connections for leaks after assembly.

add a thin piece of wood or rubber behind the valve body.

Now, it's time to attach the air lines to the cylinder. Since this particular cylinder uses $\frac{1}{4}$ " ports, you first need to install reducer bushings into the threaded holes. Once these are in place, install the $90^\circ \times \frac{1}{8}$ "-diameter push-lock fittings and fasten the lines.

The line coming off the bottom hole of the valve goes to the far end of the cylinder. This is the return side that causes the ram to retract and open the crusher.

The line coming off of the upper hole in the valve goes into the hole closest to the valve. This line provides pressurized air that causes the ram to move forward and crush the can.

With the plumbing done, secure the sacrificial platen inside the opposite end of the crusher. Use a couple of screws, then secure the ram head in place by sliding it over the threaded portion of the ram and tightening the $\frac{5}{16}$ "-diameter bolt so it bottoms out against the shaft of the ram, holding everything in position.

CRUSHER OPERATION

The valve I used is a two-way valve, which means it controls both the forward and backward action of the air cylinder. As soon as the compressed air is hooked up to the valve, it automatically pushes air into the front of the cylinder, forcing the ram back and opening the crusher fully for loading. When the green button on the valve is pressed,

it both diverts the air into the opposite end of the cylinder, forcing the ram forward to crush the can, and exhausts the air that previously was holding the ram back.

Keep everything clear, then push the button to see that the ram moves all the way forward and then returns all the way back smoothly without load.

Assuming all is well, it's time to try a can. Keeping your hands away from the button, drop a can in place in front of the ram. Once your hands are completely away from the crush zone, push the button. The ram should travel forward, crushing the can against the sacrificial platen. When you release the button, the ram will retract, allowing the flattened can to fall through the slot in the bottom of the crusher and into the recycling bin below. It's slick and fun.

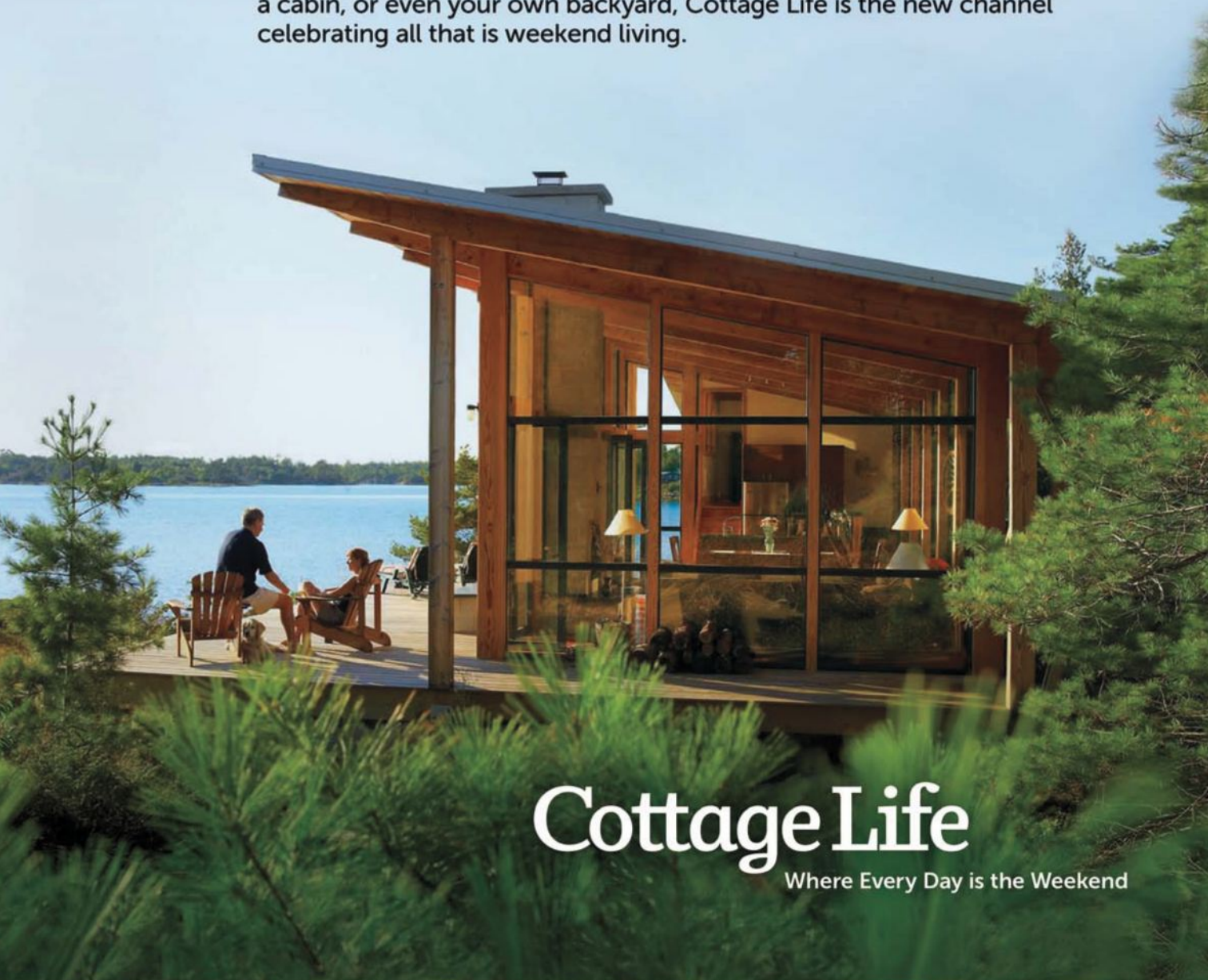
A word of warning: this crusher should be built and used at your own risk. At normal compressor ranges of 70 to 90 psi, this crusher produces 300-plus pounds of force at the ram head, both forward and backward. That's why it is imperative that you ensure there are no body parts or obstructions in the ram's path. And, although it should go without saying, this can crusher should be used only by adults. Keep the air line disconnected between uses.

If your house is anything like mine, you'll have no trouble finding responsible people more than happy to have fun crushing cans the easy way. 🍻

THE WEEKEND NEVER ENDS

COTTAGE LIFE
NEW TV CHANNEL
NOW IN FREE PREVIEW

Cottage Life - it's not just a place, it's a frame of mind. Call it a cottage, a cabin, or even your own backyard, Cottage Life is the new channel celebrating all that is weekend living.



Cottage Life

Where Every Day is the Weekend

DIY+DESIGN

OUTDOOR LIVING

FOOD+ENTERTAINING

REAL ESTATE



Kitchen Makeover

A fast and budget-conscious facelift BY MICHEL ROY

IN THE BEAUTY world, it's called a facelift. In the realm of home renovations, it's called a "refacing"—and it's the fastest, most cost-effective way to transform the look of your kitchen. What constitutes a refacing? Typically, new cabinet doors with a matching finish on the visible cabinetry. And while stain-grade wooden doors with matching veneer are OK, nothing beats fresh paint when it comes to ease and cost. But what if the doors need replacing?

Many home workshopers are perfectly capable of building a kitchen full of wooden doors. The problem? Time and money. That's where MDF comes in; I made 23 cabinet doors and drawer faces in a single day, all for a mere \$100. I built them using a few workshop-standard tools, such as a tablesaw and a table-mounted router. Admittedly, these cabinets won't last forever, but with a durable melamine paint finish, these doors are set for some serious kitchen abuse.

Here's how to bang out some simple Shaker-style doors for your own quick-fix kitchen reno.

Begin by measuring the existing cabinet doors. Because I intended

to remount the new doors in the same locations as the existing ones, using the same type of hardware, I could make the new doors the exact dimensions of the old. If you're planning to use different hardware, such as European-style hinges, you will need to account for a slightly modified door overlay, and alter the door sizes accordingly.

Next, cut out rectangles of $\frac{1}{4}$ "-thick MDF to match the doors' full-size face dimensions. Then, for each face panel, cut a slightly oversized $\frac{1}{2}$ "-thick MDF back panel. Just add an inch to the length and width of each back panel. You'll trim the back panels later. You just need enough overlap to make the lamination step quick and easy.



I USED the existing door measurements to build my new ones, making sure to incorporate the hinges into the design

after

IN ADDITION to the cabinet doors, this budget-conscious makeover included new laminate slate flooring, a new laminate countertop, sink, faucet and a simple subway-tile backsplash. All combined the kitchen has an updated new look that didn't break the bank

PHOTOGRAPHY: LYLE STAFFORD



CUTTING ACCURATELY sized cabinets demands slow but deliberate work at the tablesaw. Go slow and make sure everything's aligned; otherwise, it won't fit properly



A BASIC 1/4" spiral bit installed in a table-mounted router gets the crisp profile needed here



MAKE SURE you have your fence lined up properly, with the starting and stopping points marked clearly on the MDF

Cut out the centre portion of the face panel with a 1/4" spiral bit chucked into a table-mounted router. Adjust the protrusion of the bit so it passes through the MDF only slightly. Set the fence so that the distance from the inside of the bit to the fence equals the width of the rails and stiles you want—in this case, 2 1/2". With a pencil, draw your starting and finishing lines by marking the same distance on the fence in front of and behind the bit.

With the router running and one side edge of the face panel resting on

the table, register the panel against the fence, then plunge the panel onto the bit. Start the cuts slightly ahead of the starting mark and stop a little before the stopping mark. The subsequent cuts will dial in the corners. Pivot the panel straight up when lifting off at the end of a cut. Repeat this process for all four sides of the panel to create a rectangle with 1/4"-radius inside corners.

After touching up the inside edges of the dados with 200-grit sandpaper, it's time to glue the faces to the backs. Apply a liberal amount of glue to the TK panel; white wood glue will work, but



THE BEST way to cut through MDF is to take several passes rather than one single, long cut

cold-press laminating adhesive works best for MDF. A roller bottle makes for speedy and even application.

Flip the face panel onto its matching back panel (making sure that the back panel overlaps on all four sides) and give it a roll with a J-roller or, if you can get away with it, a kitchen rolling pin. You're aiming for a solid glue joint all over



WHEN APPLYING glue, use cold-press laminating adhesive applied with a small roller



MUCH OF the work in this kitchen reno came down to two things: Careful measurement and basic workshop skills

but almost no squeeze-out. Getting the face panel perfectly centred isn't necessary, as the overlap will be cut off later.

To clamp, lay the door on a flat surface, cover with a sturdy



TO GET a solid glue bond, use a J-roller or, if you're in a bind, a kitchen rolling pin



BASIC BUCKETS filled with water provide the best clamping pressure for projects such as these

spare panel and top with some heavy weights. I use buckets of water, which I can empty for easy storage; but a few masonry blocks or buckets of sand also will work. Successive doors can be laid right on top of the previous one, like a stack of pancakes.

Once the glue has set, rip off the extra bit of back panel around each door using your tablesaw. Clamp a 1"-thick auxiliary spacer to the fence so that it's suspended just a smidgen above the $\frac{1}{2}$ " thickness of the back panel. Slide this fence to overhang the blade until the outside edge of the teeth align with the outside edge of the auxiliary fence.

Now, it's a simple matter of running the doors through the saw. With the edge of the face panel registered against the fence, you'll get a perfectly flush cut. Don't let the little strips build up beneath your auxiliary fence. After each

WHY TEAR IT OUT WHEN YOU CAN FIX IT UP?

TEN YEARS AGO, my first project for *Canadian Home Workshop* was a budget-friendly kitchen renovation for a Toronto client. Her 1980s kitchen featured melamine-faced doors with integral oak pulls and surface-mounted hinges. I jazzed things up with new painted doors hung on European-style hinges and a few extra upgrades. A decade later, I set out to tackle another similar, inexpensive kitchen renovation—my own.

The dated kitchen in our New Westminster, B.C., house was showing its age. The flooring was torn, the cabinet doors were chipped and the pink laminate countertops with the matching pink backsplash tile never seemed to come back in style. To top it off, we had a portable dishwasher that was as loud as a truck and steamed up the windows when it drained. Something had to be done. But there were other problems that needed rectifying before I could begin our dream kitchen.

Where to start? The floor joists needed levelling, the wiring needed an upgrade and I had to install heating registers. Oh, and the windows and doors all had to be moved or resized. There also was the matter of the custom cabinetry I wanted to build. Then, there was the time and money required to facilitate all of this. Small job? Hardly.

And then I remembered that old Toronto reno. For the time being, I wanted to see what I could do with around \$1,000 and a few weekends of work—just a "sprucing up" until I could get around to the real thing.

To that end, I laid a quick laminate "slate" floor, replaced the countertop and installed a new sink and faucet. I also got rid of the pink with a newly tiled backsplash. I installed an undercounter dishwasher, replaced the trim and built some super-simple MDF doors hung with new hinges. The kitchen is not much more functional than before, but it's brighter, quieter and more pleasing to look at—and we won't lament much when the time finally comes for all of it to get gutted to the studs. —M.R.



BY CLAMPING a spacer onto your tablesaw fence, you're ensuring a perfect cut every time for each door

couple of passes, stop the saw and remove them.

Now, it's time to paint; but before you do, make sure you seal any sanded edges. Otherwise, the cut MDF will soak up the finish differently from the uncut faces. You can smear on spackle or even drywall compound, or paint on thinned glue. I like to hit the cut edges of MDF with some Kilz Original primer from a spray can—it's fast, you can sand between applications and two coats normally do the trick.

To affix the doors using European-style hinges, install the hinges to the cabinets first. Then, clamp a registration board to the bottom shelf of the cabinet (or sometimes to the face frame



BEFORE PAINTING, make sure you seal off any sanded edges first; otherwise, the finish will look amateurish



NOW FOR the easy part. Because I was simply replacing the doors, the existing cabinetry required only a repaint. Then, it was a simple matter of installing the new doors and hinges

across the top of the cabinets). The registration board should keep all the doors aligned across their bottoms. While holding the doors up against the side of the cabinet

on which the hinges will be affixed and resting against the registration board, drill through the hinge backs with a self-centring bit. Attach each hinge with just one screw first,

then check the alignment. Then, if everything looks good, finish up by predrilling and screwing in the rest of the hinge holes. No. 6 x $\frac{5}{8}$ "-long screws hold well in MDF. ▣

CANADIAN Home Workshop
THE DO-IT-YOURSELF MAGAZINE

T-SHIRT \$15.95
HARD-WON WISDOM RULE #54
MEASURE TWICE, CUT ONCE

got wood?

TO-DO LIST \$3.95
Honey-Do List

CAP \$15.95
CAP ALSO AVAILABLE IN BROWN AND STONE

APRON \$19.95

FRONT
BACK

Put your wood to good use, visit canadianhomeworkshop.com

SPEND \$25 AND WE'LL THROW IN A HONEY-DO LIST TO KEEP YOU ORGANIZED!

TO ORDER, contact
store@canadianhomeworkshop.com
or call 416-599-2000 extension 0

SUBSCRIBE *and* SAVE

Get over 30 detailed project plans every year!



Get Canada's finest do-it-yourself magazine – issue after issue of top-notch projects and how-to articles delivered to your home at a substantial savings off the newsstand price.

You won't want to miss out on any of these features:

- **DIY ARTICLES** that will save you thousands of dollars
- **THE ANNUAL DECK ISSUE** – How to build from the ground up
- **TIPS, TOOL TESTS & TECHNIQUES** to help you master your next project
- **WOODWORKING PLANS** for every style and skill level
- **IN EVERY ISSUE**, a project that you can build this weekend

Get your hands on all this – at great savings – just by mailing in this coupon TODAY!

SUBSCRIBE **NOW** *and* **SAVE UP TO 44%**

☐ 2 years for only \$40 **BEST DEAL – SAVE OVER \$30***

☐ 1 year for only \$24

NAME

ADDRESS

CITY PROVINCE POSTAL CODE

☐ CHEQUE ENCLOSED OR CHARGE MY: ☐ VISA ☐ MASTERCARD ☐ AMEX
☐ BILL ME LATER

CARD#

EXPIRY DATE

SIGNATURE

Mail to: Canadian Home Workshop, P.O. Box 715, Markham, ON L3P 7V1

Plus tax: 15% in NS • 14% in PEI • 13% in NL,
NB, ON • 12% in BC, MB • 5% elsewhere in Canada
*Savings based on \$5.95 cover price.
U.S. orders add \$15, other countries add \$45 per year.
If you prefer not to receive product mailings from us,
or other reputable companies, please check here ☐



IPGAW13E



SILESTONE COUNTERTOPS

The lowdown: Let's face it, we all have dishcloths that probably are growing colonies of bacteria. Which means they're not really doing a great job of sanitizing your countertop when you're "cleaning." Part of Silestone's production process involves a special compression system that makes it almost impossible for fluids to penetrate the surface of your countertop, thereby keeping things truly clean.

PRICE: \$56-\$86/square foot

WEBSITE: silestone.com

What's Co

Six high-tech products for a new kitchen BY TARA NOLAN

THE BEST THING about a kitchen reno? Putting everything back together after you've cleared away all the dust and debris. And, if you're lucky, making room for some sparkly, new appliances. Here are a few that came across our radar (plus a no-fuss countertop material) because of their modern, unexpected features.



BOSCH 800 SERIES 24" BAR-HANDLE DISHWASHER

The lowdown: This dishwasher, the quietest in its class, features Bosch's AquaStop leak-protection system. If there happens to be a leak somewhere, the sensor system will shut off the dishwasher and pump water down the drain rather than all over your kitchen floor!

PRICE: \$1,200

WEBSITE: bosch-home.ca

SAMSUNG FOUR-DOOR FRENCH-DOOR REFRIGERATOR

The lowdown: There happens to be a lot going on with this "Cadillac" of the fridge world. For starters, there's the retractable shelf that allows you to add extra-tall items; and the special air-flow temperature control that prevents freezer burn. But we were drawn to the soda maker. Built-in carbonation means you can create your own sparkling water in seconds.

PRICE: \$4,600

WEBSITE: samsung.ca



okin'?

LG COUNTERTOP MICROWAVE WITH OVEN

The lowdown: No one here is telling you to bake a cake in a mug and then stick it in the microwave, like those '80s cookbooks recommended. This microwave actually comes with an oven attached to the base. Bake a small batch of cookies or a few rolls, or use the "auto pizza" feature, which will automatically adjust your cooking time if, say, you're cooking a fresh or a frozen pizza.

PRICE: \$300

WEBSITE: lg.ca



GE PROFILE SERIES INDUCTION RANGE

The lowdown: An induction cooktop is a great energy-efficient range option that uses an electromagnetic field to heat a pan or pot rather than using traditional gas or electric coils. Although you also might need to invest in some new pans—100 per cent copper or aluminum, or non-magnetic stainless-steel pans will not work. If a magnet sticks to your existing cookware, you're OK.

PRICE: \$3,300

WEBSITE: geappliances.com



MOEN'S SPOT-RESISTANT KITCHEN FAUCETS

The lowdown: A lot of homeowners want the stainless-steel look in the kitchen. But, as many of us know, it can be a challenge to keep such appliances fingerprint-free. Moen has developed a spot-resistant finish that repels fingerprints and waterspots. Find it on the newest collections and the Brantford (as shown).

PRICE: \$680

WEBSITE: moen.com



RENOVATION QUIZ

According to CMHC's most recent "Renovation and Purchase Survey," 1.7 million households across Canada, or 37 per cent of the country, performed some form of home renovation in 2011. In some cases, we're upgrading for the long term; we'd rather stay put than move. But for other people, a reno is all about upping resale value. Think you know which renos equal resale dollars? Take our quiz to find out.

1. In most cases, installing an in-ground pool won't increase your home's value, except for the following:

- If you live in a neighbourhood where pools are both common and desired.
- You add a water feature, such as waterfalls, or a slide.
- It's made from concrete, not vinyl.
- Both A and C.

2. In general, you can expect to recoup about two-thirds of the cost of the renovation when selling your home: True or False?

3. Gauge your renovation based on the value of your house. For example, a \$30,000 bathroom renovation will not reap its full potential in a \$250,000 house. True or False?

4. Renovating your kitchen and bathrooms is virtually guaranteed to raise your resale value, about two-thirds, or 75%. The next-best renos include:

- Painting your interior.
- Replacing your roof.
- Replacing your furnace.
- All of the above.

5. According to the Appraisal Institute of Canada, the best rule to follow when it comes to home-reno recoup is, Avoid projects that will drastically set your house apart from other homes in the neighbourhood. True or False? True or false?

ANSWERS: 1. D; 2. True; 3. True; 4. D; 5. True



TIGER FOAM inc. Canada

Air Sealant Foam Kits
Save BIG on heating and cooling costs
Easy to Apply, Quick to Dry. Tiger Foam Air Sealant Kits are quick curing, and Easy to Use.

Seal, insulate, weatherproof, or fill to add comfort to any space. Tiger Foam contains no dangerous chemicals, and meets EPA environmental standards.

To see what Tiger Foam can do for you, check out
www.tigerfoam.ca
1(888)-TigerFm / 1(888) 844-3736




**WHERE THE TRADES
BUY THEIR TOOLS!**
The right tool... the right price... the right place.

2 LOCATIONS
1104 Barton St. E.
905-545-5585
1361 Rymal Rd. E.
905-388-0784

ORDER ONLINE
BLADE SHARPENING
TOOL REPAIR
PRICE MATCH

Family-owned and operated • Established in 1979 • 1-866-462-TEGS • www.tegstools.com



**Build Your Own Space
A Handyman's Dream**



WORKSHOP EXTERIOR
WORKSHOP INTERIOR

**SAVE UP TO 45%
ON SELECT MODELS**

FREE Shipping*
Limited Time Offer
Call Today!

Call for your **FREE Brochure**
1-800-668-5111 ext 35
FUTURE BUILDINGS

**TO ADVERTISE
CONTACT
MYLÈNE TOMKIN**

416-599-2000 ext 273
mtomkin@canadianhomeworkshop.com

FAMILY OWNED AND OPERATED For over 160 Years

We specialize in
fine quality:

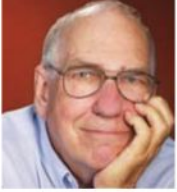
- Domestic Hardwoods
- Foreign Hardwoods
- Turning Stock/Pen Blanks
 - Plywoods
 - Pine/Fir/Hemlock
 - Red Cedar IPE/
 - Tigerwood Decking

CENTURY MILL LUMBER

UNCHANGED QUALITY SINCE 1851



3993 Stouffville Rd.,
Stouffville, ON L4A 7X5
Tel: 905-640-2350
Toll Free: 1-866-634-1851
www.centurymill.com



Then, there was the time I applied my salad technique to roofing



Half-baked **Projects**

How cooking and carpentry just don't mix

FOR YEARS, I have approached cooking and carpentry with the same plan of attack, believing that the style that works in the kitchen also will serve in the workshop. And for years, I have been wrong.

Consider my stew. I approach this dish with casual confidence. Dredge the meat, braise it, add minced carrots and celery, pour stock into the pot and mayhap some wine. No complicated measuring or weighing for me.

I once applied this stew system to a double-door closet I built in a bedroom. Admittedly, I had to measure; but once I got the space just about right, I framed it, knowing I could always shim to make the doors fit. So far, so good. Then came the drywall, which went up with one long gaping hole. No problem, I thought. Using the stew approach, I slathered the hole with drywall compound. Lots of it, mounding it up, knowing I could always sand it smooth.

I was wrong. It was like sanding the Rocky Mountains. We sold that house, and I think the current owners still are cursing my stew method of carpentry.

Then there was the time I applied my salad technique to roofing. I started making salads with lettuce, tomato and cucumber. Eventually, I got ambitious and added mushrooms and whatever else was in reach. Tasty.

With this in mind, I put on my multi-pocketed carpenter's apron and climbed the ladder. That's when

my system began to fail. I pulled a facing board and put the nails into whatever apron pocket I could reach. By the time I put on a new board, I was using whatever I could find in my apron. By the time I finished, I realized I was better at salads than roofs.

Finally, let me tell you about barbecues and tree felling. For barbecues, I have two approaches. With the first, I light four pieces of charcoal by hand, blow on them, slap steaks on the grill, clamp down the lid and sit back for two hours. In the second approach I use more charcoal, old painted boards and lawn sweepings. I slather this with fire starter, throw in a match and stick on the hamburgs. Pillars of fire shoot into the sky.

My barbecue style is diverse and dangerous, but it works. And this fashion has led to some adventures in tree felling, in which I used the casual barbecue approach. Notably, the time a neighbour asked me to help him take down a large twisted tree that overhung his cottage. He had three come-alongs pulling in different directions. Ropes so tight you could play "Danny Boy" on them.

"What do you think?" he asked as he handed me a giant chainsaw.

I handed it back. "I think I'm better at barbecuing," I said, and I went home and sacrificed more burgs. ■



**“MY GOLF GAME IS
DETERIORATING
QUITE NICELY.”**

**ANOTHER
VIAGRA
SUCCESS
STORY**



Ask your pharmacist for the original because if it doesn't say Pfizer, it's not VIAGRA®. Still available at a reduced price.

VIAGRA.ca

VIAGRA © Pfizer Products Inc., owner/Pfizer Canada Inc., Licensee. © 2013 Pfizer Canada Inc. Kirkland, Quebec H9J 2M5.

A TRUCK AS STRONG AS THE MAN WHO DRIVES IT.



ALL-NEW CHEVY SILVERADO THE MOST EFFICIENT V8 IN A PICKUP (8.7L/100 KM HWY*). EVEN MORE EFFICIENT THAN FORD'S F-150 ECOBOOST V6 (HWY). STRONG. FOR ALL THE ROADS AHEAD.

*2014 Silverado 1500 5.3L EcoTec3 V8 engine equipped with a 6-speed automatic transmission has a fuel-consumption rating of 13.0L/100 km city and 8.7L/100 km hwy (2WD) and 13.3L/100 km city and 9.0L/100 km hwy (4WD). Fuel consumption based on GM testing in accordance with approved Transport Canada test methods. Your actual fuel consumption may vary. Comparison based on wardsauto.com 2013 Large Pickup segment and latest competitive data available. Excludes other GM vehicles.

FIND NEW ROADS™

