

Make a
MAGIC CUBE

Eccentric
**PEDESTAL
BOWL**



50 HOT
PRODUCTS

CANADIAN **Woodworking** & HOME IMPROVEMENT

DEVELOP YOUR SKILLS • TOOL YOUR SHOP • BUILD YOUR DREAMS

DECEMBER/JANUARY 2017
ISSUE #105

Create a Custom **SMARTPHONE HOLDER**

p.54

**Level a
Problem Floor**

p.59

**Countertop
Material Options**

p.22

**Simple Gift Project:
Kids' Card Holders**

p.36

\$5.95

PUBLICATIONS MAIL REG NO.
40035186



CANADIANWOODWORKING.COM

TOP10: Hand Tools for Machine Enthusiasts



KING CANADA

SINGLE PLATFORM BATTERY SYSTEM

CONNECT1

TM / MC

20V MAX

20V MAX LITHIUM-ION CORDLESS TOOL SERIES

CORDLESS HAMMER DRILL

20V MAX Lithium-ion
Battery & Charger
Sold Separately

SDS+

8045L



CORDLESS 4 1/2" ANGLE GRINDER

20V MAX Lithium-ion
Battery & Charger
Sold Separately

8035L



CORDLESS OSCILLATING MULTI-TOOL

20V MAX Lithium-ion
Battery & Charger
Sold Separately

8040L



CORDLESS LED FLASHLIGHT

20V MAX Lithium-ion
Battery & Charger
Sold Separately

K-022LF



CORDLESS RECIPROCATING SAW

20V MAX Lithium-ion Battery & Charger
Sold Separately

8030L



CORDLESS 6 1/2" CIRCULAR SAW

20V MAX Lithium-ion
Battery & Charger
Sold Separately

8050L



CORDLESS IMPACT DRIVER

20V MAX Lithium-ion
Battery & Charger
Sold Separately

8055L



CORDLESS DRILL DRIVER KIT

2 - 20V MAX Lithium-ion
batteries and Charger
included

8020L



CORDLESS DRILL KIT & IMPACT DRIVER KIT

2 - 20V MAX Lithium-ion
batteries and Charger
included



20V MAX LITHIUM-ION BATTERIES & CHARGER



K-020LBT
1.3 Ah 20V MAX Li-ion
Battery



K-023LBT-3
3 Ah 20V MAX Li-ion
Battery



K-020LCG
20V Max Li-ion
Charger



www.kingcanada.com

FEATURES

18 Introduction to Wood Finishing

BY CARL DUGUAY

This is a new series of articles covering the art and science of choosing and applying a finish on wood. This article covers why we finish in the first place.

22 Countertops

BY CARL DUGUAY

In this article – the first in a new series on home improvement materials – you'll learn about the pros and cons of the different countertop materials on the market today.

26 Hot Products 2016

Whether it's a gift for a woodworker or DIY'er, or to treat yourself, here are 50 great products from the past year.

59 Levelling a Problem Floor

Adding flooring to your home goes a long way to add style and value, but if your sub-floor is out of level you're only adding to the problem by not fixing it first. Learn all the ins and outs here. BY MATT DUNKIN

DEPARTMENTS

4 Editor's Letter

6 Letters, Coming Events

8 Web Shavings

10 Home Page

12 Know Your Tools:
Lathes

14 Top 10: Hand Tools for Machine Enthusiasts

16 Canadian Quotes: Robert Akroyd

36 Kids' Playing Card Holders

40 Protection for Your Smartphone

44 Turn an Eccentric Pedestal Bowl

50 Build a Magic Cube

62 2016 CW&HI Survey Results

68 Wood Chuckle

Back Cover: "Cherry Chair" Robert Akroyd

COVER STORY

Cover photo by Rob Brown

54 Build a Custom Smartphone Case

Why not show off your woodworking skills, while protecting your phone at the same time. BY ROB BROWN



FREE SHIPPING

on orders
over \$100
& under 30kg.



- ▶ Motor: 3/4HP, 120V, Single Phase
- ▶ Number of Speeds: Variable Speed
- ▶ Spindle Taper: MT2
- ▶ Spindle Size: 1 x 8 TPI
- ▶ Swing Over Bed: 14"
- ▶ Distance Between Centers: 43"
- ▶ Spindle Speed Ranges: Variable, 600 - 2400 RPM
- ▶ Tailstock Taper: MT2
- ▶ Tailstock Spindle Travel: 2-1/4"
- ▶ Faceplate Size: 6"
- ▶ Weight: 128 Kg



14" x 43" Wood Lathe with Digital Readout



\$649

CX803 - Reg. \$999



13" Dual Speed Planer with Infeed & Outfeed Tables and Three Extra Knives



- ▶ 15 Amps
- ▶ Max depth of cut: 1/8"
- ▶ Width cap.: 6"
- ▶ Weight: 92 lbs

\$659⁹⁹

DW735XCAN - Reg \$1022.10

FREE SHIPPING



1 HP Dust Collector

- ▶ 570 CFM
- ▶ 4" intake
- ▶ Noise Level: 65dB
- ▶ 1 micron upper bag
- ▶ Transparent lower bag
- ▶ Weight: 30kg.



\$189

CT053 - Reg \$275



2 HP Dust Collector w/Canister Filter

- ▶ Motor: 2HP, 220V, TEFC
- ▶ 1,700 CFM
- ▶ Static Pressure - 10"
- ▶ Bag Capacity - 5.7 cubic feet
- ▶ Weight: 70 kg
- ▶ Made in Taiwan



\$599

CX400 - Reg \$699



3 HP Dust Collector with Canister Filter

- ▶ Motor: 3HP, 220V, TEFC
- ▶ Static Pressure: 15.5"
- ▶ 2,320 CFM
- ▶ Noise Level: 85 dB
- ▶ Weight: 85 kg



\$949

CX402 - Reg \$1149



14" Deluxe Wood Band Saw

- ▶ Motor: 1HP, 110V
- ▶ 2 Speeds: 2300 / 3200 FPM
- ▶ Cast Iron Table Size: 14" x 18" (Including sheet metal extension table)
- ▶ Table Tilt: -5° to 45°
- ▶ Precision Balanced Cast Iron Wheels
- ▶ Quick Release Blade Tension Lever
- ▶ Weight: 94 kg
- ▶ Made in Taiwan



\$699

CX104 - Reg \$899



14" Ultimate Wood Band Saw

- ▶ Motor: 2HP, 220V
- ▶ Blade Speed: 1430, 2300, 3250 FPM
- ▶ Table size: 16" x 20" Precision Ground Cast Iron
- ▶ Table tilt: -10 degrees left, 45 degrees right
- ▶ Precision Balanced Cast Iron Wheels
- ▶ Quick Release Blade Tension Lever
- ▶ Weight: 138 kg
- ▶ Made in Taiwan



\$1499

CX100 - Reg \$1599



18" Wood Band Saw

- ▶ Motor: 2HP, 220V
- ▶ 3 Speeds: 1480, 2300 & 3260 FPM
- ▶ Table: Precision ground cast iron: 17 3/4" x 17 3/4" with 6" steel
- ▶ Table Tilts: 50° right and 10° left
- ▶ Precision Balanced Cast Iron Wheels
- ▶ Quick Release Blade Tension Lever
- ▶ Weight: 185 kg
- ▶ Made in Taiwan



\$1799

CX108 - Reg \$1999

PRICES VALID UNTIL JANUARY 7TH, 2017

Busy Bee Tools

busybeetools.com

1-800-461-BUSY (2879)

Errors & Omissions Excepted

New Westminster - Concord - Mississauga - Ottawa - London - Barrie - Pickering - Dartmouth N.S. - Calgary - Edmonton

CANADA'S WOODWORKING & METALWORKING SPECIALISTS



8" Jointer

- ▶ 3 HP, 220V
- ▶ Weight: 230kg



4 H.S.S.
Knife Cutterhead

\$1499

CX08 - Reg \$1699

Spiral Cutterhead

\$1850

CX08SC - Reg \$2199



49" Pro Sliding Table



new

\$1249

CX211 - Reg \$1499



26" Drum Sander



- ▶ 3 HP, 220V
- ▶ Weight: 486 lbs

\$2599

CX504 - Reg \$2999



10" Cabinet Saw with
30" Fence



new

- ▶ 2HP, 115V/230V
- ▶ Table size: 44" x 27"
- ▶ Max depth of cut: 3"
- ▶ Max depth of cut @ 45°: 2-1/4"
- ▶ Weight: 146 kg
- ▶ Made in Taiwan

\$1499

CX208 - Reg. \$2299



10" Cabinet Table Saw
with Extension Table &
50" Rail



- ▶ 3HP, 220V
- ▶ Table size - 27" x 73 3/4"
- ▶ Max Depth of Cut @ 90° - 3 1/8"
- ▶ Max Depth of Cut @ 45° - 2 3/16"
- ▶ Weight: 257kg

\$2049

CX201 - Reg \$2550



16" Open End Drum
Sander

- ▶ 1HP, 110V
- ▶ 1725 RPM
- ▶ Max width:
2" x 16"
- ▶ Belt feed
motor: 1/8 HP
- ▶ Weight: 50kg
- ▶ Made in
Taiwan

new



\$999

CX507 - Reg. \$1299



5/8" Hollow Chisel
Mortiser w/Tilting Head

new

- ▶ 1/2HP, 110V
- ▶ 3.8 Amps
- ▶ 60 Hz
- ▶ Capacity: 1/4" - 5/8"
- ▶ Made in Taiwan

\$749

CX305 - Reg. \$899



1" Hollow Chisel
Mortiser w/Tilting Head

new

- ▶ 1HP, 110/220V
- ▶ 1720 RPM
- ▶ 60 Hz
- ▶ Capacity: 1/4" - 1"
- ▶ Made in Taiwan

\$1449

CX306 - Reg. \$1699



Cyclone Dust Collectors

new

- ▶ 1.5HP, 220V

Made in Taiwan

- ▶ 2HP, 220V

\$1249

CX411 - Reg \$1499

\$1579

CX412 - Reg \$1899

Enhanced and Updated Content

Earlier this year *CW&HI* put out a reader survey and we received an incredible amount of feedback. To me, that says we have a lot of subscribers who feel very passionate about this publication. You can read more about the results of our survey on page 62. Once we sifted through all the information, we decided to leave most of the magazine untouched but make a number of additions to our content. A couple things stood out: readers wanted more home improvement projects and techniques, as well as more finishing information. Starting in this issue, we've increased our page count so we can simply add three regular home improvement-based columns, as well as one regular finishing-based column.

The three home improvement-based columns are 'HomeInOn', 'SmartHome' and 'HomePage'. Respectively, they cover the basics regarding home improvement materials, technology in and around the home, and a one-page mix of general and seasonal home improvement information. The finishing-based column is entitled 'FinishingTouch', and will be a series of articles starting with the basics of good finishing practices, and will eventually lead to more advanced techniques.

In this issue, our 'HomeInOn' column focuses on counter-top materials, the 'SmartHome' column shines the spotlight on smart-phone cases that excel in a shop environment, and the 'HomePage' column offers a wide range of tool reviews, home improvement videos, events, information being shared on our forum, as well as a few other topics. Our inaugural 'FinishingTouch' column covers the reasons why we finish wood in the first place.

As always, we enjoy hearing from our readers and welcome your comments. Email me with any questions or feedback at any time, as we're always trying to give you exactly what you want from a Canadian woodworking magazine.

Rob Brown



rbrown@canadianwoodworking.com

Issue #105

PUBLISHERS

Paul Fulcher, Linda Fulcher

EDITOR

Rob Brown

ART DIRECTOR

Jonathan Cresswell-Jones

CONTRIBUTORS

Lorraine Choi, Allan Cusworth, Carl Duguay, Matt Dunkin, Don Wilkinson

PREPRESS

Bonnie Wittek

PROOFREADER

James Morrison

SUBSCRIPTIONS/INQUIRIES

Jennifer Taylor 1-800-204-1773

ADVERTISING

(519)449-2444

CANADIAN WOODWORKING & HOME IMPROVEMENT

One-year subscription (6 issues) \$27.95

Single-copy price: \$5.95

H.S.T. REG. #878257302 ISSN #1497-0023

PUBLICATIONS MAIL AGREEMENT No. 40035186

RETURN UNDELIVERABLE CANADIAN ADDRESSES
TO CIRCULATION DEPT. CANADIAN WOODWORKING
PO BOX 286 DARTMOUTH, NS B2Y 3Y3

E-mail: circdept@canadianwoodworking.com

COPYRIGHT 2017 BY CANADIAN WOODWORKING
MAGAZINE DIV. OF SAWDUST MEDIA INC.

TEL. (519)449-2444 FAX (519)449-2445

e-mail: letters@canadianwoodworking.com

website: www.CanadianWoodworking.com

Reprinting in whole or part is forbidden except
by written permission from the publishers.

Please exercise caution when working with any tools or machinery. Follow common safety rules and precautions as outlined in any manuals related to the equipment being used. This publication is sold with the understanding that (1) the authors and editors are not responsible for the results of any actions taken on the basis of information in this publication, nor for any errors or omissions; and (2) the publisher is not engaged in rendering professional advice/services. The publisher, and the authors and editors, expressly disclaim all and any liability to any person, whether a purchaser of this publication or not, in or respect of anything and of the consequences of anything done omitted to be done by any such person in reliance, whether whole or partial, upon the whole or any part of the contents of this publication. If advice or other expert assistance is required, the services of a competent professional person should be sought.

From time to time other organizations may ask *Canadian Woodworking* if they may send information about a product or service to some *Canadian Woodworking* subscribers, by mail or email. If you do not wish to receive these messages, contact us in any of the ways listed above.

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



Paul Fulcher
Publisher & Advertising Director
pfulcher
@canadianwoodworking.com



Jennifer Taylor
Circulation
circdept
@canadianwoodworking.com



Carl Duguay
Web Editor
cduguay
@canadianwoodworking.com

Funded by the
Government
of Canada

Financé par le
gouvernement
du Canada

Canada



**Canadian Stewardship
Services Alliance**

Participant in CSSA stewardship programs





Grizzly Industrial

PURVEYORS OF FINE MACHINERY®, SINCE 1983

CHRISTMAS SALE Nov. 1st – Dec. 31st

- ALMOST A MILLION SQUARE FEET PACKED TO THE RAFTERS WITH MACHINERY & TOOLS
- 2 OVERSEAS QUALITY CONTROL OFFICES STAFFED WITH QUALIFIED GRIZZLY ENGINEERS
- HUGE PARTS FACILITY WITH OVER 1 MILLION PARTS IN STOCK AT ALL TIMES
- 24 HOUR ORDERING BY PHONE OR ONLINE • MOST ORDERS SHIP THE SAME DAY

9" BENCHTOP BANDSAW

- Motor: 1/2 HP, 120V, single-phase, ODP induction, 1720 RPM, 2.8A
- Table size: 12" x 12" x 3/4"
- Table tilt: 0-45° right
- Cutting capacity/throat: 8 1/2"
- Max. cutting height: 3 1/2"
- Blade size: 62" (1/4" to 3/4")
- Blade speed: 2460 FPM
- Overall size: 20 3/4" W x 17" D x 29 1/2" H
- Approx. shipping weight: 48 lbs.

MADE IN AN
ISO 9001 FACTORY!



G0803 ~~\$229⁰⁰~~ **INTRO PRICE \$189⁹⁵**

2 HP PORTABLE DUST COLLECTOR

- Motor: 2 HP, 240V, single-phase, 9A
- Air flow capacity: 1360 CFM
- 6" Inlet and "Y" with two 4" openings
- Portable base size: 27 1/2" x 47 1/2"
- Impeller: 12 3/4" cast aluminum
- Height with bags inflated: 94 1/2"
- Upper bag size (dia. x length): 19 1/2" x 47 1/2"
- Lower bag size (dia. x length): 19 1/2" x 33"
- Filter rating: 2.5 micron
- Approx. shipping weight: 137 lbs.

MADE IN AN
ISO 9001 FACTORY!



G0786 ~~\$385⁰⁰~~ **SALE \$325⁰⁰**

5-SPEED FLOOR RADIAL DRILL PRESS

- Motor: 1/2 HP, 110V, single-phase, 5A
- Spindle taper: JT-33 • Spindle travel: 3 1/4"
- Number of speeds: 5 (550, 880, 1520, 2490, 3470 RPM)
- Collar size: 2.160"
- Drill chuck: 1/4" - 5/8"
- Swing: 33 1/2" maximum • Table swing: 360°
- Table tilts: 90° left & right
- Table: 12 1/8" diameter
- Overall height: 64 1/2"
- Approx. shipping weight: 147 lbs.



G7946 ~~\$325⁰⁰~~ **SALE \$299⁹⁵**

16" X 46" SWIVEL-HEAD WOOD LATHE with CAST IRON LEGS & DIGITAL READOUT

- Motor: 2 HP, 110V, single-phase, 14A
- Swing over bed: 16"
- Swing over tool rest: 13 1/2"
- Distance between centers: 46"
- 1" x 8 TPI RH headstock spindle
- MT#2 spindle & tailstock tapers
- Spindle bore: 3/8"
- Variable speed: 600-2400 RPM
- Overall dimensions: 19" W x 72 1/2" D x 48" H
- Approx. shipping weight: 354 lbs.



G0462 ~~\$595⁰⁰~~ **SALE \$550⁰⁰**

12 1/2" LEAN & MEAN PLANER

- Motor: 2 HP, 110V, single-phase, 15A
- Max. cutting width: 12 1/2" • Max. cutting height: 6"
- Max. cutting depth: 3/32" • Min. board thickness: 1 3/4"
- Feed rate: 32 FPM
- Number of knives: 2 double-edged HSS
- Knife size: 12 1/2" x 2 1/2" x 1/8"
- Cutterhead speed: 10,000 RPM
- Number of cuts per inch: 52
- ON/OFF toggle switch with safety lock
- Thermal overload protection
- Top-mounted return rollers
- Includes knife setting jig and wrench
- Approx. shipping weight: 78 lbs.



G0505 ~~\$325⁰⁰~~ **SALE \$295⁰⁰**

6" JOINTERS WITH MOBILE BASE

- Motor: 1 HP, 110V/220V, single-phase, 14A
- Prewired voltage: 110V
- Table size: 6 5/8" x 47 3/8"
- Number of knives: 3
- Cutterhead speed: 5000 RPM
- Cutterhead diameter: 2 1/2"
- Max. depth of cut: 1/8"
- Max. rabbeting depth: 1/2"
- Cuts per minute: 15,000
- Fence size: 29 1/8" L x 4" H
- Approx. shipping weight: 252 lbs. (G0813), 260 lbs. (G0814)



G0813 WITH KNOCK-DOWN STAND **INTRO PRICE \$525⁰⁰**

G0814 WITH CABINET STAND **INTRO PRICE \$595⁰⁰**

30TH ANNIVERSARY 17" HEAVY-DUTY BANDSAW

- Motor: 2 HP, 110V/220V, single-phase, TEFC, prewired 220V
- Amps: 20A at 110V, 10A at 220V
- RPM: 1725
- Precision-ground cast-iron table size: 17" x 17" x 1 1/4" thick
- Table tilt: 10° left, 45° right
- Floor-to-table height: 37 1/2"
- Cutting capacity/throat: 16 1/4"
- Blade size: 131 1/2" L (1/4"-1" W)
- Approx. shipping weight: 342 lbs.



G0513ANV ~~\$895⁰⁰~~ **SALE \$850⁰⁰**

10" HYBRID TABLE SAW WITH RIVING KNIFE

- Motor: 2 HP, 110V/220V*, single-phase, prewired to 220V
- Amps: 16A at 110V, 8A at 220V
- Precision-ground cast-iron table w/wings
- Measures: 40" W x 27" D
- Table height: 34"
- Footprint: 21-1/2" W x 20" L
- Arbor: 5/8"
- Arbor speed: 3850 RPM
- Capacity @ 90°: 3-1/8"
- Capacity @ 45°: 2-3/16"
- Rip capacity: 30" right, 12" left
- Overall size: 36" W x 60" L x 40" H
- Approx. shipping weight: 416 lbs.



G0715P ~~\$850⁰⁰~~ **SALE \$825⁰⁰**

15" HEAVY-DUTY PLANER

- Motor: 3 HP, 240V, single-phase, 14A
- Max. cutting width: 15", Depth: 1/8"
- Max. stock thickness: 6 3/4", Min: 1/4"
- Min. stock length: 6 3/4"
- Feed rate: 16 and 30 FPM
- Cutterhead diameter: 3"
- Number of knives: 3 HSS
- Knife size: 15" x 1" x 1/8"
- Cutterhead speed: 5000 RPM
- Table size: 20 1/8" x 15" x 3 1/2"
- Overall size: 32" W x 28" D x 23 1/2" H
- Approx. shipping weight: 382 lbs.



G0815 ~~\$1150⁰⁰~~ **SALE \$895⁰⁰**

PRICING CODE
16CANWW
MENTION THIS CODE
WHEN PLACING YOUR ORDER

18316

1-800-523-4777

grizzly.com

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

2 GREAT SHOWROOMS!

BELLINGHAM, WA • SPRINGFIELD, MO

WE SHIP TO CANADA!
FREE BROKERAGE RATES ON MACHINERY ORDERS!
PLEASE VISIT GRIZZLY.COM FOR DETAILS



VIEW VIDEOS AT
grizzly.com

letters

Great Community Project!

Every summer I have a project to work on. This year I didn't have much planned until I saw the article on the community library. I simply followed the article and made a few slight customizations. The day I installed it about a half dozen people visited, and I've since had many nice conversations and lots of book donations. I'm really happy you included the article, and hope more readers are building their own versions.

Keep up the great work!

Ray E.

Ladner, B.C.



CORRECTION re: Oct/Nov'16 Laser Level Review

We inadvertently covered the wrong Bosch model in our "Introduction to Laser Levels" article, (Oct/Nov, 2016). Unfortunately the error was not noticed until after the article was published. The comparative model in our round-up should have been the Bosch GLL 2-15 and NOT the model GLL 2-50. The street price for the GLL 2-15 is \$169 compared to the model tested at a retail of \$369, making the GLL 2-15 the second least expensive unit, on par with the DeWALT DW088K. The GLL 2-15 is being replaced with the GLL 55 available now at your local retailer.

Thanks for the inspiration!

I had just finished a pergola when the Aug/Sept issue of *CW&HI* arrived, so I took some thoughts from the "Weave Gate" article in the issue to add a sliding gate. I could not find light lumber for the weave. As the brown treated 2x4s were very wet I ripped them in 1/2" slices and stained the white sides to match the brown treatment. It turned out great!

Thanks for the project.

Brian M.

Lindsay On.



Subscription Draw Winners

Gary D. Whitby, ON has won a Bench-top Drill Press from General International.



Wilf B. New Westminster, BC has won a \$250 gift card from Lee Valley.

Lee Valley



Subscribe or renew now for your chance to win!

Sharp Diamond Stone Article!

Thanks for the informative article on sharpening with diamond stones (June/July 2016). I like the idea of diamond stones, but was wondering if the diamond surface would cause wear problems for the Veritas Mk II sharpening jig. Thanks for the useful information.

Garry P.

Via email

Hi, Garry.

I've been using the two together for quite some time, and haven't found the stones cause any additional wear on the Mk II roller. The stones don't abrade the jig as the roller portion of the jig rolls on the surface of the stone. I think you're good to go. — Carl Duguay, Web Editor

shoptested

Ridgid Trim Router: Lots of Bang for Your Buck

This little trim router features a lot of extras, and makes many routing tasks quick and enjoyable. The first few times I used it I was pleased to have many of those extras on my side, as I used the edge guide, dust port, see-through base, variable speed feature and LED light in one single project. It's also got loads of power, so taking deeper cuts won't be a problem when the need arises. Overall this is a very user-friendly trim router at a very fair price. Visit ridgid.com for more details. — Rob Brown



NEW



quality. unmatched.™

PRO 5 LTD - Powerful one handed compact sander for maximum surface quality.



PRO 5 LTD
\$129.00*
Available
November 2016

festoolcanada.com

*Limited quantity and availability. Please see dealer for complete details.

FESTOOL®
Tools for the toughest demands

Tool Reviews

**Bosch Starlock MAX
Oscillating Multi-Tool**

**DeWALT FlexVolt 60V
Max Circular Saw**

View these reviews and more at:
canadianwoodworking.com/reviews



Free Plan

Activity Center

A children's activity center is easy to build, makes a great holiday gift and will keep kids busy for hours. Visit the "Free Plan" section, under the "Resources" tab on our website to view this and many other plans.



Courses

Rosewood Studio

Nov 28: **Boxes** w/
Adrian Ferrazzutti



Events

**Lignum Vitae Tree
of Life
Show and Sale**
Nov 24 - Dec 8, 2016
Calgary, AB
www.sait.ca

**IIDEXCanada
2016**
Nov 30 - Dec 1, 2016
Toronto, ON
www.iidexcanada.com

**Homebuilder &
Renovator Expo**
Nov 30 - Dec 2, 2016
Toronto, ON
www.homebuilderexpo.ca

Best Build

Check out the **Woodworking** section of our forum for our latest "Best Build" thread – a 2x4 bed frame. This month's winner, Peter Chang, receives a **dual marking gauge** from Lee Valley.



To find out more about this project, go to: forum.canadianwoodworking.com or simply go to CanadianWoodworking.com and click **FORUM**.

Video Links

www.canadianwoodworking.com/videos

Esherick Style Bar Stool Tutorial

Mirka Abranet Max
Sanding Belts

Canadian Quotes:
Robert Akroyd



shopnews

Sponsored Content

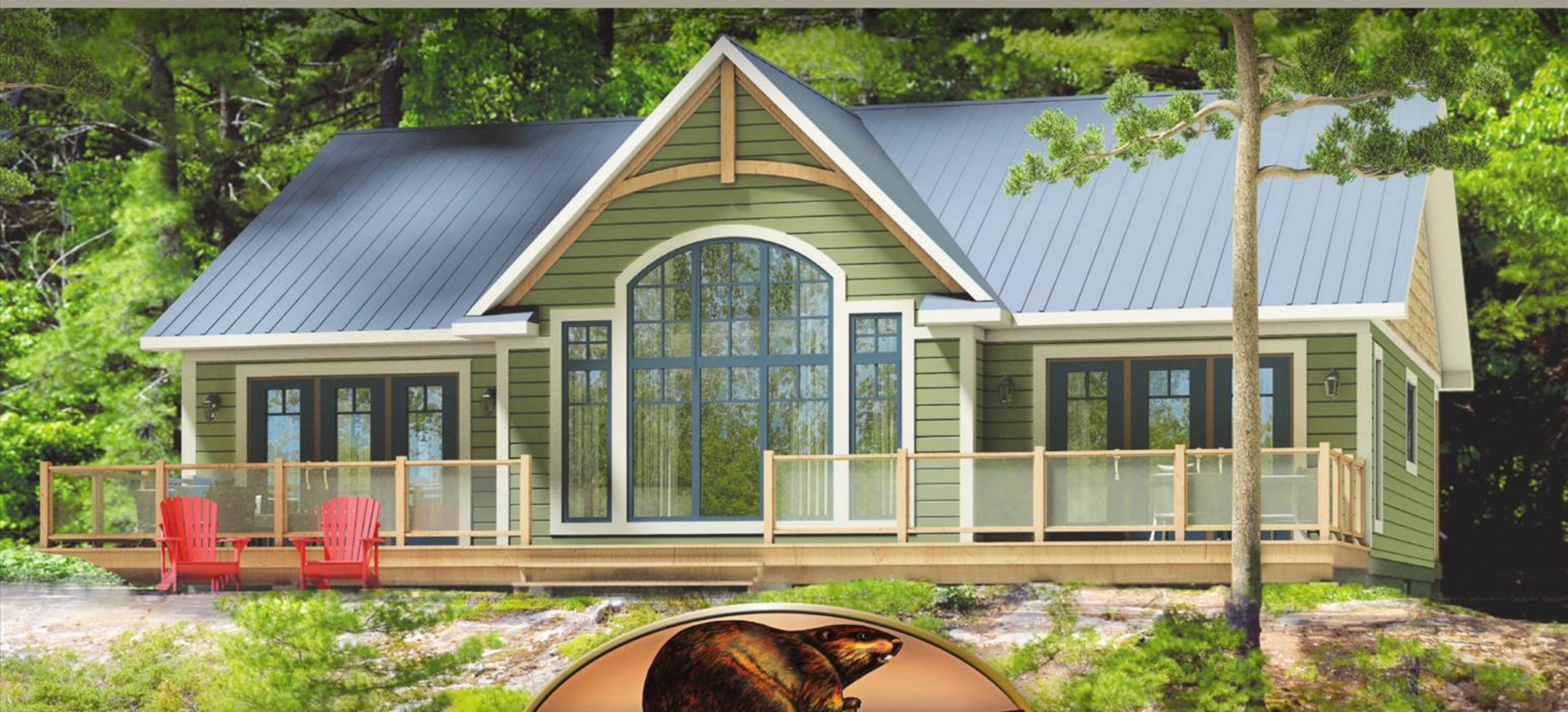
Laguna 14" Bandsaw

Laguna's new 14BX is a great choice if you're looking to buy one band saw for all of your sawing needs. It has big band saw capabilities in a small 14" European-style steel frame, with a 16x21" cast-iron table. Inside, cast-iron flywheels provide helpful rotational mass to drive blades as wide as 3/4" through your densest stock, resawing material up to 12" wide. The 14BX also comes with Laguna's ceramic blade guides, which offer the versatility of using wide or narrow blades. You can buy a 1.75 HP version that's wired for 110 volts (\$1,899) or a 2.5hp 14BX that runs on 220 volts (\$1,999).

www.brettwood.com



THE BETTER WAY TO BUILD YOUR HOME OR COTTAGE



2656-090

14⁹⁹

With guaranteed material packages. The latest Beaver Home & Cottage Design Book is available at your local Home Hardware Building Centre. There are 116 home and cottage plans to choose from, so you can be sure to find a design that suits your style, budget and building site. We can also alter any plan to your specifications.

 **Home**
hardware
building centre

Tool Reviews

Black+Decker 36V MAX 2-In-1 Stick Vac

PaintWIZ Paint Sprayer



View these reviews and more at: canadianwoodworking.com/reviews



Forum Thread

New hardwood floor, old house

From Anthony10

St. John's, NFLD

I recently bought an 80-year-old house with cupped and uneven softwood floors, and would like to have hardwood installed by someone. Is it better to take up the old softwood floor, or can I lay the new floor over the old?

From Steve in Ayr Ayr, ON

If the floor is uneven, to lay a new floor you really have to rip out the old floor first, and lay a new subfloor. Anything else will be a compromise.

From callee Seguin, ON

Are you sure your existing floor is a finish floor, and not the subfloor? In old houses, the subfloor was t&g planking, usually of cheap softwood. Check if floor joists are underneath it. If there's subfloor underneath, I'd pull it. That will give you a chance to screw down the subfloor and make it all more solid.

From Kevin H Renfrew, ON

Go down to the joists so you can examine and fix many issues; level the top of the joists, allow electricians to run wiring, insulate for sound, install a proper sub-floor that meets today's standards and glue it down to prevent squeaks. You can then stand back and tell yourself 'A lot of work, but it's done right'.

From Doug G New Westminster, BC

If you don't need sound insulation or wiring, don't rule out refinishing the existing floors. They can really look great, especially in an old house.

From Anthony10 St. John's, NL

Thank you for explaining this. Now I have a better understanding!

Also, check out these home improvement threads at forum.canadianwoodworking.com

- Recommended Support Size for Carport
- Deck Post Saddles – Flush or Raised?

Free HI Plan

Built-In Seating Area

Build this comfy seating nook in your living room. Read about how to do it on our website at www.canadianwoodworking.com.



Video Links

www.canadianwoodworking.com/videos

How to Cut a Floor Tile Circle for Toilet Flange



Repairing a Bathroom Ceiling Fan



Visit our website to see this and many other home improvement videos.



Home Improvement App

DIYZ www.diyz.com

DIYZ is a mobile app for your smartphone that helps you tackle DIY projects. With step-by-step instructions, DIY videos, tool suggestions, and the option to video chat with a pro advisor, it makes home improvement easy.



Line It Up With Precision

GLL 2-15 Self-Leveling Cross-Line Laser



BOSCH

Invented for life

50 ft.

Vertical, horizontal and cross-line modes
projects 2-lines independently or together for a wide array of level and/or alignment applications

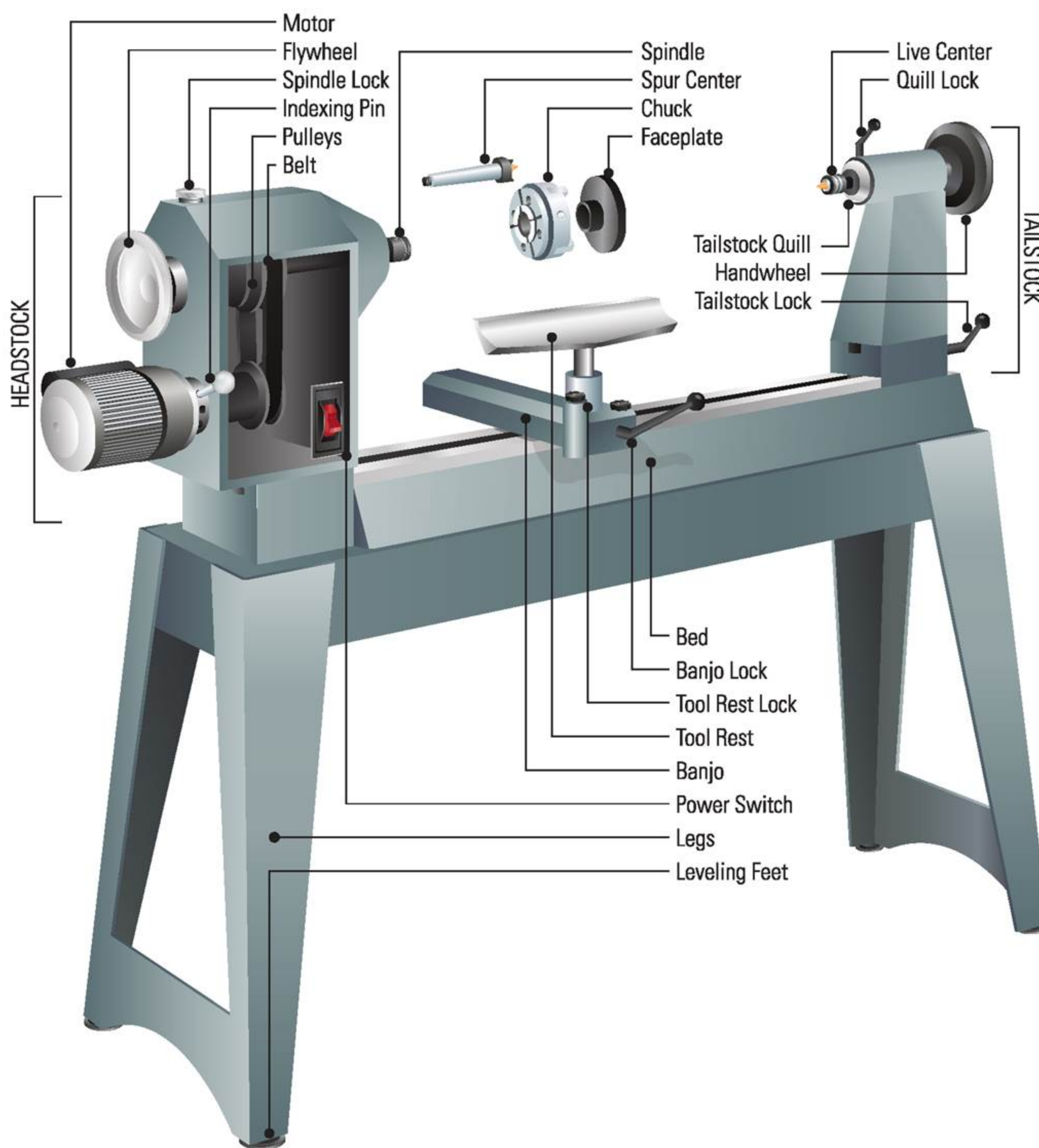
Smart pendulum leveling system
self-levels, senses and indicates out-of level condition, locks when switched off

Includes BM 3 positioning device
with retractable feet, strong magnets and a ceiling grid clip



www.boschtools.ca

Lathes



The **swing** is the largest diameter work piece a lathe can rotate. The distance between centers (**DBC**) is the longest work piece that can be held between the head and the tail stocks. **Benchtop** lathes, which can be mounted on a user-built or commercial stand, provide all the features and performance that most hobbyist woodworkers, furniture makers, and DIYers will need. An optional bed extension to increase the DBC can be added to many models. Larger **stationary** lathes provide more power, have greater swing and DCB capacities, longer quill travel, less vibration, and offer more accessories.

Benchtop Lathes

Price: \$250-\$1,400

Swing: 10"-14" **DBC:** 14"-18"

Motor: 1/3 HP-1 HP

Speed Range: 250-4,000 RPM

Spindle Thread: 1", 8 TPI

Spindle Taper: MT2

Stationary Lathes

Price: \$2000-\$7,000

Swing: 12"-24" **DBC:** 16"-43"

Motor: 1 HP-3 HP

Speed Range: 50-4000 RPM

Spindle Thread: 1-1/4" x 8 TPI

Spindle Taper: MT2 - MT3

Get the Most Out of Your Lathe

Wear Eye Protection

Wood chips fly at considerable speed, and in the blink of an eye you can be left without one. Invest in good quality safety glasses (or better yet a face shield). And avoid loose clothing that could get tangled on your work.

Keep Tools Sharp

Purchase a bench-top grinder and sharpening jig to keep your turning tools in top condition, and spend the time to learn how to sharpen properly. It's not complicated. Alternately, purchase tools that use replaceable disposable insert cutters.

Lighten Up

You can't turn what you can't see. Provide adequate overhead, or focused task lighting, on your work.

Roll, Don't Rock

When spindle turning, rather than standing still and moving your arms, keep your arms pinned to your sides, and shift your body back and forth – you'll find it easier to make long flowing cuts.

Don't Forget the Tools

Be cautious of buying large tool sets. You may end up with tools you'll rarely, if ever use. An alternative is to buy a tool, learn how to use it, and repeat. A good place to start is with a roughing gouge for turning a square piece of wood to round.



The Experts **Trust** Titebond®



I've been using Titebond wood glues on my custom projects and in my woodworking classes for years. I rely on Titebond for many different applications. Whether for indoor or outdoor use, I've never had a glue joint failure. I trust the performance from Titebond for all my projects.

George Vondriska

WoodWorkers Guild of America
Vondriska Woodworks



See George discuss gluing tips and woodworking techniques at www.goa.com.

Titebond offers the most comprehensive assortment of glues for bonding wood, including Titebond III Ultimate Wood Glue. For more information on the right glue for your next project, visit titebond.com or call 1.800.347.4583.



topten **Top 10** Hand Tools for a Machine Enthusiast

You can divide woodworkers into two camps: hand tool lovers and machine enthusiasts. If you're in the latter camp, consider boosting your speed, quality and accuracy with these 10 hand tools.

BY ROB BROWN

- 1 Block Plane** — A great tool for chamfering edges and smoothing smaller, shorter surfaces, a block plane should be in every woodworker's shop. Even if you inherited your grandfather's block plane years ago, as long as it's tuned up and has a sharp blade, it will work pretty well.
- 2 Rasp** — A rasp will roughly shape edges to just about any shape. Square corners are fine, but sometimes you need to add some shape to a piece of wood. Rasps are also a lot of fun to use.
- 3 Jack Plane** — I'm not trying to turn you into Tom Fidgen here, but a jack plane will help out with flattening larger surfaces. If you don't have a 36" wide planer, and you have to glue multiple dressed panels together to create a table top, a jack plane will help you flush the joints. You'll also need one for dozens of other shop tasks.
- 4 Spokeshave** — Like a rasp, a straight, round-bottom spokeshave is perfect for adding curves, creating chamfers and adding some shape to a piece of wood. Think of a spokeshave as a plane that can create curves in wood. If you enjoy using it, look into getting a flat and concave spokeshave as well.
- 5 Ryoba Japanese Saw** — Even if you don't want to cut joints with Japanese accuracy, you'll be thankful to have one of these saws near your bench. It can make through cuts while ripping or crosscutting. Don't treat it like a super-beefy western style saw — use it a bit more delicately and be rewarded.



6 Awl — An awl will help you out with so many simple jobs around the shop; they're not expensive and they're very easy to use. This might be one of those tools you inherited from your grandfather, along with your block plane. If that's the case, a simple sharpening on a fine belt sander and a quick clean with some steel wool and wax will make you want to reach for this simple tool.

7 Coping Saw — Tight curves are not always easy to do. Even with a bandsaw, some curves are too tight to complete. A coping saw might not cut as fast as a bandsaw, but it will excel when your bandsaw reaches its limits.

8 Simple Carving Knife — You can get a dedicated marking knife if you wish, but if I was only going to have one quality knife around my shop, it would be this. It can do a lot of different cuts, and will also open boxes and do more rudimentary tasks around the shop.

9 Shoulder Plane — There are a number of different sizes of shoulder planes on the market, but I would recommend a medium-sized version for most woodworkers. They're great for fine-tuning the fit of a tenon to a mortise, deepening rabbets and dados, and many other random shop tasks.

10 Sharpening System — In order to get a number of these tools to work properly you will need to invest in a sharpening system. If you opt for a set of stones, I'd go with 1000 and 4000 grits right away, and add an 8000 grit stone when you want to sharpen your performance even more. Rotary sharpening systems also work great, but have their pros and cons. With a bit of research, and some practice, you'll have sharp, useful tools for the rest of your life.



ROB BROWN

rbrown@canadianwoodworking.com



Go Online for More

RELATED ARTICLES: Make Your Home Winter-Ready (Oct/Nov 2015), Dust Collection Tips (Dec/Jan 2016), DIY Makeover Ideas (Aug/Sept 2014)

PRECISION CUT.
EVERY CUT.



EXPERIENCE THE SAWSTOP DIFFERENCE

SAWSTOP.CA • 866-SAWSTOP

Robert Akroyd

...on working in a big city, a small shop and lack of soul in much of the live-edge furniture today.

BY ROB BROWN



Robert Akroyd, 45, Akroyd Furniture, www.akroydfurniture.ca

Location & size of studio – Downtown Toronto, Distillery District, 1,000 sq.ft. (600 sq. ft. workshop, rest is showroom, stockroom and finishing area)

Education – BA University of Waterloo, Sheridan College

How long have you been building furniture?

23 years.

What sort of furniture do you specialize in?

Contemporary residential.

In order, what are the three most important items in your shop apron?

7 mm mechanical pencil, 10' tape measure, ear plugs.

Do you prefer hand tools or power tools?

Power tools – furniture making is the retirement project I began when I was 22 years old and I don't want to wear out my body any sooner than absolutely necessary.

Solid wood or veneer?

Solid wood. I'm still perturbed that it seasonally expands and contracts, risks warping and splitting, but I love making things from it.

Figured wood or straight grain?

Recently – straight-grained.

Twenty years ago – figured.

Inherited Vintage Stanley Sweetheart or fresh-out-of-the-box Veritas?

Veritas!

Flowing curves or geometric shapes?

Depends on the project ... but this decade has been more geometric.

Favourite wood?

Cherry. No, walnut. Wait ... yeah, cherry.

Least favourite wood?

2x4s for building our shipping crates from the big box building center.

Media Cabinet – Although asymmetric, there is a balanced feeling to this cabinet, as the wider, open side of the cabinet is less overpowering than the slatted, door side. Made with rift-sawn white oak.

quotes

My studio is a combined woodworking shop and retail store in downtown Toronto in a mixed-use heritage building filled with other makers' studios, theatre companies, rehearsal spaces and the like. To make it work, my square footage is really, really small. The studio's retail side is open to the public five days a week and visitors can come in and browse the pieces we have on display, as well as peruse the print and digital portfolios to see examples of past projects.

I tend to work a lot. Weekdays start by 8 a.m. when my assistants come to work but I love to be in the shop well into the evening. Sometimes that means being there to see the sunrise through the east-facing windows.

I love tools and machines that remove "toil". As much as I enjoy the physical side of this job, there can be a lot of repetition and strain. I love my planer and saws for making fast work of what, centuries ago, would have been back-breaking work. I love my thickness sander for reducing the amount of hand-sanding. Festool's Domino system makes cutting perfectly fitted joints almost too easy.

Sometimes designs seem to spontaneously arrive on the back of a napkin. Sometimes they take weeks of sketching and computer modelling and serious work to arrive at.

I currently live and work in a dense urban area, so I find that my work's

aesthetic is strongly influenced by architecture.

I usually begin with a pencil sketch – I still think best with a pencil in my hand. Next, I use a simple 3-D computer modeling program to flesh out the concept and provide a much more realistic visual presentation. Working and shop drawings are a mix of pencil- and computer-generated.

Make furniture for the people who will use it and live with it, not to impress other furniture makers.

I first discovered George Nakshima's work in 1993 when I found a copy of "The Soul of a Tree". I made my first live-edge piece shortly thereafter and have continued making them for the last 23 years. It saddens me to see that there is a lot of furniture made as "live edge" that entirely lacks any soul whatsoever and has merely been reduced to parody.

In a perfect world I would just do speculative work – wake up in the morning and make whatever interested me. My reality, however, is that I have bills to pay and doing commissioned work allows me to pay them reliably. I also like how clients can sometimes push me outside my comfort zones and try new materials or processes.

I have some customers who have almost shifted into a category of "patron" because we've built upwards of



Dining Table and Chairs – Made of grey elm and white quartz, this unique table was made to complement a sideboard Akroyd made for the client previously. The carved puzzle-like panels running down the center of the table are level so they can support stemware.

15 pieces over the years for them, so the relationship is quite close at that point.

It's likely that I'll be including more painted surfaces in the future.

I wish there was still some semblance of an apprenticeship system in furniture making. Without over-regulating what is essentially a creative practice, it would be good to have some aspects of the field still represented as a proper "trade". Offering a mix of alternating school study and work practice would better prepare young people for a life in woodworking.

Peter Fleming at Sheridan College has had the biggest influence over my furniture career. The objects I saw of Peter's seemed to manifest both a deftly confident ability to craft in wood (and metal) and a solid understanding of contemporary design. As an instructor he has a considered and sophisticated approach that is much more like that of an architect.



ROB BROWN
rbrown@

canadianwoodworking.com

Go Online for More

RELATED ARTICLES: Keith Logan (*Dec/Jan 2015*), Heidi Earnshaw (*Apr/May 2014*)
SLIDESHOW: To view a slideshow of Robert Akroyd's work, visit the Videos section of our website.

Introduction to WOOD FINISHING

Join us as we delve into the challenging, and often misunderstood, world of wood finishing. Our new informative column, "Finishing Touch", will help take the mystery out of finishing and allow you to choose and apply the right finish, no matter what type of project you're working on. We start with why you should finish a project at all.

BY CARL DUGUAY

This issue begins our new series on wood finishing. For anyone new to the craft of woodworking, knowing which finish to use and how to apply it is fraught with confusion, uncertainty and disappointment. But wood finishing doesn't have to be all that complicated or distressing. In this series we'll look at how to best prepare your projects for finishing. We'll cover the most common types of finishes – what they are and how to apply them – and, we'll look at a variety of specialty topics, including pore filling, staining, dying, toning, glazing, ebonizing, spraying and French polishing.

In this introductory article we'll look at a few things that we need to be aware of before we even begin to put finish to the wood.

Why We Finish Wood

There are a number of reasons that we apply finishes to wood. The most obvious is that it protects the surface of the wood from dirt, stains, moisture, and abrasion. And, to some extent, it even protects us from bacteria that might otherwise reside in the nooks and crannies of wood – especially in very open pored wood like ash, elm or oak used in kitchens and dining rooms, or on children's furniture.

The choice of finish we use will often depend on what the project is going to be used for. The priority for a kitchen tabletop would be a finish that offers superior abrasion and moisture resistance, while for a display cabinet the dominant concern might be for a finish that enhances the natural colour and grain pattern of the wood, and less for its resistance characteristics.

Another important reason we finish wood is to reduce moisture exchange. Wood responds to changes in the level of moisture around it by expanding and contracting. This affects the structural integrity of the projects we build and can cause the wood to warp, crack or split. While no finish will completely



Heat and Moisture Protection – Some finishes may need to stand up against heat and warm liquids, if they're spilt. Certain finishes are great at this task, while others soften and discolour.

eliminate moisture exchange, it can significantly reduce its occurrence. This is why it's important to apply a finish equally on all surfaces of your project, even those that won't be visible.

We also finish wood to enhance its appearance – to 'bring out' or 'pop' the grain. Sometimes we may find the open pores in a wood unappealing, and want to fill them to produce a flatter, smoother finish. At other times we may want to match the colour of wood to an existing piece of furniture, or we may simply want to make one species of wood look similar to a different species.

Finishing is a bit of a balancing act. In general, there is no 'best' finish. Rather, you'll try to choose a finish that balances the need for protection while maximizing the appearance of your project.

Finishing Starts at the Beginning

You can avoid some finishing surprises by giving a bit of thought to the choice of wood before you begin your project.

hardwax-oil

ha:rd-wæks /oɪl/
noun

A crosslinked polymerization of **oils** and **waxes**, delivered together in a single component product.

THE ORIGINAL HARDWAX-OIL
www.osmo.ca

osmo®



A Basic Finishing Kit

Regardless of the specific type of finish you'll use, there are some common finishing supplies you'll want to keep on hand. Store them in a cabinet or plastic container for easy access and to keep them dust free. It's best to purchase the solvents, thinners, and other supplies you need as required for a specific finish. At a minimum you'll want to have these supplies on hand:

- A NIOSH-approved organic vapour respirator
- Latex or vinyl gloves
- Painter's tape
- #0000 (extra fine) oil-free steel wool or super fine 3M fiber rubbing pads
- Disposable plastic mixing cups
- Lint-free rags
- 2" flat brushes: natural-filament (for solvent-based finishes); synthetic-filament (for water-based finishes)



Photo by Fuji Spray

Safety Issues – Many finishes emit solvents, or other chemicals, once they're applied. If you're using a finish like this protect yourself and the environment with equipment like a face mask and spray booth.

good for your health. Protect yourself by working in a well-ventilated space. Ensure you wear a NIOSH-approved organic vapour respirator and latex or vinyl gloves when handling solvents and applying finishes.

Some finishing materials are also dangerous because of the flammability of their solvents, and may require specific storage and disposal precautions. Never pour solvents or finishes down the drain – store them in appropriate containers and take them to a recycle centre. Spread rags used to apply finishes in a single layer so heat dissipates while the material cures. After the rags become hard and brittle they can be placed in the garbage.

In the next article in this series we'll look at surface preparation – what you need to do to prepare wood surfaces to receive a finish. It's the most critical step in obtaining a great finish, and one that you'll want to master.

CARL DUGUAY

cduguay@canadianwoodworking.com



Country Look – Some furniture has a country feel to it, and is a bit less refined and glossy. In these cases you may not need extreme durability from your finish, but want ease of application and a nice colour.

Often we build projects that combine wood in different forms, the most common being solid wood and plywood. We may also incorporate different wood species in the same project. The same finish applied to wood in its different forms, and to different wood species, may not always produce the same results. This is due to the characteristics of the material being used. As well, the way that the wood is cut – plain-sawn, quarter-sawn or live-sawn – will affect the appearance of your project.

Your Health and the Environment

Almost all finishes, as well as the solvents and thinners we use with them, contain harmful chemicals. Some may have no immediate, apparent impact, while others can produce a temporary acute impact. Regardless, over the long term, repeated exposure to these chemicals can have irreparable, and often dramatic, detrimental impacts on your health. It's wise, then, to consider that none of the finishing materials you use are



Go Online for More

RELATED ARTICLES: Top 10 Finishes for a Small Shop (June/July 2014), Two Options for Finishing Your Next Masterpiece (Apr/May 2011)

ADDITIONAL RESOURCES: "Understanding Wood Finishing" by Bob Flexner; "Foolproof Wood Finishing", by Teri Masaschi; *Finishing* (Taunton's Complete Guide) by Jeff Jewitt

Varathane
SINCE 1958

Complete your project IN LESS THAN A DAY!

CHANGING THE RULES OF WOOD FINISHING



Varathane®
Ultimate
Stain

Achieve beautiful
staining results with just
ONE APPLICATION
of the new Varathane
Ultimate Stain.

Wait for **ONE HOUR** before
applying just **ONE COAT** of
the new Varathane
Triple Thick Clear Finish -
It is three times thicker than
traditional polyurethane. That's all!

Your project is finished with professional results
and you are free to get on with your day!



Varathane®
Triple Thick
Clear Finish

 **RUST-OLEUM**
CONSUMER BRANDS CANADA

www.rustoleum.ca



LoneWolf @
www.cro-wood.com

Countertops

The kitchen is the heart of the home. It's a central meet-up place for food preparation, meals and informal discussion. The countertop gets a lot of use and is a focal point in the room, so choosing the right style is important for function and aesthetics.

BY CARL DUGUAY

If you're considering a replacement kitchen (or bathroom) countertop, there are a number of factors you'll want to consider: how much of the replacement, if any, you will do; how much money you'll want to spend; what countertop features are most relevant for your lifestyle; what styles and colours will look best in your kitchen; and what other upgrades might you undertake at the same time as the countertop installation. As with almost any home improvement initiative, the first step is thinking it through.

DIY or Contract

Laminate and wood countertops are the only two that most avid DIYers will likely want to consider doing all or part of the replacement. If you have the skills, time, and inclination you can do the complete job yourself – make your own laminate or wood countertop, remove the existing countertop, sink, and faucet, and install the new unit. It's obviously the most time-consuming, but it's the most economical, and you get full bragging rights. Alternately you can purchase a custom-made countertop, remove the old countertop, and install the new unit yourself. The trickiest part is probably cutting the holes for sink and faucet.

Lead Photo by Caesarstone

If neither of the two options above appeal to you, but you still want to save a few dollars, consider removing the old countertop, sink, and faucet. It's straightforward and the only power tool you'll need is a jigsaw or reciprocating saw. However, unless you have a few renovation projects under your belt, you'll probably be better off hiring a contractor to do the job.

Installing granite and quartz countertops isn't for the faint of heart. It's a two-person job as the slabs can be very heavy and susceptible to damage during installation. You'll also need to use a segmented diamond blade to cut out the hole for the sink. Plus you'll likely need to cut butt joints for inside corners, which can be tricky. If you've never worked with either material before, you might want to begin with a smaller project, such as a bathroom, to build up your confidence.

If you choose to hire a contractor, do take the time to find a reputable tradesperson. Don't base your selection solely on the lowest price. Word-of-mouth recommendations are a great way to find a good installer, but you'll still want to get an itemized quote and list of clients. And don't be shy about calling each client to ask how the renovation went. The quote should cover removing and disposing of the existing countertop, sink, and faucets; installing the countertop; reinstalling the sink and faucets; and caulking the countertop if required.

It often makes sense to replace the sink and faucet at the same time as the countertop. Reinstalling a blemished or outdated sink will only serve to highlight, rather than disguise, the difference between the new and the old. It's also a good time to give thought to other enhancements that will embellish your kitchen. These include installing a backsplash and under counter LED lighting, replacing or refurbishing kitchen cabinet doors, replacing the flooring, and repainting kitchen walls. Any avid DIYer can generally do all of these enhancements.

Countertop Options

The type of material you choose for a countertop is more of a practical matter – having to do with your current and future lifestyle – while the colour and pattern is largely a personal consideration – expressing your personal taste and the overall design of your home. Fortunately, while some materials offer greater scratch resistance, most are fairly impact-resistant and are quite good at resisting stains, heat and moisture. And both laminate and synthetic solid surface countertops come in an amazing range of colours and patterns.

Granite, quartz, or solid surface countertops are the most expensive, but they typically last the longest. Prorated over a 30- or 40-year period makes them an affordable option. On the other hand, most people replace a laminate countertop after 15 to 20 years. But, if you have a tribe of youngsters, then it might be the sensible choice till they've flown the coop. Likewise, wood countertops have considerable visual warmth, and they're very environmentally friendly, but they do require more consistent care and maintenance than most other countertops.

The most affordable countertop continues to be laminate. Ceramic tile follows closely behind. At the other end of the price spectrum are granite and quartz. In the middle price range you'll find butcher blocks, synthetic solid surfaces, concrete, stainless steel, and recycled glass countertops. However, pricing can vary quite a bit, depending on material quality. For example, quartz countertops can range from around \$90 per square foot to over \$200 per square foot (for materials and installation).

There are well over a dozen countertop materials available today. We've listed seven of the most popular materials, beginning with the ones that are most DIYer amenable. These products are also widely available across Canada. Other materials, including bamboo, marble, soapstone, limestone, slate, concrete, and tile are largely still niche products.



Photo by Wilsonart

Laminate: The go-to countertop material for the vast majority of homeowners because of its low cost and extensive colour and pattern range. Can be made to imitate granite, quartz, wood, and other materials. Typically made from phenolic treated paper and melamine resin.

Cost: \$

Pros: Good impact-, stain- and heat-resistance; easy to maintain; a phenomenal choice of colours/patterns; DIYer can install.

Cons: Easier to scratch than granite or quartz; cannot be repaired; large countertops require seams

Brands: Formica, Wilsonart, Arborite, Pionite, Nevamar

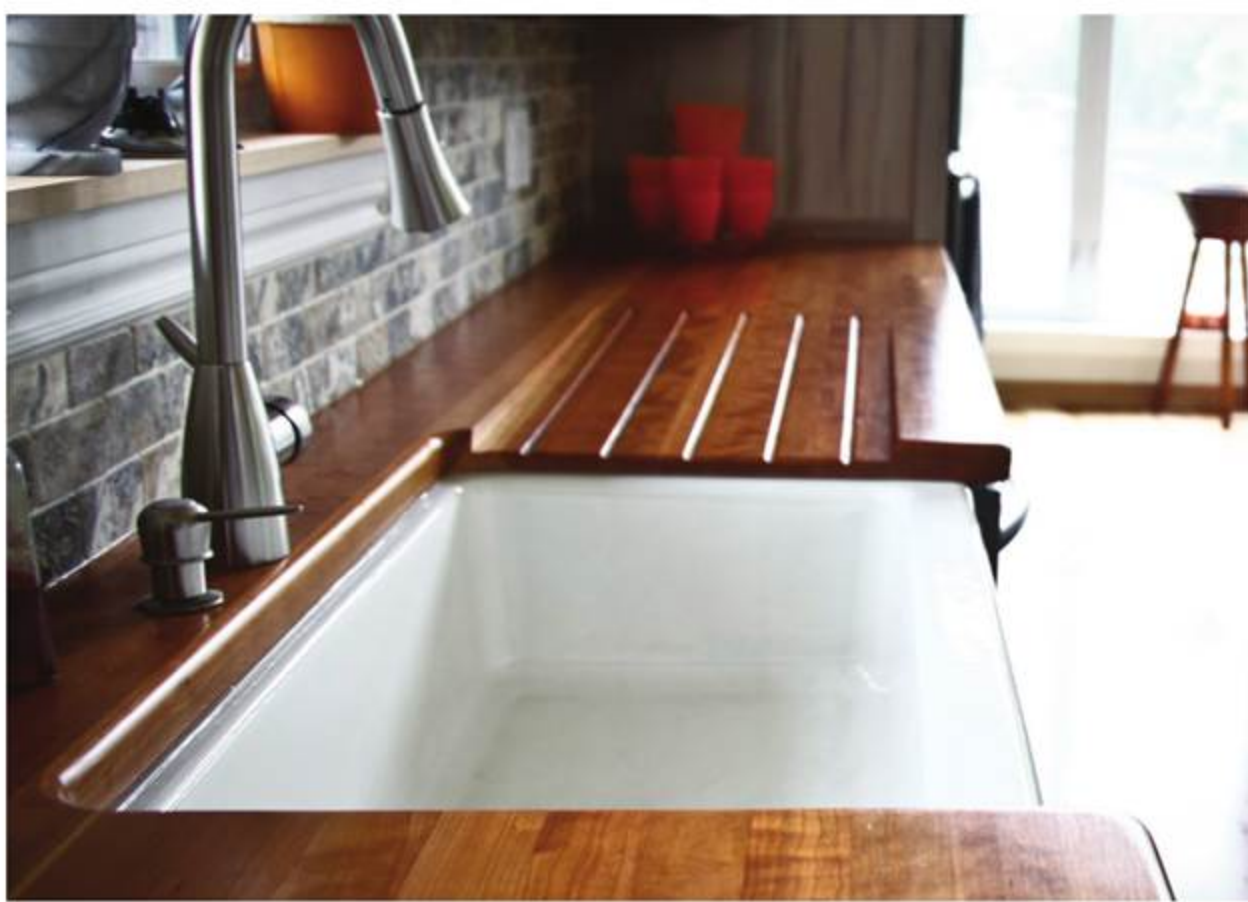


Photo by Canadian Butcher Block Company

Wood: Options include solid wood and end-grain butcher blocks. They provide an alluring look and feel and add considerable tactile warmth. However, because they require greater care and maintenance they are often used on kitchen islands or short sections of countertops.

Cost: \$\$

Pros: Relatively durable; DIYer can install.

Cons: Scratch, dent, and scorch easily; prone to moisture damage near sinks or over the dishwasher; require regular maintenance.

Sources: Canadian Butcher Block Co.; local millwork shops



Photo by Natural Stone City

Granite: The most popular natural quarried stone. It provides the ultimate in an 'all natural' look and feel. No two slabs are the same, so you get a unique colour and pattern combination. Available in a variety of colours and in solid, marbled, and speckled patterns, along with a matte or glossy finish. Quarried in countries including Brazil, Canada, China, and Italy.

Cost: \$\$\$\$

Pros: Stain, scratch, heat, impact, and moisture resistant; low maintenance.

Cons: Limited colour range; large countertops require seams;

Planning to Sell

For many buyers, the kitchen is the hub of the home. It's also the one room that people think of as being most costly to update. After all, it's not just an empty room, it has all that stuff – appliances, cabinetry, countertops, backsplash, faucets, sink, and the like. If your countertops are stained, scratched, or overly worn, buyers are likely going to factor in the price of replacing them on any offer they make. So, installing new countertops might have an impact on how quickly the home sells, and how much is offered. One major caveat though, if the rest of the kitchen is in mediocre or poor condition, then upgrading just one component is unlikely to have much of a positive impact. This is where the advice from a seasoned professional real estate agent can prove very helpful.

seams are more prominent than with quartz; periodic re-sealing required; professional installation required.

Sources: Stonecraft Canada; Natural Stone City Inc.; World of Stone.



Photo by Cambria

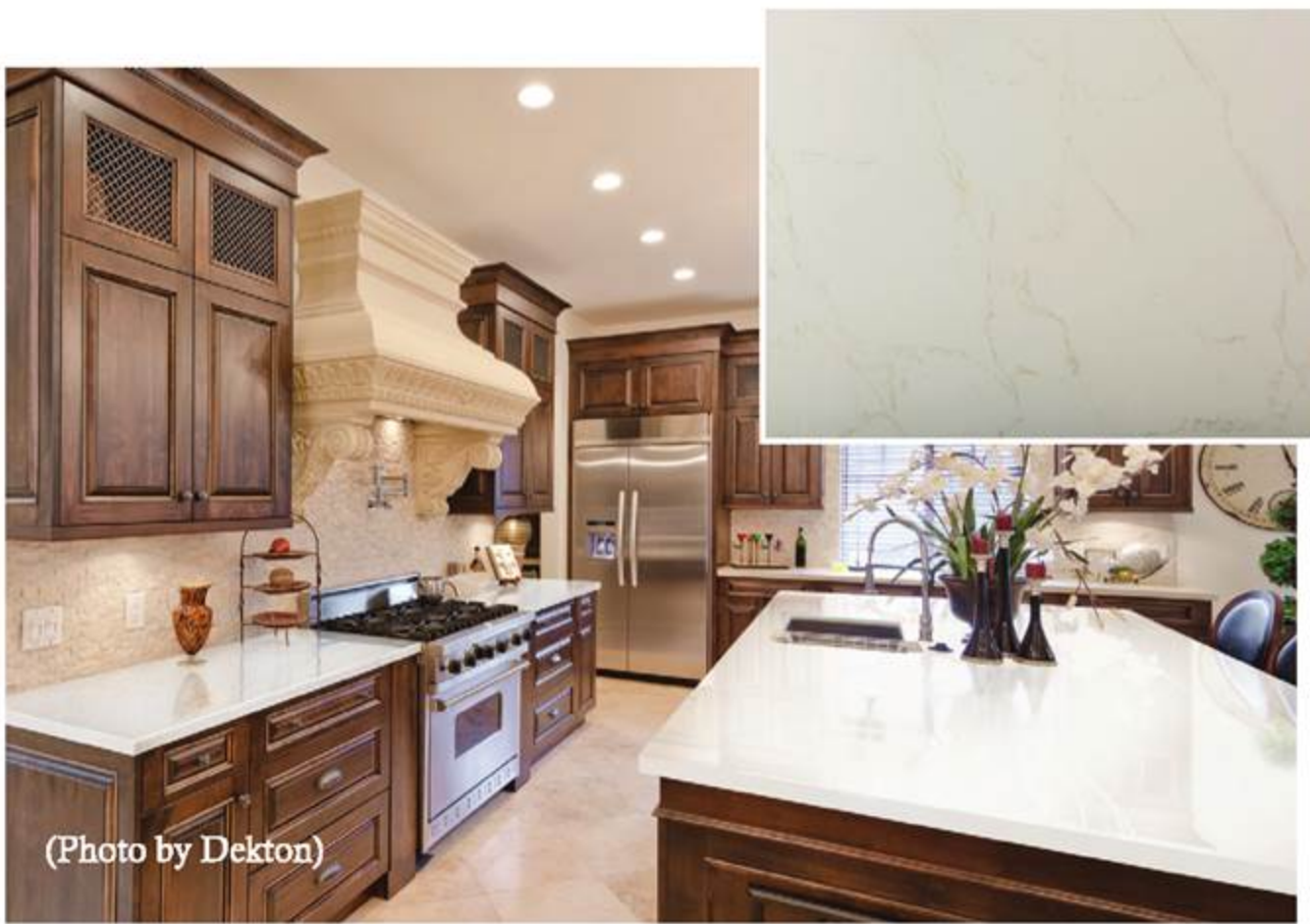
Quartz: Also referred to as engineered stone, it's manufactured from crushed quartz (93 percent) mixed with resins, polymers, and pigments (7 percent). Available in a wide range of colours and patterns. Can have a flecked or smooth look depending on the coarseness of the quartz. Provides a more consistent look than granite.

Cost: \$\$\$\$

Pros: Stain- impact- and moisture-resistant; uniform appearance; no sealing required; maintenance-free.

Cons: Less scratch-resistant than granite; not heat-tolerant; large countertops require seams; UV-intolerant; professional installation recommended.

Brands: Cambria, Corian, Silestone, Caesarstone



(Photo by Dekton)

Synthetic Solid Surface: Made of 100 percent acrylic, 100 percent polyester, or a combination of the two. Available in a variety of colours and patterns (but not as extensive as laminate). Typically made to imitate granite or quartz. One of the few materials that can be made with an integrated sink for a seamless installation.

Cost: \$\$

Pros: Good impact and heat resistance; repairable; easy to maintain

Cons: Moderate scratch resistance; professional installation recommended.

Brands: Corian, Avonite, Dekton

Stainless Steel: Offers a distinctive modern look that blends in well with stainless steel appliances.



Photo by Silver Star Metal Fabricating

Pros: Hygienic; stain- heat- corrosion-resistant; extremely durable; easy to maintain

Cons: Scratches and dents easily; shows fingerprints; chemical cleaners can discolour it.

Cost: \$\$\$

Brands: Usually custom-made by local fabricators.

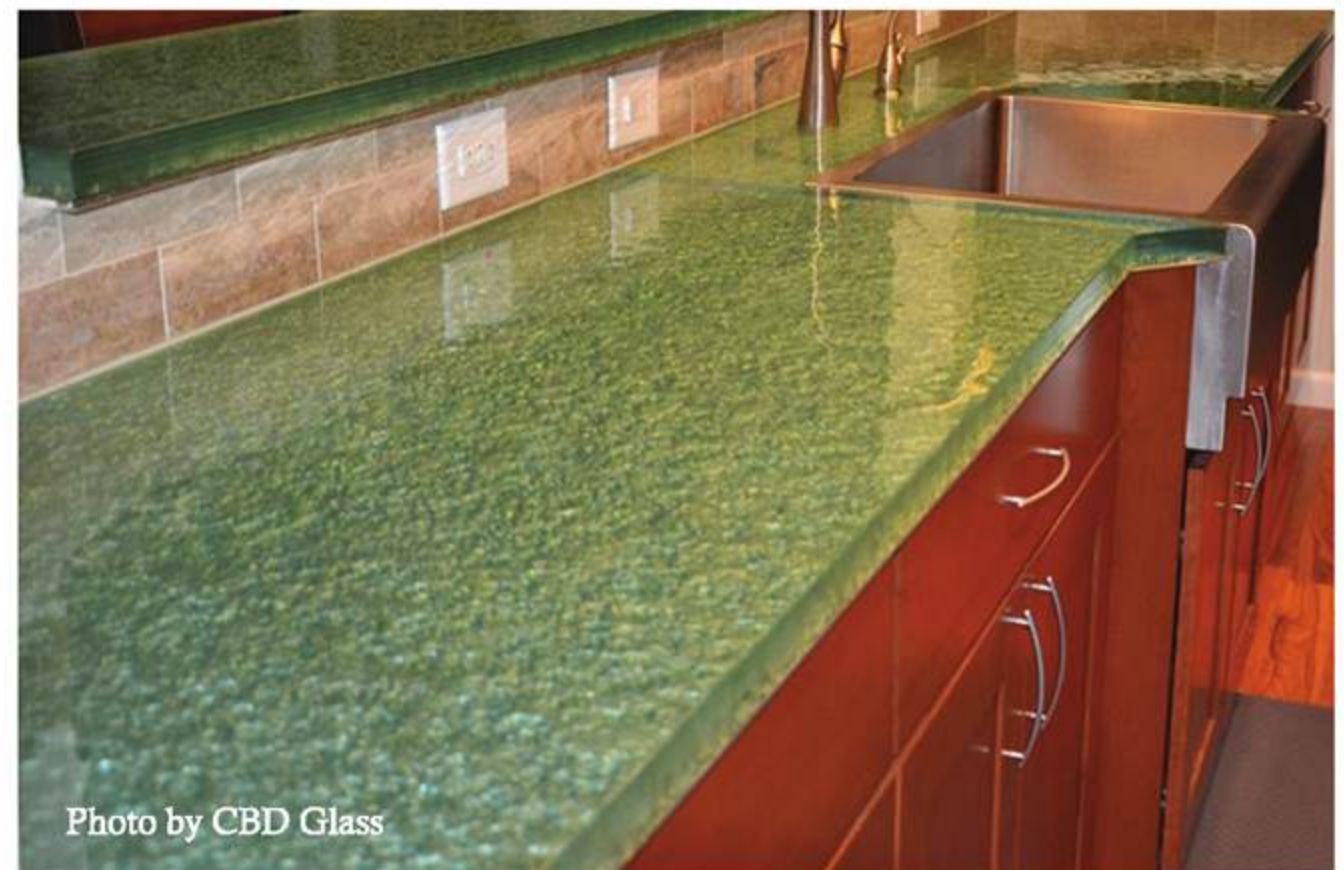


Photo by CBD Glass

Glass: Another material that offers a contemporary look. Available in a vast array of colours, shapes, and textures, as single slabs and in a recycled glass format.

Pros: Heat- and stain-resistant; maintenance-free; very easy to clean.

Cons: Susceptible to cracks; chips are difficult, if not impossible to repair; vulnerable to acidic substances; shows fingerprints.

Cost: \$\$\$

Brands: ThinkGlass, CDB, Cosentino, Vetrazzo



CARL DUGUAY

cduguay@canadianwoodworking.com



Go Online for More

RELATED ARTICLES: How to Build Solid Wood Countertops (Dec/Jan 2015), Working With Laminate (Feb/Mar 2010), Special Cabinets and Countertops – Part 4 (Oct/Nov 2003)

shopnews

Sponsored Content

Sliced Red Oak – A New Classic at Home Depot

Red oak has been a classic woodworking material for ages, but some people feel that rotary cut red oak is too wild and bold a look for those who work with hardwood plywood panels. Home Depot stores throughout Canada now stock a sliced red oak choice from Columbia Forest Products that delivers a handsome, refined Red Oak lumber look in a cost-effective panel format. Available in 4' x 8' sheets in 1/2" and 3/4" thicknesses, this Canadian-made decorative plywood is also made with formaldehyde-free, soy-based PureBond® technology so customers can breathe easy about their indoor air quality.

www.homedepot.ca/



With the wide selection of new products that come out annually, it can be overwhelming to have to keep up to date with everything that hits the market. To make this task easier on Canadian Woodworking & Home Improvement readers, we have assembled this list of "Hot Products" to kick off 2017.

BESSEY's NEW Pipe Clamp

Although viewed as a more traditional tool, the pipe clamp can be found in nearly every workshop. BESSEY's newest version has a stable base, smooth action ACME thread and a large clamping contact surface. It also comes standard with pads. Available in 1/2 IN (PC12-2) and 3/4 IN (PC34-2) versions, the cast construction is designed for years of reliable service.

Why It's Hot: The spindle comes with a hex head spindle to facilitate clamping. This feature is not to



augment clamping force but rather, to make it easier for highly repetitive clamping functions or for those with wrist strength issues.

www.besseytools.com

Oneida Air Systems Viper Scraper

The Oneida Air Systems Viper Scraper is a hollow handled, ergonomically designed scraper with a textured grip and a reversible tungsten-carbide blade. It attaches to your shop vacuum by a hose and sucks all waste through your hose to your shop vacuum reducing cleanup and exposure to the dust and scrapings. Made in the USA.

Why It's Hot: Now you can have mess-free scraping for any project including paint scraping, popcorn ceiling removal, lead abatement, boat hull repair, stucco removal and much more. Eliminates the mess and the health considerations.

\$24.99USD

www.oneida-air.com



Easy Radiant Works EZ Duzzit Garage/Shop Heater

Experience the comfort of radiant heat in your shop with the EZ Duzzit radiant garage/shop heater. The EZ Duzzit offers 40,000 BTUH of comfortable radiant heat in a 22' straight, 12' U, or 10' x 10' L configuration. Available in propane or natural gas models, with an option for isolated combustion air, these units are perfect for the woodworking hobbyist.

Why It's Hot: Manufactured



in Canada, built to last, and covered by an industry best 4 year "No ifs, Ands, or Buts" guarantee, the EZ Duzzit will provide decades of comfortable, safe, quiet, and fuel efficient heat in your garage or workshop.

www.easyradiantworks.com

DEWALT FlexVolt System Cordless Table Saw

DEWALT's 60V MAX* 8-1/4" Table Saw's brushless motor provides runtime, durability, and power and covers 95% of ripping applications on a variety of materials. Using one FLEXVOLT Battery, the Table Saw can rip up to 302 linear feet of 3/4" OSB material on a single charge. With a maximum rip capacity of 24" on the right side of the blade and a maximum rip capacity of 12" on the left side, the saw can easily handle full 4x8' sheets of material.

Why It's Hot: At only 45 lbs.



(without a battery) and with the blade guard assembly and all other components stored onboard, the Table Saw is easy to transport using the integrated side handle. \$699 at Home Depot and other home improvement stores

www.dewalt.ca

The Mini-Mite 5 PLATINUM T70

The Mini-Mite 5 PLATINUM T70 System is the most powerful 5-stage on the market. Equipped with a Heat Dissipation Box that removes any heat buildup from the Turbine case & Noise Reduction Covers, this system is a favourite in the industry. It's powerful, portable and perfect for all fine-finishing.

Why It's Hot: The 5-stage provides additional power and develops 9.5PSI. This allows application of heavier coatings and thicker viscosity finishes faster and with less time spent on material preparation.



Includes Bonus 5-for-5 Package (6' Whip Hose, Wet Film Gauge, Cleaning Kit, Extra Filters and "Always Measure" Booklet)

www.fujispray.com

New PC Cordless 20V Brushless Nailer

The 18 GA Brad Nailer has a fastener length capacity of 5/8" to 2" and a magazine capacity of 100 nails. The nailer is capable of driving up to 1300 nails per charge using a 4.0Ah PORTER-CABLE battery (sold separately), and up to 450 nails per charge using a 1.5Ah PORTER-CABLE battery (included in kitted offering). Weighing only 5.1 lbs without a battery, this lightweight and balanced tool contains a rubber over-mold ergonomic handle that provides maximum comfort and control during use.



Why It's Hot: The Brad Nailer includes several tool-free features including a tool-free jam release, tool-free depth adjustment wheel, and a tool-free stall release lever. \$299

Available at Lowe's and Amazon.ca.
www.portercable.ca

Bosch Self-Leveling Cross-Line Laser

The GL 55 offers optimal leveling and alignment solutions for renovators, carpenters, and avid DIYers. It features vertical, horizontal and cross-line modes and can project two lines independently or together. It includes the Bosch VisiMax™ technology, which allows for outstanding line visibility in standard working conditions and protection from overheating. Laser lines are visible up to 50', with an accuracy of $\pm 1/8"$ at 33'. The Bosch smart pendulum system self-levels and indicates out-of-level condition, to help ensure an accurate layout. Includes mounting bracket, target plate, batteries, and carry case.

Why It's Hot: Excellent quality, features, and performance. Bright and crisp lines for easy viewing. Simple keypad operation. Multiple operating modes. Self-leveling and out-of-level indicators.

www.boschtools.ca



Benchmark Twistor Cordless Screwdriver

New and exclusive to Home Hardware is the Benchmark Twistor. Easily reach where other cordless screwdrivers cannot. Always drive screws at the right angle with 380 different head positions and 360 degree orbital rotation and flexibility. It has a variable speed trigger, adjustable LED work light, quick release chuck and a rubber over mold for superior grip.



Why It's Hot: This kit includes an 8V LI-ION removable battery, a fast charger and 1" screw driving bits (PH1, 2 x PH2, PH3, SQ1, 2 x SQ2, SQ3).

Retail \$49.97

Item number 1248-254

www.homehardware.ca

Forrest Ply Veneer Worker (PVW) Blade

This commercial-quality blade is designed specifically for rip and cross cutting two-sided plywood—finished or unfinished—and plywood veneers. Delivering flawless cuts without splintering or fuzz, it's also perfect for cross cutting solid woods. The PVW blade uses the same high-precision manufacturing process as our award-winning Woodworker II. All Forrest blades are American-made and come with a 30-day, money-back guarantee.

Why It's Hot: Veneer-covered plywoods and coated panels used on kitchen and bathroom cabinets can now be cut on a table saw versus a panel saw—quite a savings for the small shop owner! Superb engineering ensures vibration-free performance and long life.

MSRP \$162.00

www.forrestblades.com



King Industrial Benchtop Jointer with 6" Helical Cutterhead

The 1 HP, belt driven motor delivers power to the helical style cutterhead providing an exceptional finish when either face or edge jointing. The safety keyed lock-out switch and a pair of push blocks are standard equipment on this parallelogram jointer. At 38 pounds, it is handy, portable and fun to use.

Why It's Hot: Not every shop needs a big cumbersome jointer, but when you need it, you need it. The KC-6HJC is your answer. It is portable, quiet and efficiently



delivers a superior finish on both hard and soft woods. Make this helical design jointer the next addition to your shop.

www.kingcanada.com

King Industrial Benchtop Planer with 13" Helical Cutterhead

With 26 two-sided cutters, this planer cuts quieter while offering an exceptional finish on both hard and soft woods. Equipped with eight pre-set depth stops, cutterhead locking system, material thickness gauge, and King's exclusive 2 position dust hood, it has the best features available. At 85 pounds, with cushioned handles, and safety keyed lock out switch, it's both safe and portable.

Why It's Hot: Offering quiet operation and exceptional quality of finish, this King Industrial



helical planer offers performance and value to any shop. Whether it's the backup planer in your cabinet shop or the work-horse in your hobby shop, the KC-13HPC is the right choice.

www.kingcanada.com

Mirka 3x4 Sander with 4 Rolls

The perfect solution for smaller sanding jobs. This kit includes the MR-34DB sander 3" x 4" with self-generating vacuum for dust-free sanding with 3 mm orbit. It only weighs 0.68 kg with a maximum speed of 10,000 RPM. The kit also includes 4 Abranet rolls in the following grits: 120, 180, 240 and 320. The NET abrasives offer high performance and long lifespan when compared to traditional sandpaper.

Why It's Hot: The MR-34DB is an ergonomic and lightweight pneumatic



orbital sander which guarantees a good surface finish thanks to its 3mm orbit. NET abrasives are a key component for dust-free sanding. This solution is suitable for smaller sanding jobs such as windows, kitchen cabinet doors and furniture production.

www.mirka.com

Milescraft Drill90PLUS

Milescraft has released a new heavy duty right angle drill attachment for the DIY market! The Drill90PLUS has an enhanced, all-metal drive with bearings providing longer life and durability. Comes with a 3/8" keyless chuck and is compatible with most drill accessories including spade bits and hole saws. With a reach of 4" you can now drill into those tight spaces.

Why It's Hot: The Drill90PLUS is the new, upgraded version to the original Milescraft Drill90. This completely new design has an ergonomic body design with removable, dual position handle for optimal support and capability when drilling in hard-to-reach spaces.

Price: \$34.99

www.milescraft.com



Milescraft DowelJigKit

The DowelJigKit includes a JointMate, which is a self-centering jig with an adjustable fence that allows for precise dowel alignment for maximum joint strength. The built-in metal bushings ensure accurate alignment when drilling, for perfectly positioned dowels. The kit includes steel dowel/tenon centers, fluted dowel pins, drill bits and depth stops. DowelJigKit is an affordable solution to fit your doweling needs!

Why It's Hot: The Milescraft DowelJigKit includes everything you need to get started creating



doweled joints! Whether you are building or repairing furniture, this kit allows for quick and accurately doweled corner, edge or surface joints.

Price: \$29.99

www.milescraft.com

Milescraft SandDevil3.0

With the innovative design of the Milescraft SandDevil3.0, you get power tool results with hand-sanding precision. Sanding hard to reach spaces has never been easier! SandDevil3.0 uses a common belt size, 2-1/2" x 14", for easy replacement and you can reuse old sanding belts over and over again. Included with the SandDevil3.0 is an 80 grit cloth backed sanding belt.

Why It's Hot: The Milescraft SandDevil3.0 can be used on multiple surfaces, providing precision



CLEVER LEVER



sanding results with a flawless finish. It features the Clever Lever for self-tightening, tool-free exchange of the sand paper belt. It is a valuable addition to every tool box!

Price: \$22.99

www.milescraft.com

Milescraft Exactor

Simplify your measuring and marking applications with the Milescraft Exactor, the only 9-in-1 tool of its kind. The Exactor has built-in dual levels, a sliding bevel, depth gauge, dual 45° miter measurements, inner and outer 90° measurements, a 3/16" reveal and an imperial and metric scale. The Milescraft Exactor is designed for a multitude of everyday household and jobsite applications.

Why It's Hot: Exactor has a five-way adjustable rule that functions as a depth gauge, miter layout tool, scribe, square measurement tool, or traditional ruler. Whether you're transferring a measurement, laying out mitered corners, or doing trim work – Exactor is the only tool you'll need to get the job done right!

Price: \$14.99

www.milescraft.com



ROLAIR Electric Oil-less Air Compressor

At 60 decibels, ROLAIR's newest super-quiet, oilless trim and finish air compressor will appeal to any contractor who is concerned about noise pollution on the jobsite, especially when working indoors. The rest will appreciate that it delivers 2.4 CFM at 90 PSI, draws 7.5 amps while running and features a robust roll cage with a convenient cord wrap. Additional features include a quarter-turn drain valve, protected intake filter housing and a low-profile tank assembly.

Why It's Hot: The JC10PLUS builds on the formula that made the original JC10 so popular. Trim and finish carpenters will benefit from the higher CFM rating and lower amp draw. They'll also appreciate the upward-facing gauges, heavy-duty vibration dampeners and comfortable handle grip. Available January 2017.

\$319 (USD)

www.rolair.com

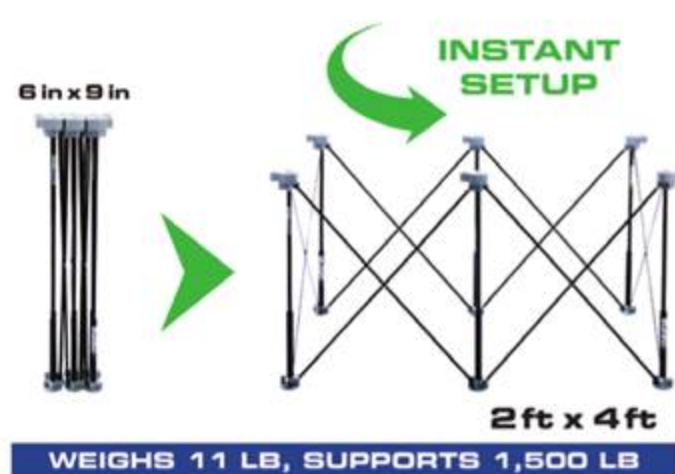


Centipede Portable Work System

The unique steel frame design of the Centipede Portable Work System features multiple steel struts that rest directly between the load and ground to support thousands of pounds while keeping even the thinnest sheet materials from sagging. Each strut moves in tandem with a series of flat steel cross bars flexible enough to absorb impacts and ensure long-lasting smooth operation.

Why It's Hot: Compact portable bases perfect for creating extra bench space anywhere, anytime. Ultra-lightweight and incredibly easy to set up, this stand provides stable support for pretty much anything that can fit on it, includes accessories, and comes in a carry bag.

www.centipedetool.com



Drill Doctor

Sharpen dull and broken drill bits with Drill Doctor. Don't get stuck in the middle of a project and run to the store for a new bit – just sharpen it and get back to work. Drill Doctors can sharpen a wide range of point angles and drill materials, probably everything you own. Visit website to learn about special offers.

Why it's Hot:

- You already own a lifetime supply of drill bits. Now sharpen them and save money!



- Fast, easy, works every time
 - Sharper than new results
 - Saves money – pays for itself in just a few sharpenings
 - Models to fit any budget
 - Durable – three-year warranty
- www.drilldoctor.com

Work Sharp Knife & Tool Sharpener

The Original Work Sharp Knife & Tool Sharpener is the first knife sharpener designed to sharpen every knife you own. Using flexible belts and sharpening guides to ensure your knives or cutting tools are sharpened at the proper angle every time. The Knife & Tool Sharpener sharpens straight blades, curved blades, filet knives, serrated knives, gut hooks, and any other type of knife you use – quickly and easily.



Why It's Hot: The Work Sharp Knife & Tool Sharpener sharpens every knife you own. Flexible abrasive belts and precision sharpening guides provide the proper angle every time to sharpen like a pro. It's versatility and portability makes it an invaluable tool to keep all blades razor sharp and ready for use.

MSRP \$89.95

www.worksharptools.com

DAP Wood Pro-X Latex All-Purpose Wood Filler with DryDex Dry Time Indicator

Just like our popular DryDex spackling, this easy to use, latex-based wood filler goes on Pink and dries Natural when it is ready to sand and stain. With low odour and easy soap and water cleanup, this wood filler can be planed, cut, nailed and drilled – just like real wood. Also, it's thick, knife-grade formula can be molded & sculpted, making it ideal for corners & vertical surfaces.

Why It's Hot: Unlike other latex-based wood fillers that change colour when dry, DAP Wood Pro-X All-Purpose Wood Filler accepts stain very well, resists cracking and



can be used indoors and outdoors when properly topcoated. Coming to Canada in early 2017.

canada.dap.com

DAP Wood Pro Latex All-Purpose Wood Filler

This professional-quality latex-based wood filler dries quickly, leaving a uniform, smooth, nearly blemish-free appearance that stains well and blends right in. Once cured, this filler is very strong, will accept screws and nails without crumbling or cracking, and can be used indoors or outdoors. Available in a range of colours, and in tubs and convenient squeeze tubes.

Why It's Hot: The thick, even consistency of DAP Wood Pro Latex All-Purpose Wood Filler means it can be "bulked up" for deeper fills and can be used for vertical or overhead applications. Coming to Canada in early 2017.

canada.dap.com

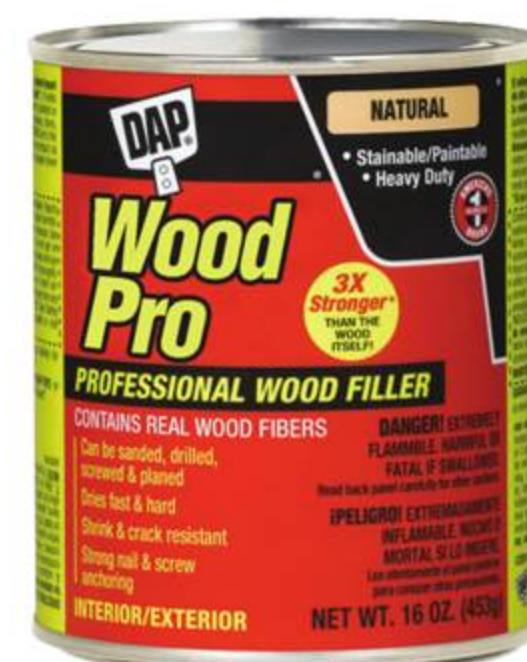


DAP Wood Pro Professional Wood Filler

Fast-drying and shrink and crack resistant, this traditional wood filler spreads smoothly and easily, and can be molded and shaped to suit virtually any repair. Easy to sand, plane, and stain, this wood filler creates a seamless fill that allows strong anchoring of screws and nails.

Why It's Hot: Using the same formulation as America's #1 selling wood filler, this solvent-based wood filler contains real wood fibers and dries 3X stronger than the wood itself! Coming to Canada in early 2017.

canada.dap.com



Every Workshop Needs A Great Knife

Flexcut knives are precision made for maximum performance. Their high-carbon steel blades have durable points, hold an edge extremely well and are easily maintained by simple stropping. Each knife is expertly hand-sharpened and tested before shipping, so it's ready to use right out of the package. Comfortable, curved ash handles allow for long periods of carving without hand fatigue. In addition to those pictured, 16 different knives are available to handle every task from roughing in to fine detail carving.

Why They're Hot: Flexcut knives are versatile, well-engineered tools, 100% North American made, assembled and sourced. The top pick of pro carvers, hobbyists and woodworkers around the world.

SRP: Ranging from \$18.50 to \$28.50

For a list of Canadian retailers:
www.flexcut.com



Flexcut 3-Blade Starter Set

We've packaged some of our most popular knives in one, 3-Knife Starter Set. The comfortable curved ergonomic handle allows for long periods of carving without hand fatigue.

Includes KN12 Cutting Knife, KN13 Detail Knife, KN14 Roughing Knife, and Flexcut Gold polishing compound

Why It's Hot: Flexcut knives are versatile, well-engineered tools, 100% North American made, assembled and sourced. The company's commitment to quality and customer service make these knives a top pick of pro carvers, hobbyists and woodworkers around the world.

KN500 - \$57.50

For a list of Canadian retailers:
www.flexcut.com



Flexcut Carvin' Jack

The 6-Blade Carvin' Jack is the world's first folding multi-tool for woodcarving. It's equipped with 2 scorps, straight gouge, a hook knife, chisel, and a detail knife. You also get a SlipStrop, a bar of Flexcut Gold polishing compound to keep your blades sharp, and a leather belt-mounted sheath that looks good with jeans or even your better pants.

Why It's Hot: The only tool like it in the world - A woodcarving set in your pocket.

JKN91 SRP: \$156.50

For a list of Canadian retailers:
www.flexcut.com



Kreg Cabinet Hardware Jig

The Kreg Cabinet Hardware Jig takes the guesswork out of installing cabinet knobs and pulls. The moveable edge guide and measuring scales make it easy to position knobs precisely, while adjustable drill guides ensure straight holes for perfect knob and pull positioning every time. Perfect for new construction and for refreshing entire rooms.

Price: \$32.99

Why It's Hot: The Cabinet Hardware Jig is simple to use. All you need is a drill and a 3/16"



bit, and the ability to set the jig to match your hardware and the position where you want it to go.

www.kregtool.com/hardwarejigs

Kreg Concealed Hinge Jig

The Kreg Concealed Hinge Jig allows you to drill cup holes for concealed cabinet door hinges using just a drill. The jig positions an included carbide-tipped bit exactly at the proper position and offset, and drills to the perfect depth every time thanks to the depth stop collar.

Price: \$39.99

Why It's Hot: Concealed hinges are great for mounting cabinet doors because they stay out of sight, they're adjustable, and they work very well. The Kreg Concealed Hinge Jig



simplifies the installation process using nothing more than a drill and the included bit.

www.kregtool.com/hardwarejigs

Kreg Drawer Slide Jig

The Kreg Drawer Slide Jig simplifies drawer installation by aligning slides in the cabinet and on the drawer. Built-in tabs make the jig easy to align to support the slide inside the cabinet, and to support the drawers as you attach the slides to them.

Price: \$32.99

Why It's Hot: The Kreg Drawer Slide Jig is simple to use, and it ensures that every drawer fits right and operates smoothly. Plus, the Jig works with ball-bearing, epoxy-coated, and undermount slides for perfect



positioning every time.
www.kregtool.com/hardwarejigs

Kreg Mobile Project Center

The Mobile Project Center is a workbench, sawhorse, assembly table, and clamping station all in one. It's easy to set up and store away, and it provides a sturdy platform for all kinds of project tasks. Plus, the Mobile Project Center includes \$40 worth of bonus clamping accessories, so it's ready to go to work, right out of the box.

Price: \$199.99

Why It's Hot: In one mode, it's a sturdy sawhorse that's great for supporting long boards as you cut. Flip the large tables into position and this product offers the



features you'd expect to find in a high-end stationary workbench.
www.kregtool.com

Worx Cordless Switchdriver

WORX 20V Switchdriver features two 1/4 in. chucks that rotate clockwise or counter-clockwise with the push of a button. Drill a pilot hole and then rotate the second chuck with a driver bit to sink screw. The 3 lb. drill has a two-speed gearbox and an 11-position electronic clutch. Includes two, 1.5 Ah batteries, charger, LED worklight and carrying bag.

Why It's Hot: Only drill on the market today with two revolving chucks. Load any combination of 1/4 in. drill and screwdriver bits to speed assembly work. Gets work done twice as fast without interruption. No more fumbling or lost bits.

www.worx.com



DEWALT Brushless 20V XR Cordless Planer

DEWALT's 20V MAX Brushless Planer (DCP580B) features a brushless motor for maximum efficiency and that helps to maintain speed under load. With a 3-1/4" width capacity with 3/32" adjustments, a rebate capacity of 5/64", and up to 15,000 RPM, this tool offers premium performance for a variety of woodworking applications. Ergonomically designed, the 20V MAX Brushless Planer (DCP580B) has a comfortable grip and is well-balanced for horizontal and vertical planing. The planer weighs 6.7lbs and operates off



of the DEWALT 20V MAX battery system.

Why It's Hot: Lightweight and cordless, the planer can be easily transported around the jobsite without the hassle of a cord. \$279 (bare tool) and www.dewalt.ca for retailer availability.

Rockwell F80 Oscillating Multitool

Rockwell's fastest and most powerful Sonicrafter, the F80 with Duotech Oscillation, features oscillating angles of 3.4 and 5.0 degrees. Powered by a 4.2 amp motor, the variable-speed multi-tool incorporates electronic constant speed control and Vibrafree technology. F80 features industry's-best maximum cutting load of 35 lbs. of force. Its Universal Fit accepts other major brand's accessories, and Hyperlock provides one ton of clamping force to prevent accessory slippage.



Why It's Hot:

The Rockwell F80 Duotech Oscillation Sonicrafter is the first oscillating tool with two oscillating angles of 3.4 and 5.0 degrees. Dual oscillating angles enable the tool to work harder and run faster. Users can now choose the angle that best fits the application.

www.rockwelltools.com

Pegasus Worktable and Sawhorse Combo

The space-saving 30 lb. WORX Pegasus is a combination worktable and sawhorse. It features built-in channels to house two, 18 in. quick-clamps and four dogs to secure workpieces for cutting, sanding gluing or staining operations. The 31 in. x 25 in. tabletop supports loads up to 300 lbs. and 1,000 lbs. in sawhorse configuration. Built-in tool slots and trays house frequently used tools.

Why It's Hot: Pegasus functions as a worktable and sawhorse and stands at a comfortable working



height of 32 inches. It's constructed of nylon resin and aluminum so it won't rust. Integrated clamps assist in multiple projects and store when not in use.

www.worx.com

Fein MultiMaster FMM 350 QSL With Starlock

The German made MultiMaster is the undisputed leader in oscillating tools. Its anti-vibration system produces the lowest vibration rating in the industry, while high-quality electronics deliver infinitely variable constant speed under load. Its unique 3D design transfers maximum power to the accessory. An all metal drive head and gearbox ensure maximum service life. And, the QuickIN tool-free clamp, in conjunction with the new Starlock snap-fit mounting system, enables you to change accessories in under 3 seconds. MultiMaster – the universal system for interior construction and renovation.

Why It's Hot: Use it for a wide range of cutting, sanding, sawing, scraping, and polishing tasks. Work precisely and efficiently on corners, edges, grooves, and profiles. It's unbeatable for sanding into tight corners, grout removal, cutting door jambs and toe kicks, and making trim cuts in bathrooms and kitchens.

www.fein.ca



Fein Starlock Accessories

Starlock accessories are designed to work seamlessly with Fein's MultiMaster, SuperCut and MultiTalent oscillating tools, as well as with Bosch, Makita, Milwaukee and other tool brands. The unique Starlock design ensures a super tight fit between tool and accessory, for maximum power transfer to the accessory. Fein offers the largest range of oscillating accessories on the market, with many exclusive designs for unique jobs. They offer accessories for a full range of sawing, sanding, scraping, and other tasks.

Why It's Hot: While an oscillating tool supplies the power, it's



the accessory that does the work. Starlock accessories are made from premium steel in Germany, and provide fast, precise, clean cutting. Their long service life means better value for your money. Many of the Starlock accessories feature a stepped design that enables you to work flush to the surface for better accuracy. There are over 40 Starlock accessories to choose from.

www.fein.ca

Bow FeatherPRO & FeatherDUO

The Bow FeatherPRO Featherboard not only provides exceptional protection against kickback but is as smooth as a traditional featherboard on the infeed. The hardened foam material of the feathers holds soft woods without marring and absorbs vibration. Buy the featherPRO for \$39.99 or the DUO stackable featherboard kit for \$79.99.

Why It's Hot:

- Increased kickback safety to end user
- Anti-kickback living hinge design



- Long lasting and wear resistant material
 - Non-marring feathers, easy on soft woods
 - Absorbs vibration and versatile
- www.elitetools.ca

AXIOM Precision CNC Machines

Versatility, robustness, easy to use... These are only a few of the features that make AXIOM stand out in the field of CNC machines. Its unique solidity comes from its steel structure. Every PRO Version machine possesses a liquid cooling system. It's the Ivy League of CNC machines! Great quality-price ratio.

Why It's Hot: The AXIOM machines are easy to use and can work with any software, enhancing their versatility. Motion on every axis of every Axiom machine is controlled by high-precision ball screws.

Starting at: \$2699.

www.elitetools.ca



Grizzly 8" Jointer with Parallelogram Beds

This 8" Jointer is popular among both professional and hobbyist woodworkers. The 76-3/4" table with extra-long infeed table and the huge fence will make sure your stock is cut accurately. The easy to reach pedestal-mounted switch and lever-controlled table elevation make this a joy to operate. This machine will gobble up wood with ease and produce smooth, straight, and flat stock all day long.

Why It's Hot: The extra-long in feed table and extra-tall fence make controlling long stock easy for dead-flat jointing operations. Combine that with a fully adjustable infeed and outfeed table mechanism and quick-response lever controls and you have the perfect jointer for any shop.

G0490W Reg \$1,025 USD (2016)

www.grizzly.com



Grizzly Shop Fox 2 HP 7" Planer / Moulder with Stand

This next generation Planer/Moulder (W1812) features precision-ground cast-iron wings for increased work support, T-slots for easy guide rail adjustment, a one-piece enclosed stand, and a pedestal-mounted control switch with variable-speed feed motor for unsurpassed control over planing and moulding cutting results. If you make your own mouldings and frames, you need this machine!

Why It's Hot: With the wide selection of accessory moulding knives, custom architectural mouldings are within easy reach for the one-off shop as well as the production shop. And, with the open frame design and optional elliptical jig, creating matching curved casings for round-top windows and doors is a breeze!

Reg \$1,650 USD (2016)

www.grizzly.com



Grizzly 17" Ultimate Bandsaw

We designed this "Ultimate" 17" bandsaw (G0636X) to compete directly against expensive "high-end" European bandsaws. After several years of research and development, we put together this amazing package that is a perfect blend of precision and muscle—with all the features (and more) of comparable saws. Finally, you can buy the bandsaw of your dreams and still have enough money left over for a bunch of high-end blades!

Why It's Hot: With power and cutting capacity to spare, this ultimate 17" bandsaw also features micro-adjusting rack and pinion table tilt, quick-change blade release/tensioning, deluxe fence, and a foot brake for safety and quicker stops for increased production.

Reg. \$2,550 USD (2016)

www.grizzly.com



Grizzly 15" Heavy-Duty Planer

Featuring a powerful 3 HP motor and 5000 RPM cutterhead speed, the headstock sits atop a four-column support with easy handwheel height adjustment and column locks. With this great 15" Heavy-Duty Planer (G0815) you can improve the functionality of your shop without sacrificing precious floor space, while still having the power you need to tackle large projects or do production work.

Why It's Hot: The stationary table on this 15 inch planer allows the use of fixed infeed and outfeed rollers so any thickness adjustments won't affect the floor to table height. The planing head is



supported by four cast iron columns and thickness adjustments are silky smooth with two gas springs and a large cast iron handwheel.

Reg \$895 USD (2016)

www.grizzly.com

Varathane Finishing

Achieve beautiful staining results with just ONE APPLICATION of the new Varathane Ultimate Stain.

Wait for ONE HOUR before applying just ONE COAT of the new Varathane Triple Thick Clear Finish – it is three times thicker than traditional polyurethane.

Why It's Hot: Your project is finished with professional results and you are free to get on with your day!

www.rustoleum.ca



shopnews

Sponsored Content

New Maple Leaf Pen Kit

Show your Canadian pride with our exclusive new Maple Leaf pen kit. It's an easy to make twist ballpoint pen kit featuring embossed maple leaves and a Parker-style refill. You can turn the barrel out of a material of your choice – for an extra Canadian touch, why not some Curly Canadian Maple or one of our Canadian flag pen blanks? The kit is available in three platings: gold with gun-metal accents, chrome with gold accents, and chrome with gun metal accents. Prices start at only \$6.95 per kit – volume discounts are available. Visit www.penblanks.ca for more information.



Amana Tool ZrN Coated CNC Bits

Amana Tool's broad line of ZrN coated 2D/3D Solid Carbide Spiral CNC bits cannot be beat.

Bits are specially designed for profiling and carving in plastic, foam, aluminum, & wood and other materials.

Collection includes ball nose, flat bottom, straight or tapered Spiral Up-Cut bits.

Amana's ZrN bits are sold individually (46280 - tapered ballnose, costs \$44.70) and in sets. (8 pc set #AMS-136, costs \$309.68)

Why It's Hot: Proprietary ZrN coating along with a high grade of solid carbide and superior grinding provides high resistance to wear, sharper cutting edges, extended tool life and less friction & heat buildup. Also allows for super precise detail work. Perfect for many applications.

www.amanatool.com



Craftex 10" Wet Grinder

This item is one of Busy Bee Tools best selling grinders and for good reason! With a slow wheel speed of only 115 RPM and water reservoir, you can sharpen a multitude of tools.

The universal support can be installed vertically or horizontally on the grinder and the grinding jig accepts a variety of cutting tools.

Why It's Hot: On sale until January 7th 2017 for only \$199, this makes a great addition to your workshop

www.busybeetools.com



NOVA Voyager DVR Drill Press

Worlds First Smart Drill Press, the most versatile and truly multipurpose machine, able to handle wood, metal, glass and plastics with ease. The direct drive design eliminates belts and pulleys, for ultra smooth operation and faster, more efficient drilling. Powerful 1.75HP/2HP high torque motor, 50-5500rpm variable speed, and onboard computer for incredible software assistance in all important areas around load, depth, vibration and safety functions.

Why It's Hot: The NOVA Voyager software can be upgraded and updated via USB Port, giving you the ultimate in functionality and flexibility.

SKU 58000

MSRP \$1,499.99

www.teknatool.com



NOVA Galaxi DVR Lathe

An excellent all round lathe, with incredible versatility. Onboard is intelligent 1.75/2HP DVR motor with features such as chisel dig in safety sensing, favorite speed settings and out of balance work adjustment. Super smooth operation and incredible torque. With a very low speed of 100rpm right up to 5000rpm, this is the first NOVA DVR Lathe to feature easy to use dial in speed control, making its the perfect solution for a wide

variety of projects, from small pens to large bowls and platters.

Why It's Hot: For a limited time, this comes with a free Wireless Remote control.

SKU 55214

MSRP \$2,249.99

www.teknatool.com



shopnews

Sponsored Content

Veritas Quick-Release Wonder Dog

The Veritas Quick-Release Wonder Dog has a fast-acting cam mechanism to speed adjustments. Simply slide the head against the workpiece, then throw the lever to apply clamping force. Curved and irregular shapes can also be clamped; two screw holes in the brass dog head let you attach a custom face of any shape, giving good control without marring work.

The low-profile head and clamp body are 5/8" and 11/16" thick, respectively, so you can plane stock as thin as 3/4" without worrying about hitting the clamp. The 3/4" diameter, 2-3/4" long post lets you use it wherever you can drill a suitably sized hole, and is canted to keep the clamp head against the bench top under clamping force. The dog has just over 6" of travel. The rod, post and cam lever are made of steel.

Visit www.leevalley.com for more information.



SawStop Professional Cabinet Saw

Woodworkers take pride in their creations. Serious table saw manufacturers do the same. With the Professional Cabinet Saw, SawStop dedicated countless engineering hours to ensuring nothing was missed. Offering two different motor configurations (1.75HP or 3HP) and three different fence and rail options (30", 36" or 52"), this saw gives you versatility around the shop matched with the ability to stop on contact with skin.

Why It's Hot: Skin detection, true vertical elevation, smooth repeatable cutting, and the industry-leading T-Glide Fence, gives you the highest quality cabinet saw that delivers repeatable cuts and overall excellence for all your project needs.

Starting at \$3,417

www.sawstop.ca



Laguna Flux Series Cyclones

Introducing the new "Flux" series cyclones from Laguna Tools. Laguna has been recognized for premium cyclones, but has "raised the bar" again in the cyclonic two stage dust collection arena. The P|Flux series comes standard with noise reducing acoustic foam.

Available in 1.5HP 110 volt as well as 2HP & 3HP

Why It's Hot: Laguna's new P|Flux ships standard with a high frequency remote control, HEPA filtration system. As well as many other unique features such as LED control panel and sensors alerting you when it is time to clean the filter and empty the drum.

Prices range from \$1,999CDN for 1.5hp to \$2,999 for 3hpCDN

www.lagunacleanair.com



Arbortech Turbo Plane

TURBO Plane is a revolutionary wood-working blade that attaches to any standard 4 or 4.5" Angle Grinder.

Why It's Hot: With Smooth Blade Technology wood workers, hobbyists, novices and artists alike can now remove wood safely and quickly whilst achieving a smooth sculpted finish. The added benefit of Angled Versatility means that you can achieve flat planed surfaces, great when working with live edge or hardwood tables. Yet, when tilted on an angle the TURBO Plane is ideal for concave or convex wood shaping. Create tables from firewood. Round and prepare lathe blanks. Carve bread bowls. Create wooden iPhone speakers. Perform log home maintenance. For more project ideas, tips and tricks and to see the TURBO Plane in action visit their YouTube channel: ArbortechWoodworking. For a catalogue call 866.517.7869.

www.arbortechusa.com



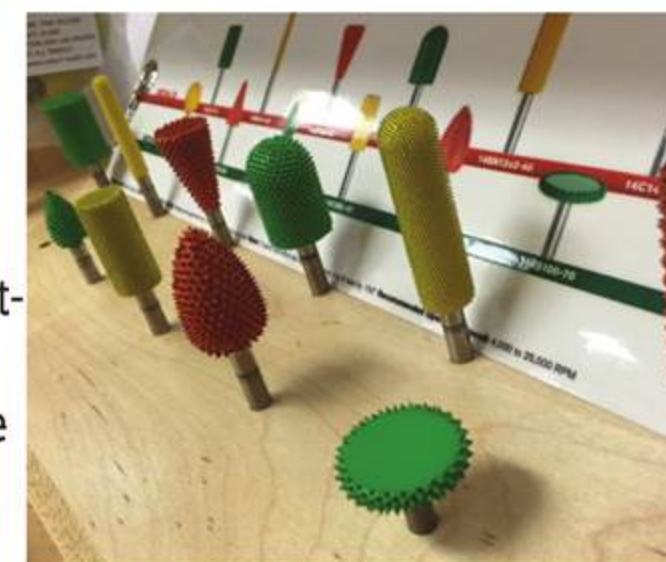
shopnews

Sponsored Content

Razor-Sharp Rotary Cuts at Tegs Tools

Tegs Tools has recently introduced into its stores a product that is ideal for the everyday woodworker.

Saburrtooth® rotary tools feature long-lasting, razor-sharp carbide cutting teeth arranged into a unique open pattern to resist loading while providing rapid stock removal and smoother finishes. These rotary tools are available in many shapes, sizes and textures to suit your carving, grinding, shaping, cutting and machining needs. They are available in 1/8", 3/32" and 1/4" shank sizes to suit any major brand rotary tool. Tegs stocks a wide range of Saburrtooth® products in store and online at www.tegstools.com.





Make a Set of Kids' Playing Card Holders

If you have kids or grandchildren who would like to play card games, but are having trouble holding a mitt full of cards, here's your answer. Make a few extras while you're at it, as I'm sure there are other kids in your life who would like to receive one as a gift.

Photos by Rob Brown

BY ROB BROWN

Encouraging kids to play cards not only strengthens the bond between family and friends, it helps with math and other cognitive skills. It's also a lot of fun for both kids and adults. When I started playing cards with my kids, the main stumbling block was that their hands weren't coordinated and large enough to deal with all the cards they were dealt, so I made them these simple holders.

Dimensions

The holders I made are 12" long and they work well. Usually some of the cards have to overlap each other, but that's no problem. In terms of width, the 1-1/2" holders I made are stable, without being cumbersome. I wouldn't make the holders any thinner than 3/4", as a certain amount of mass is required to help keep the holder from tipping over while kids handle it. My holders are about 15/16" thick, and are made from white ash.

Breakout

Start by breaking out stock long enough for all the holders you are going to build. It's easiest to work with one long piece, rather than a few shorter pieces. Aim for 7/8" thick x 1-1/2" wide stock, but there's no need to be overly accurate.



A Little Wider – With his rabbet plane held on an angle, Brown widens the mouth of the groove, allowing kids to more easily insert cards. This could also be done with a file or coarse sandpaper.

Machining

I used a thin kerf blade (3/32" wide) to machine the groove in the holders. At first I made a test cut with an ultra-thin 7-1/4" diameter blade that was 1/16" wide, but I thought the kerf would be too thin for my kids to easily insert cards into the groove. Tensions can sometimes run high while playing cards with kids – there's no reason to make matters worse.

Tilt your table saw blade to 10 degrees, and set the blade height to cut about half way into your stock. Adjust your rip





FOR LOVERS OF WOOD



More than **120**
species of wood to choose from

Solid lumber, veneer, live edge slabs, burls, plywood,
musical tone woods and pre-cut components

Custom millwork
Retail outlet
Shipping and delivery services

Contact us today! 357 Eagle Street N., Cambridge, ON
1 800 265 0624 | www.forloversofwood.com





Chamfer the Edges – A block plane eases all four edges to eliminate the chance of splinters. Here, Brown is heavily chamfering the two upper edges of the holders.

fence so the groove will be slightly on the user side of center, so when the cards are sitting in place they will be centered above the holder. In hindsight, I may have put a bit too much thought into perfecting groove placement; pretty much anywhere will likely work just fine. Pass the workpiece over the blade to create the groove.

I used a rabbet plane to slightly widen the mouth of the groove, to make inserting the cards even easier. If you don't have a rabbet plane, a file or some coarse sandpaper should do the trick.

To ensure nobody gets slivers, take a few passes with a block plane on all four edges. Spend a bit of extra time on the upper edges, as a small chamfer is a nice touch to these holders.

Cross-cut the holders to length then ease the sharp corners and edges. Sand the surfaces to remove any milling marks.

Apply a finish

I almost didn't even apply a finish to these holders, but then remembered that kids are likely going to spill food or drink on them, or at the very least have dirty hands, so a light coat or two of finish will help keep them looking like new for longer. I wiped on a few coats of a food-safe finish with a cloth and let it dry. For once, a project that's incredibly easy and low-stakes to finish!

Other options

If you really do want to get fancy you have a few options. A double-decker card holder, where the base is wider and thicker (about 2-1/2" x 1-1/4") and there are two grooves, is an option. The groove that's away from the user is machined fairly shallow, while the groove towards the user is machined fairly deep. This allows the user to see both rows of cards at the same time.

Another option is to make a curved card holder. After breaking out the stock and temporarily fixing it to a



Ease the Edges – Make sure all the sharp edges are gone, so nobody gets a sliver.



Apply a Finish – A simple, wipe-on finish is perfect for this small project. A couple of coats will add some protection, and keep the wood looking new.

workbench, install a bit no larger than 1/8" diameter in your router. Secure your router to a circle-cutting jig, and then do some math. You will have to determine what radius will best work for the length of curved card holder you want, then determine where the pivot point of your circle jig should be attached to your workbench to produce the proper groove. It's a lot more work than a straight groove, but it looks great when complete.

With your card holders finished, whether they are straight, double-rowed or curved, share them with the young kids in your life and deal the cards.



ROB BROWN

rbrown@canadianwoodworking.com



Go Online for More

RELATED ARTICLES: Children's Blocks (Dec/Jan 2012), Make a Children's Sleigh (Dec/Jan 2013), Build an Indoor Bouldering Wall for Kids (Feb/Mar 2014)

RIDGID®



EXPAND YOUR SYSTEM

WITH ANY 18V BATTERY



FREE Batteries. FREE Parts. FREE Service.
FOR LIFE.

Registration Required at RIDGID.com





Smart Protection For Your Smart Phone

The most useful tool in your shop might just be right in your pocket. In order to protect it from bumps, falls, dust, and tools you should consider one of these smartphone protectors.

BY CARL DUGUAY

Smartphones have become indispensable tools in the workshop and on the job site. They're the one device most of us now carry around all the time, simply because they enable us to do so much. They've replaced a slew of once-popular devices, including MP3 players, voice recorders, cam-recorders, eBook readers, calculators, and GPS trackers.

Smartphone apps now turn your device into a flashlight, compass, barcode reader, credit card scanner, level, measuring tape, light meter, decibel meter ... the list goes on. And, there are apps that make it a lot easier to manage your business. Among other things, you can access your customer data, schedule appointments, manage your marketing and advertising, do the majority of your invoicing and ordering, manage your inventory, and quickly access technical information.

Photos by Manufacturer, Lead Photo by Carl Duguay

You've spent a lot of money on the phone, so it's worth spending a bit extra to protect your investment, especially considering how relatively fragile it is and how frequently during the day you use it. Drop a phone onto a concrete or tile floor and you risk damaging the external case, the internal components, the display screen, or all three. It's not just the risk of dropping your phone. Fine dust can infiltrate the power charging and sound ports, while coarser materials, such as metal filings, can scratch the display screen.

There's a wide range of phone cases on the market – we looked at four different styles that provide varying degrees of protection. The case that's best for you will depend on the nature of the work you do, and personal preference. We've stayed away from cases made from polyurethane, as they're not very durable, and from metal cases, which can interfere with digital signals.

The four case styles we looked at protect your phone from inadvertent bumps and knocks. The ToughBuilt and the Hand and Hide are essentially 'carry cases' – you remove the phone from the case to use it. While in the case, both provide very good protection. Outside the case it's a different story. The Otterbox and UAG provide drop protection, as the case remains on the phone all the time. Both of these cases also provide screen protection. The Otterbox incorporates screen protection into the case frame, while the UAG has a separate add-on screen protector. If your phone has a screen that uses Corning's Gorilla Glass, a toughened, hard glass with high scratch resistance, then it likely doesn't really



Protect Your Investment – Whether you're in your shop, at the jobsite, or out and about, it pays to protect your phone, and all the information on it.

need extra screen protection, unless you work in an environment with a lot of contaminants in the air. Some phones have a camera lens flush with the back, which makes them more susceptible to scratching. On others, the lens is slightly recessed into the housing, which provides more protection for the lens. However, none of these cases offer protection for the camera lens.

There are cases for every level of protection, and oodles of colours and styles to choose from. If protecting your investment matters, get one and use it.



ToughBuilt TB33

The Holster Case: Job Site Simplicity

ToughBuilt.com

\$13.00 US

The ToughBuilt TB33 is a traditional jobsite pouch that is both durable and functional. It's made from heavy-duty nylon, so should give years of service. The interior of the pouch is lined with a smooth fabric to protect the phone from scratching, and it's padded to provide some cushioning. The hook-and-loop closure is quick to open and close. It has room for the ubiquitous carpenter's pencil along with a pen or stylus, and a small note/sketch pad. There's a handy carabiner for attaching keys, and a large steel belt clip. Even with these accessories it only weighs 5 ounces. It accommodates cell phones and smaller smartphones up to about 2-3/4" wide quite easily. Wider phones are more difficult to insert and extract. Also, it won't accommodate phones covered with a hard shell case, unlike the Otterbox or UAG below. Still, if you're looking for an inexpensive case to tote your phone around the jobsite or workshop, you can't beat the ToughBuilt TB33.

Photo by Carl Duguay



Hand and Hide Phone Wallet

The Wallet Case:
Contractor High Style

HandandHide.com

\$100.00 US

It's important to present yourself well when meeting with prospective clients, and this folio-style case is all about presentation. It's also a very classy item when you're out for an evening of Salsa or a day on the croquet range. The wallet is made from hand-stitched full-grain leather, and feels fantastic in the hand. At only 2-1/2 ounces, it's less than half the weight of a typical smartphone. The phone doesn't have to be removed from the wallet for most operations, but if required, you can quickly extract it, and then re-insert it back in the wallet. The phone fits the wallet securely. There are four credit card slots, and one wide slot for folded cash. It offers a level of protection as good as, if not better than, the ToughBuilt, but in a considerably more debonair way. Each Hand and Hide wallet is custom-made – the company makes wallets for 39 different smartphones in a choice of nine custom colours. You can have it inscribed at no extra charge, engraved for a modest fee, and outfitted with an optional metal belt clip. Great protection and stellar looks all in one.



Otterbox Defender

The Tough Case: Ultimate Protection

OtterBox.com

\$49.95

If you're looking for the ultimate in phone protection for a workshop environment or jobsite, then you'd be hard pressed to find a case that trumps the Otterbox Defender. It's a bit bulkier than other styles of cases, but at 2-1/2 ounces, not much heavier. It consists of three components: an outer synthetic rubber slip cover that provides excellent grip and a tight, dust-free barrier; a hard polycarbonate internal shell that protects the phone from drops, bumps and shock; and a plastic film screen protector that guards against scuffs, scrapes, and scratches. What's nice is that the screen protector is attached to a frame that easily installs over the hard shell. The case covers the entire phone except for the control buttons and input ports. Otterbox offers an optional polycarbonate holster with a belt clip that doubles as a kickstand and rotates a full 360°. Available in a wide range of styles and colours for the most popular smartphones on the market. When push comes to shove the Otterbox Defender has the upper hand.



UAG

The Slim Case: DIYer Delight

UrbanArmorGear.com

\$39.95

Not everyone wants to drive around in a Hummer – sometimes a sleek Miata will do nicely. Likewise, if you're looking for a less bulky, lighter case than the Otterbox, but still want good protection from knocks and drops, the UAG might just fit the bill. These cases are made from polycarbonate hard plastic for structural rigidity and thermoplastic polyurethane (TPU) rubber for impact resistance. And, at just over 1 ounce, you won't find a lighter hard-shell case. Large textured buttons make it easy to control phone functions. The case itself is somewhat smooth so if your hands are damp it might lead to a less secure grip. Unlike the Otterbox, there is no front cover. Instead, the UAG comes with a peel and stick plastic film screen protector. These can be tricky to install without leaving bubbles between the screen and the phone screen. Fortunately, UAG offers a tempered glass screen protector that's easier to install, and provides superior scratch resistance than a film screen. It comes in a plethora of colours for all the major phones and, overall, is light, sleek, and strong – very sweet.



CARL DUGUAY

cduguay@canadianwoodworking.com

NEW

RIKON

Oscillating Spindle Sander

A valuable machine for every shop!

For the fast and accurate sanding of curved board edges. This powerful machine has a 1/2 HP motor, all steel gearing, metal housing, and spindles in 1/2", 3/4", 1", 1-1/2", and 2" diameters.

Features



Cast Iron
Tilting Table



Includes 5
Spindles & Inserts



Convenient
Tool Holders



Dust
Port



Oscillating Spindle Sander #50-300

For more information visit www.rikontools.com today!



Turn an Eccentric Pedestal Bowl

Follow the steps properly and you will open your eyes to the wonderful world of eccentric turning. Once you finish this piece, and have a good command of the process, you'll be able to design all sorts of interesting and unique eccentric turnings.

Eccentric woodturning is a technique that creates a finished piece with an element, or elements, that are offset from the true center, which is parallel to the ways (bed) of the lathe. The scope of this project keeps it simple by using only two different axes. Eccentric turning is also called multi-center turning. This process can yield some very interesting results depending on the location and number of sets of axes used. The wood grain (end grain) orientation of the block used in this project runs in the same direction as the lathe axis.

Some intermediate woodturning skills are required to complete this project. Safety in the workshop is paramount, and sharp turning tools are imperative.

This eccentric pedestal bowl is turned on two axes with the true centers being used to round the blank to a cylinder, and to shape the bowl and base sections. A second axis is used to shape the middle of the pedestal.

Design

When a person looks at a turned piece, the first thing they see is the shape, or form. When designing this bowl I used a modified Rule of Thirds (1/3:2/3), which is close to the Golden Mean ratio (1:1.618034), for some of the dimensions. The Golden Mean design ratio appears naturally in many places and is used by many artists and craftsmen when designing furniture, buildings, etc. to create results that are pleasing to the human eye. Some photographers also use the Rule of Thirds when composing their pictures. I rounded the calculations to suit my eye. You can use this ratio or just design the bowl using your own dimensions.

The design lines of the bowl need to flow smoothly. All curves transition into each other, and where a line changes direction, I like to create a filet. This stops your eye movement and prepares your brain for a change. All this makes for an interesting finished piece.

Selecting the Wood

I selected a 5-1/2" long dry block of big leaf maple cut from a log. Though

the finished bowl is only 5" tall, the extra 1/2" is needed to allow for truing and creation of the chucking tenon.

Mounting the Block

Review the grain pattern in the block and select which end will be the top of the bowl. Locate and dimple the center of the block on both ends and mount it between centers on the lathe with the bottom towards the tailstock. At about 1200–1500 RPM, or a speed comfortable to you, turn it to a round cylinder a little larger than the finished outside diameter of the top bowl. True up the bottom end of the blank. Make a tenon to fit your chuck jaws. The depth of the tenon needs to be as long as possible without touching the bottom of the jaws. This ensures that the block aligns true in the chuck. The piece will be offset later and as much tenon length as possible will be needed.

Reverse the blank and mount it in a four-jaw scroll chuck. Bring the tailstock up to center the blank using the dimple in the end. Mark the location of chuck jaw number one as a reference point for offsetting the cylinder and in case the piece has to be re-chucked later. True up the cylinder and make sure the top is flat.

On the outside of the cylinder, mark the location of the bottom of the bowl section at 2-1/2", and the approximate location of the offset disk at 3-1/4" from the top of the bowl. You may want to make these marks a little more visible by cutting a shallow groove with a skew or parting tool.

Mount a Jacob's chuck in the tailstock. With the lathe speed at about 250 RPM, drill a 1" diameter by 1-7/8" deep pilot hole in the center of the bowl. I used a Forstner bit with a piece of green masking tape on the shaft to indicate the hole depth. Remember to allow for the drill point. This hole not only creates a depth guide but also provides a starting surface for your gouge for hollowing out the bowl.

Shaping the Inside of the Bowl Section

Hollow out the inside of the bowl section of the piece to its final dimensions with a 1/2" bowl gouge. To make a



Rough it Out – Once the blank is chucked in the lathe, Cusworth turns it round on the main axis.



Start With a Hole – Start to create the cavity of the bowl with a Forstner bit. Cusworth wrapped a piece of green tape on the shaft, at the correct distance, so he would know how deep to drill. Notice the layout lines on the blank. They will come in handy while you turn the base and offset center.

smoother cut and reduce tear-out, follow the grain of the wood fibers. To illustrate, consider sharpening a pencil with a knife; you always cut with the grain towards the tip, which creates a smooth surface. The same principle applies when you cut wood with a bowl gouge. This process is described as cutting with the grain supporting the bevel on the gouge. To follow the grain here, cut from the center of the bowl towards the rim. If you cut backwards from the tip to the center, the wood will splinter and cause almost unreparable tear-out. If you still get some tear-out, it can be minimized by using a sanding and cutting compound. I use Clapham's Sanding and Cutting Compound, a beeswax product



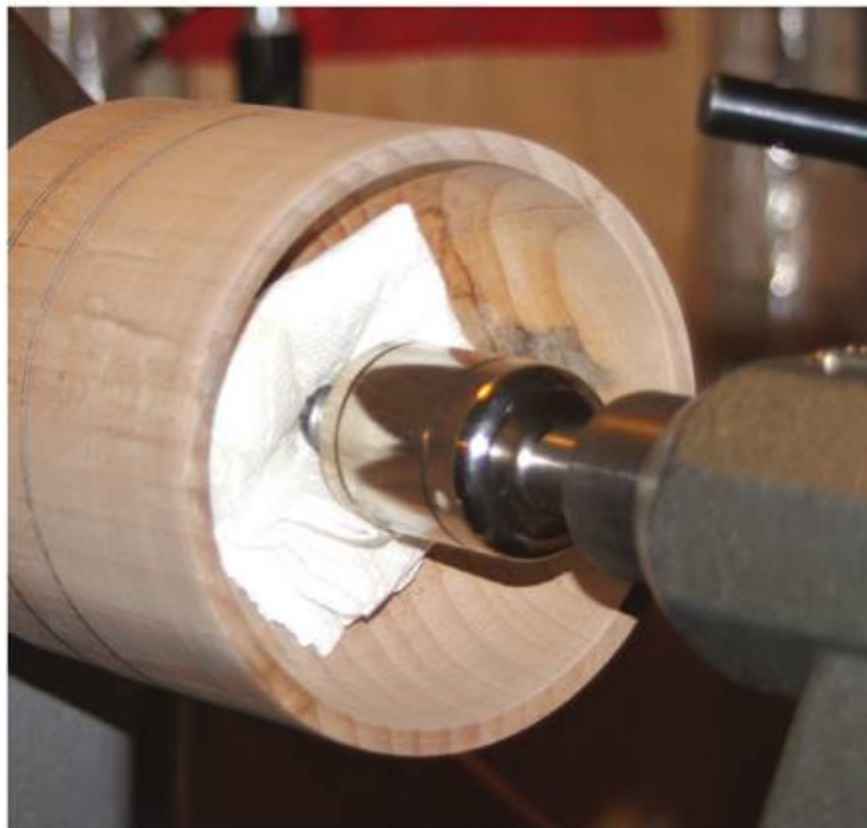
Hollow the Bowl – Use a 1/2" bowl gouge to hollow out the main bowl, stopping when the bottom surface of the bowl is flush with the drilled hole.



Bowl Depth – Measure the depth of the bowl with a depth gauge, then transfer that dimension to the outer surface of the blank. This will ensure you don't turn into the bowl area.

that is readily available. I have found it compatible with any finish I have used to finish my bowls so far.

Confirm the depth of the bowl using a depth gauge and mark this



Cushioned Support – A wadded up piece of paper towel will help support the blank while you turn the outside surface of the bowl.

dimension on the outside. This mark will soon be removed but will create a mental image. True up the surface of the rim.

Rough-sand the inside of the bowl through the abrasive grits from 120 to 220 to remove any tool marks and scratches. Finish-sanding to 400 grit will be completed later.

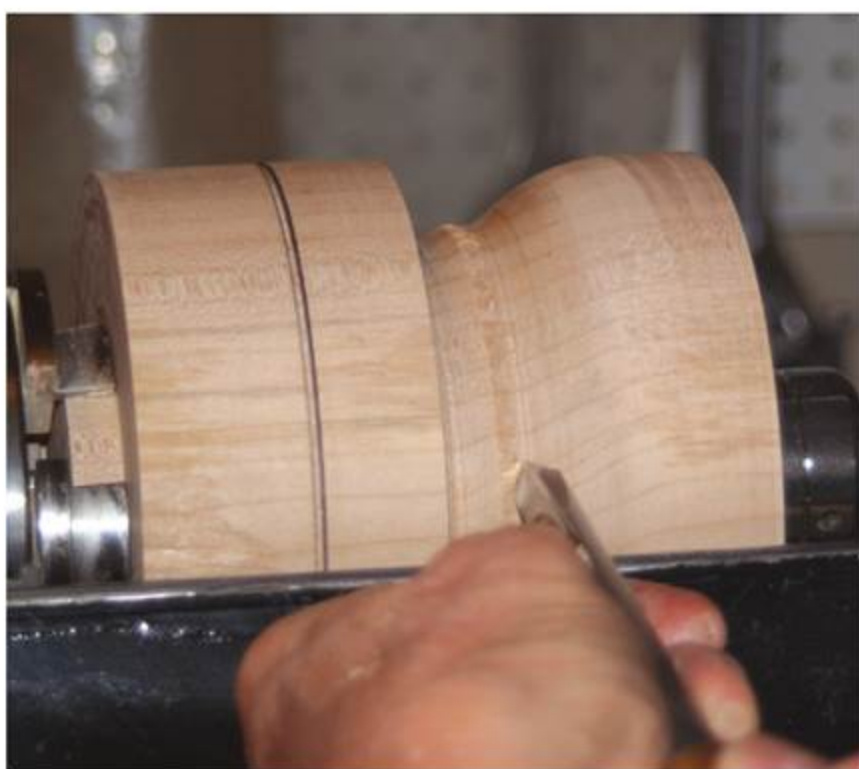
Shaping the Outside of the Bowl

Remove the sharp point and bring the tailstock up into the bowl using a pad of paper towel to protect the surface. This will provide support while shaping the outside. Turn the outside shape of the bowl to the finished 5" outside diameter following the contour of the inside shape. Check the wall of the bowl often to maintain a consistent thickness. Shape the pedestal stem to its 3/4"–7/8" finished diameter at the

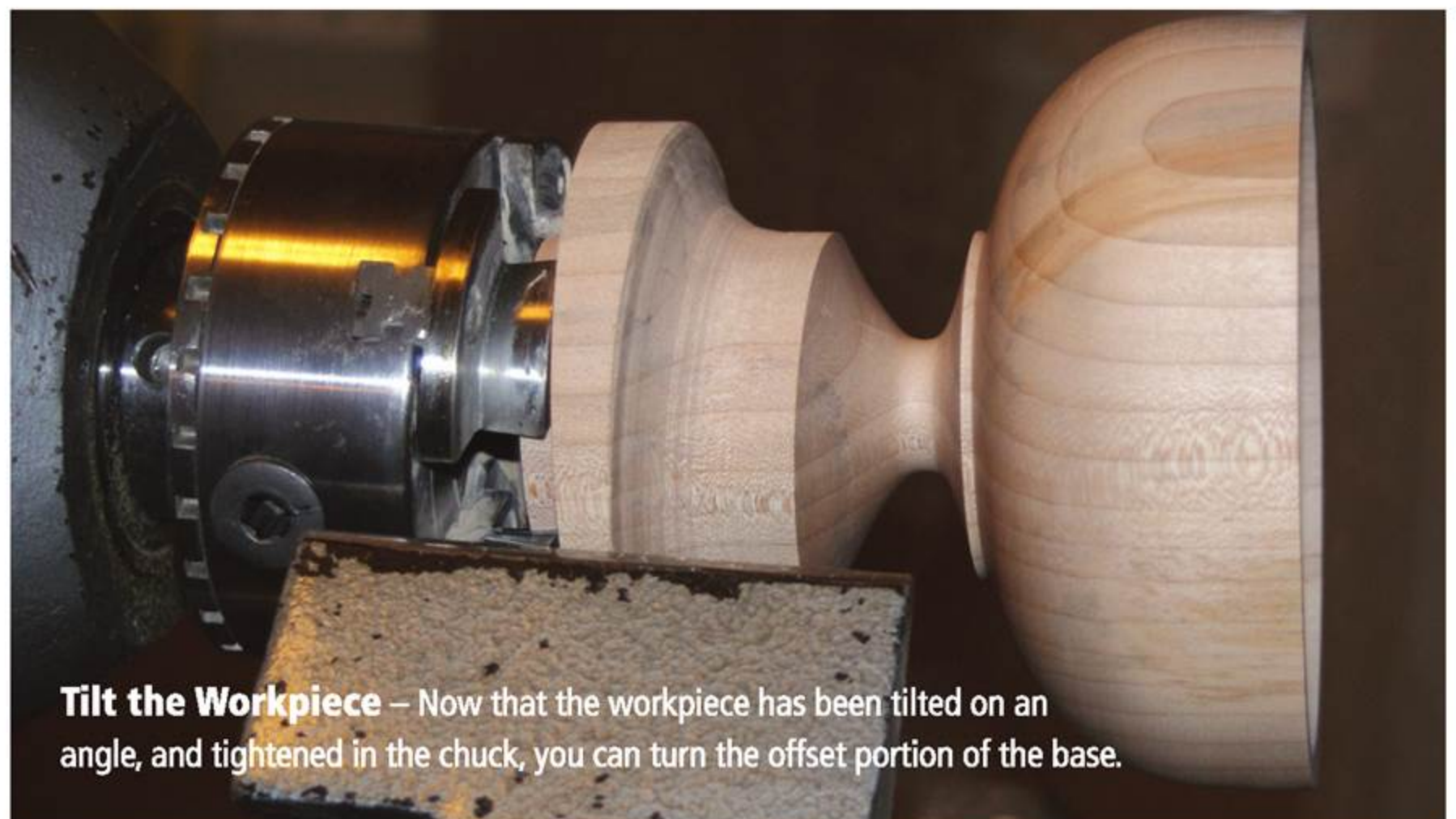
base of the bowl section and the top of the surface of the offset disk. During this process you will need to reduce the diameter of the disk and base area of the cylinder to about 3-3/4" to provide clearance for the gouge. These dimensions will be approximate since measurements will change when the cylinder is offset in the next step. Follow the grain direction to maintain support of the gouge bevel. You can create filets at points where the design direction changes if desired. Rough-sand these surfaces to 220 grit as before. Finish sanding will be completed later.

Offsetting the Center Section

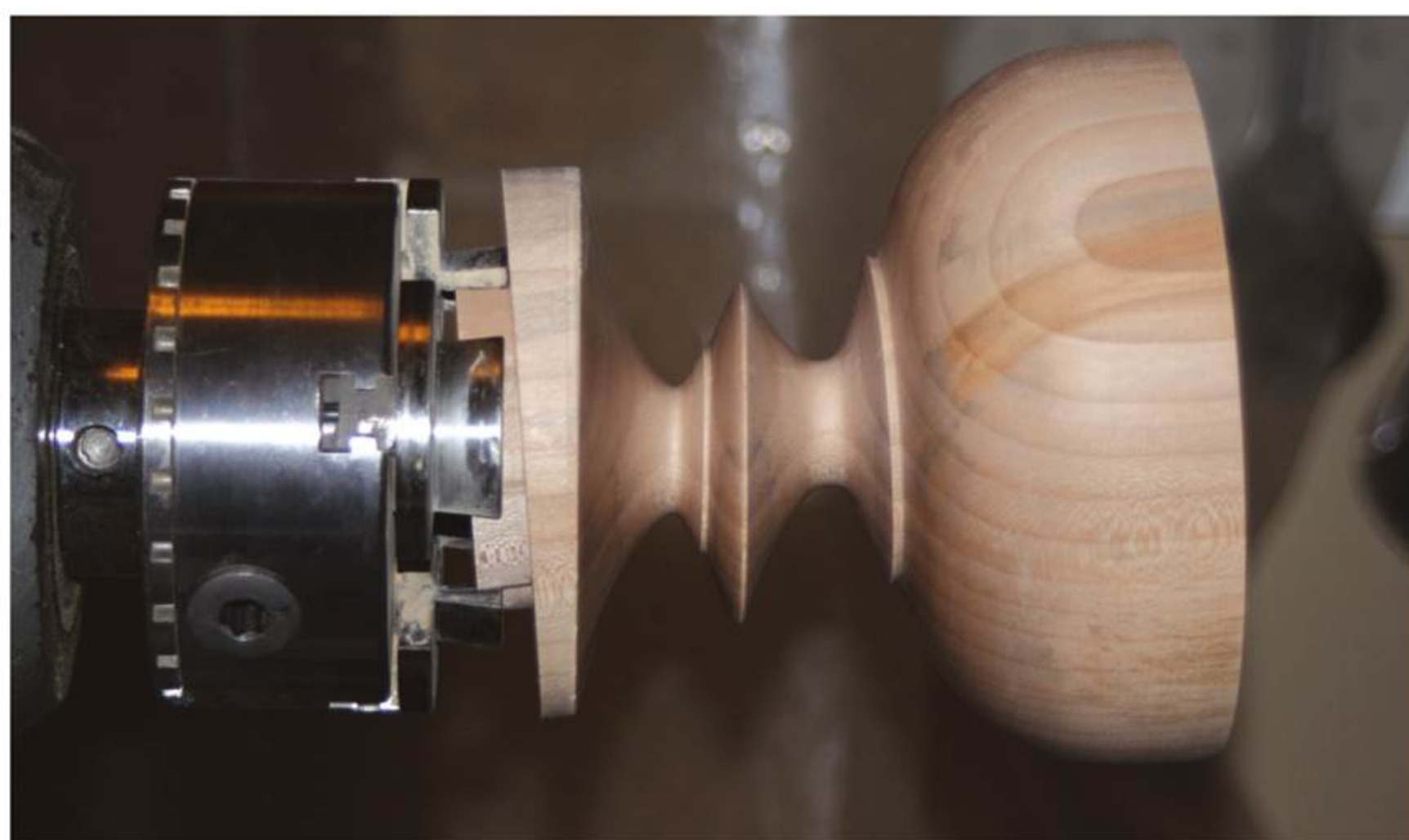
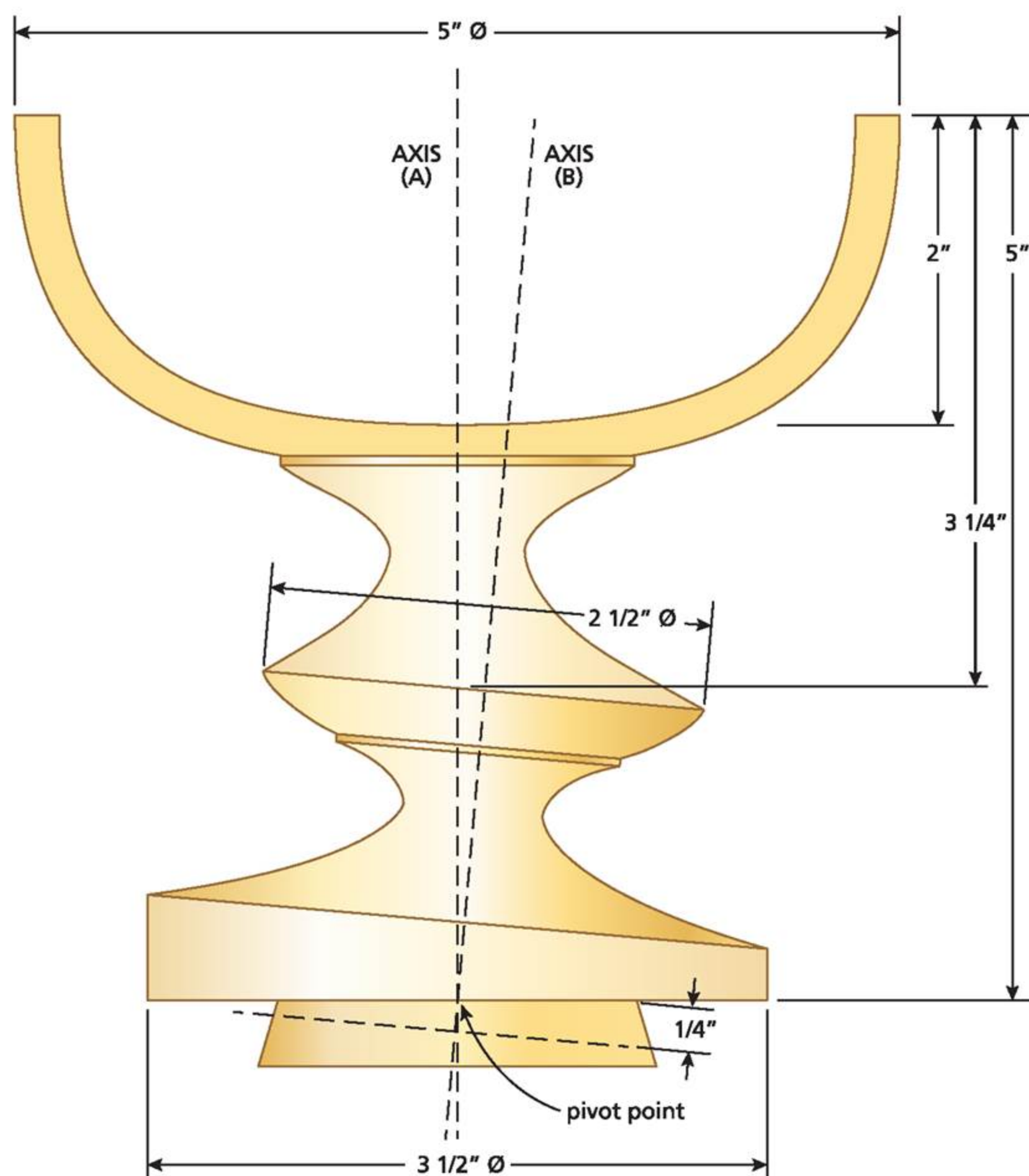
With the lathe turned off, and chuck jaw #1 facing up, hold the cylinder in the chuck and slowly loosen the jaws just enough to offset the base 1/4" at



Turn the Bowl's Exterior – Shape the outer surface of the bowl portion of the project, being careful not to remove any wood past the first layout line.



Tilt the Workpiece – Now that the workpiece has been tilted on an angle, and tightened in the chuck, you can turn the offset portion of the base.



Offset Complete – This is what it will look like when the offset portion of the base is complete. Notice the bottom of the workpiece isn't sitting flush against the chuck.

jaw #1 by tilting it towards jaw #3 – the opposite jaw. Mark the location of the front of jaw #1 on the tenon. Place a 1/4" x 1/4" x 1-1/4" long piece of scrap wood between the jaw front and the cylinder to create a firm seat. Pull the tailstock back and tighten the jaws

securely while holding the cylinder firmly against the chuck jaws and the 1/4" spacer. Remove the spacer. The cylinder is now offset in the lathe and will spin off-center. Revolve the lathe very slowly by hand while positioning the tool rest to make sure that the bowl

SO MUCH TO ENJOY!

Woodworking
& HOME IMPROVEMENT

Digital Edition

All print subscribers are eligible to receive our digital edition. If you are not receiving it Call **1-800-204-1773** or email orderdesk@canadianwoodworking.com Include your name, address and postal code.

Online Library

All print and digital subscribers enjoy full access to our online library with 100s of plans and projects, and 1000s of tips and techniques. Log in at the top of our website's home page, then view the full archive by clicking on the file folder icon at the top right of any digital edition.

Log in at canadianwoodworking.com

Newsletters

Be the first to find out about woodworking related news, tool reviews, videos, contests, and events in your area. Sign up free at canadianwoodworking.com

Draw for Tools!

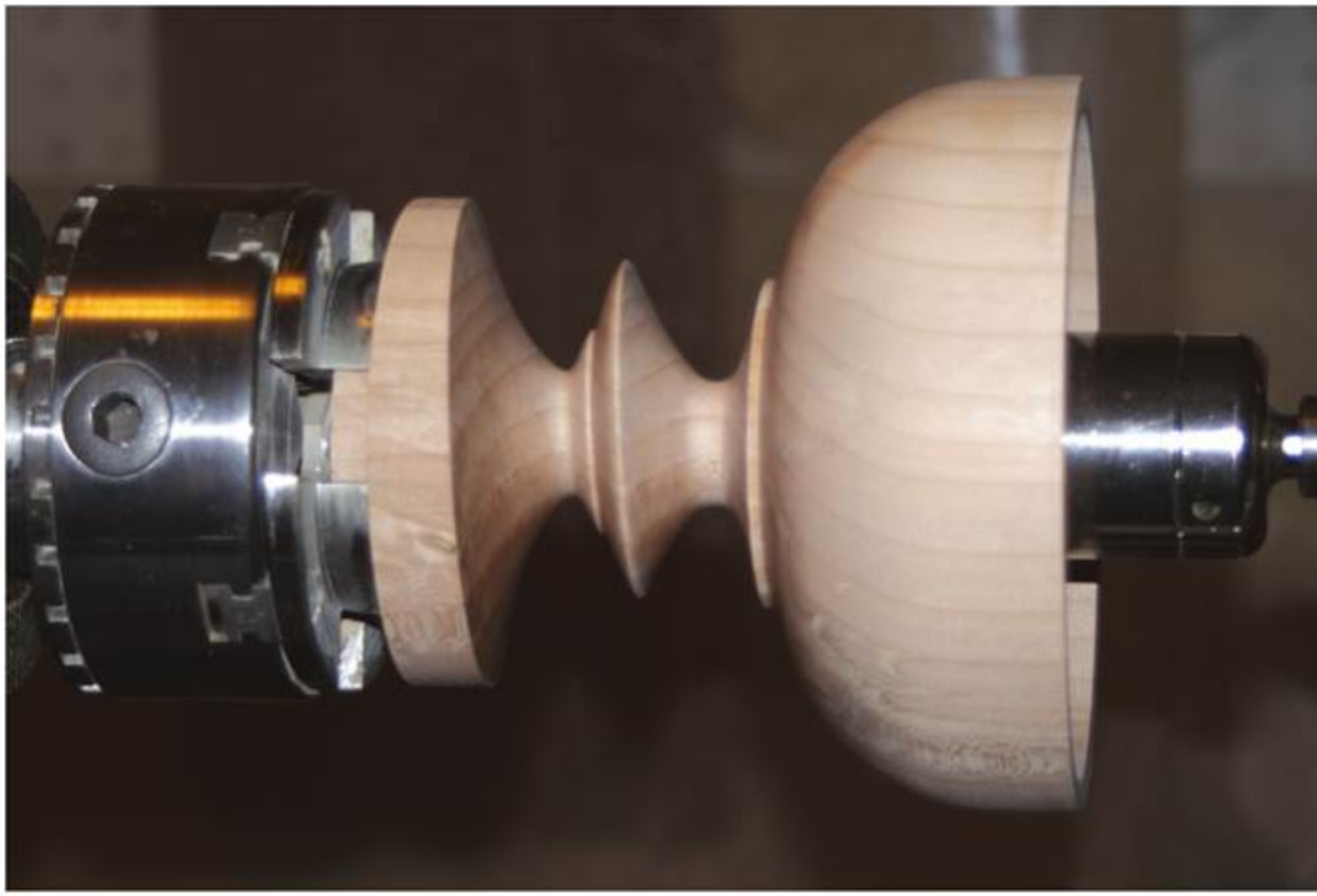
New and existing subscribers are entered into two draws every issue for woodworking tools and a gift certificate from Lee Valley! Subscribe or renew today at canadianwoodworking.com/subscribe

Woodworking Forum

Canada's largest woodworking and DIY Forum. Connect with fellow Woodworkers to learn, share, and enjoy! forum.canadianwoodworking.com

Customer Care

Want to give a gift, change your address, or renew your subscription – let us help! Call our friendly customer care team at **1-800-204-1773** or email orderdesk@canadianwoodworking.com

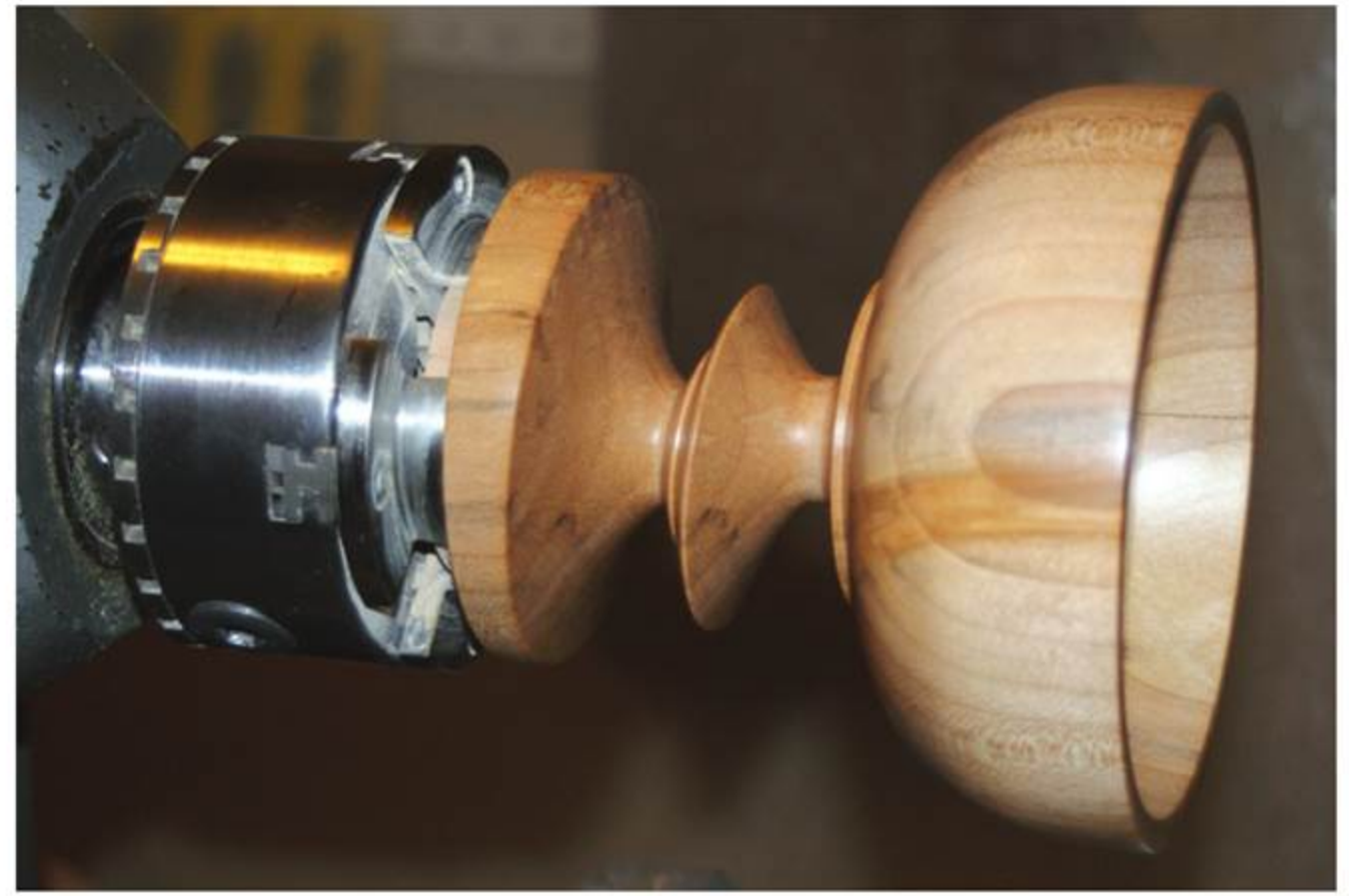


Final Base Diameter – Now Cusworth has turned the bottom of the base to its final diameter. The workpiece was repositioned in the chuck so it was rotating true again before he finished the bottom of the base.

does not hit it. If you decide to make any changes to the measurements suggested here, it's a good idea to keep a record of them for future reference.

Since the bowl will be spinning off-center you will not be able to use the tailstock for support. Start the lathe at a slow speed, about 500 RPM. Use a sharp detail/spindle gouge and very light cuts to round off the next 1/2–3/4" of the center section where the offset disk will be about 2-1/2" diameter. Create a curved transition towards the base section. Notice the ghost image as the lathe is turning and be aware of where your fingers are at all times. Stop the lathe frequently to inspect your progress. Whenever you move the tool rest with the cylinder mounted offset, always slowly turn the lathe by hand before you turn it on to make sure the piece does not hit it.

Shape the bottom of the offset disk and the top surface of the base section. Carefully sand this section, using the same sanding procedure as before. This part has to be sanded to the finish grit at this time since this section will always be spinning off-center after the next step.



Beeswax Finish – With the piece still in the lathe Cusworth adds a layer of beeswax finish to the outer surface of the turning.



Jam Chuck is Ready – Cusworth prefers a jam chuck to support the piece while he turns the underside of the base. Here it is ready to receive the workpiece.

Shaping the Base

Stop the lathe and loosen the chuck slightly and return the cylinder to its original position flat against the base of the



LAGUNA AIR

THE DUST HAS SETTLED



DEALER INQUIRIES CONTACT BENNYH@LAGUNATOOLS.COM | © 2016, LAGUNA TOOLS, INC.

LAGUNA CLEAN AIR.COM



Secured – Some masking tape will ensure the workpiece will stay put during the final operation.



All Done – With the base turned to a slightly concave surface, lines added to visually complete the piece and beeswax applied to the bottom, the piece is ready to be removed from the lathe.

chuck. Tighten the jaws securely while holding the bowl firmly in place. Bring the padded tailstock up against the inside bottom of the bowl. The lathe speed can be increased to 800–1000 RPM for the next step. Turn the base to its final 3-1/2" diameter using a spindle gouge and very light cuts.

Sand the base section and complete the finish sanding of the inside and outside of the bowl, as well as the top of the offset disk.

Finishing the Project

Stop the lathe and apply an even coat of salad bowl beeswax to all surfaces. If you use a soft cloth, most of the surfaces can be carefully rubbed with the lathe spinning at a slow speed.

Completing the Bottom Surface

Remove the bowl from the chuck. Reverse the bowl on to a jam chuck. I prefer jam chucking the vessel on the outside rim surface and adding some painter's tape straps for security. A

vacuum chuck will also work. Bring the tailstock up for support and line it up with the dimple on the bottom of the base. Using a sharp spindle gouge and light cuts, remove the tenon and refine the bottom of the base. Make it slightly concave so the bowl will not rock on a table. Back off the tailstock for the last few cuts. Sand the base through the grits as before, add any desired decorative rings, sign your creation and apply the salad bowl beeswax to complete the project.

Remove your eccentric pedestal bowl from the jam chuck and admire your handiwork. You can polish or buff the beeswax after it dries. People are sure to ask you how you got the center disk so off-center.

Have you used any eccentric turning techniques before? Share your ideas, as well as photos of your finished pieces, to the end of this article on our website.

ALLAN CUSWORTH
acusworth@telus.net



Go Online for More

RELATED ARTICLES: Woodworking Tools For a New Turner (Aug/Sept 2011), A Split-Turned Rocking Vessel (Aug/Sept 2012), Turning a Fruit Platter (Oct/Nov 2010)

60 YEARS
SINCE 1954

ATLAS

SELECTION, SERVICE & PRICE
1-844-4FESTOOL (433-7866)

NEW LOCATION NOW OPEN

871 Islington Ave
Access via Queen Elizabeth Blvd

- 12,000 sqft showroom
- 40 parking spaces
- EASY ACCESS from 427 & Gardiner Expressway
- Huge FESTOOL display and demo area, INTERACTIVE WOODWORKING SHOP and Demo Machinery!

SPR SuperMax
FESTOOL
LAGUNA
SawStop

BOSCH
Milwaukee
DEWALT
PORTER CABLE
GREX
NEW
KING

Makita
Jesse
STANLEY
BESSEY
SENCO
OCCEANIC LEATHER
freud
DIMAR

www.atlas-machinery.com

233 Queen St. W Toronto, ON, M5V 1Z4 416.598.3553
871 Islington Ave. Etobicoke, ON M8Z 4N9 416.252.8527

A woman with dark hair, wearing a green hoodie with 'LAKE HOUSE Canada' printed on it, is sitting in a patterned armchair. She is holding a small, light-colored wooden cube with three circular holes drilled through it. In the background, a wooden table holds various decorative items, including a small red and white ceramic figurine and a framed picture.

Build a Magic Cube

All children have a natural love for toys, but they also have a natural interest in tricks. This magic cube will grab the attention of any child, and will cause adults to wonder how it was done too.

BY LORRAINE CHOI

When I was a teenager, the Rubik's Cube was a popular puzzle toy. Over the years a number of solutions have been developed for solving the puzzle, but they all are still too complicated for me. Here's another kind of magic cube that is equally puzzling, but much less intimidating. Had the tree grown around the steel ball? Was the block of wood carefully glued together to conceal joint lines?

Stock Preparation

You'll need a steel ball, a block of wood and a short dowel slightly smaller in diameter than the steel ball's. I happened to have some scrap maple in the desired size, so maple was used for this project. Mill up a piece of wood 2-1/2" square.

Marking and Boring

As in any project, big or small, the first step is laying out. Find and mark the center point on each side with a center-finder or by drawing two diagonal lines.

Measure the diameter of the steel ball and find a drill bit that is slightly smaller than the ball's diameter. In my case, the ball is 18.9 mm in diameter and the closest bit I had in the shop and used was an 18 mm brad point bit.

Chuck the drill bit in the drill press and bore through holes on three of the sides, using a backer board to prevent blow-out on the bottom. Make sure to use a clamp, or other hold down device, to ensure the wood cube doesn't get away from you when boring the holes. Alternatively, you can drill holes halfway

Photos by Charles Mak



Find the Center – Using a ruler, Choi marks a line from opposite corner to opposite corner, then repeats the task with the other two corners. The intersection of the two lines is the center of the face.

Drill the Holes – With a clamp attached to the block so Choi can better grasp it, she uses a drill press to bore the required holes.

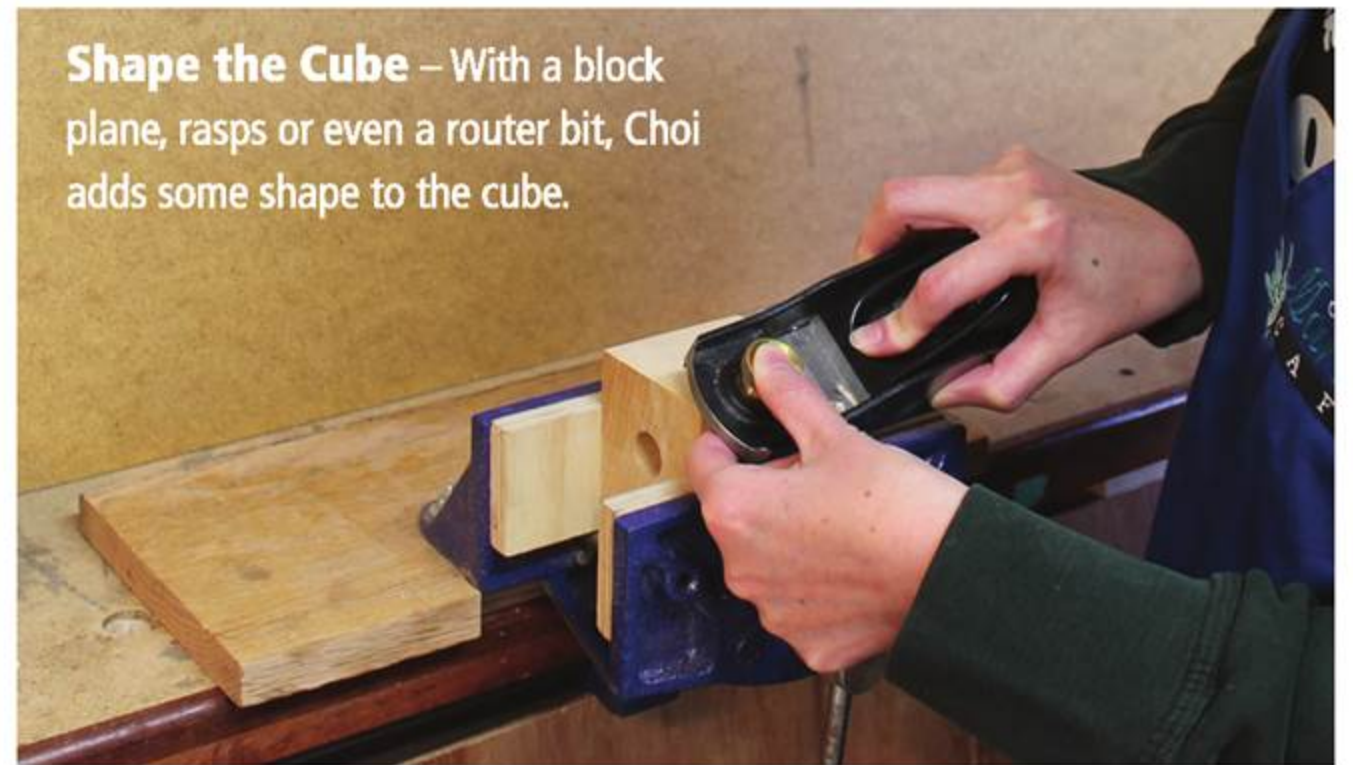


through from each side. Since the block was hardwood, I sprayed some lubricant on the drill bit to reduce friction and cool down the bit between boring.

Shaping

The magic cube can be of a simple square shape or fancier, with profiled edges, created using, for example, a router bit. If you plan to get your child involved, you may show them how to use a hand tool or two, such as a small block plane or a rasp to chamfer the edges. Sand all the surfaces to 120 grit after the desired shape is cut.

Shape the Cube – With a block plane, rasps or even a router bit, Choi adds some shape to the cube.



Clamping Technology | Cutting Technology | Precision Steel

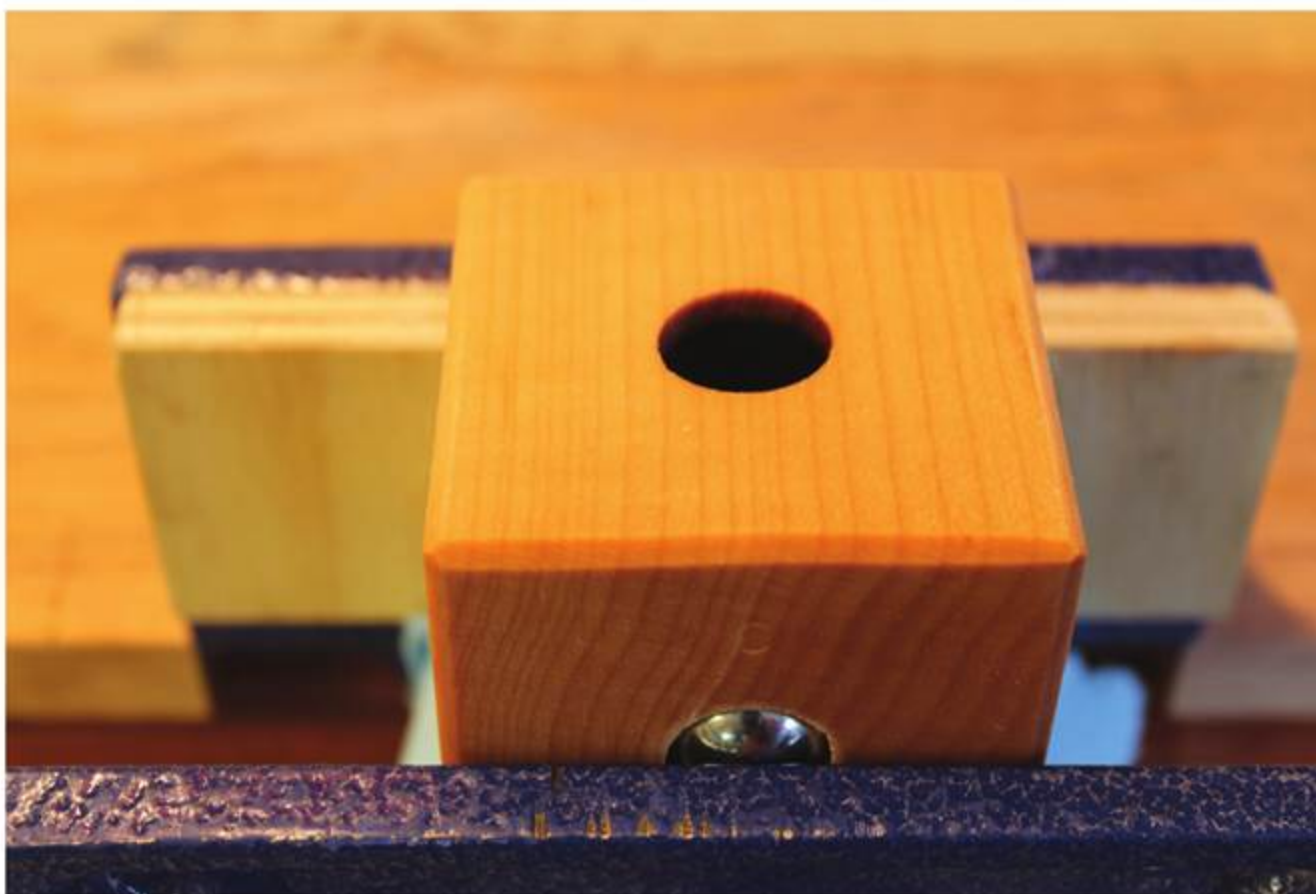


BESSEY® Auto-adjust toggle clamps

- Automatically adjust to variations in work piece height while maintaining clamping force.
- Adaptable base plate for easy mounting in metric & imperial.
- Large handle with soft insets for maximum comfort.
- BESSEY® Auto-Adjust Toggle Clamps offer a range of clamping force and clamping height. One can replace a range of competitive clamps for quicker set-ups, smaller tool cribs and consolidated inventories.
- Try them all!



www.besseytools.com



Part Way In – Using a vise, Choi presses the ball into the end grain surface of the cube until it's flush with its outer surface.

Soaking

The trick in this magic cube lies in softening the wood fibres with water so the ball can be pushed into the chamber through one of the holes. Immerse the block in the water for at least eight hours. I covered the block with a soft cloth to keep it from floating above the water level. If you want a shorter waiting time, boil the block in low heat for about 15 minutes and let it soak for two hours.

Assembly

Remove the block from the container and wipe off any excess water. Apply a rust prevention lubricant like WD40 or oil to the steel ball. To prevent any wood splitting, the ball needs to be pushed into the chamber through a hole in the end grain, not one in the face grain. Butt one end grain surface of the block against one jaw in a vise and close the vise gradually to squeeze the ball into the hole on the opposite end grain until the ball is almost flush with the face. To push the ball into the chamber, I used a bushing as a push stick. Bingo! Your first magical toy is born.

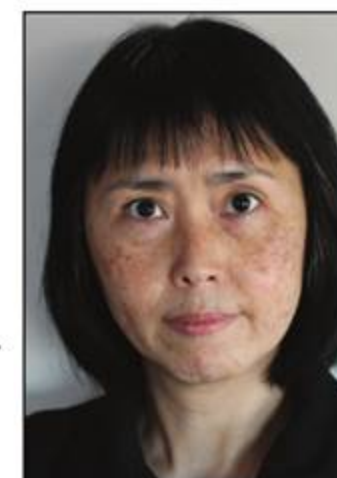


The Rest of the Way – To push the ball the rest of the way into the cube, a bushing was used in conjunction with the vise. You could also use a dowel that is slightly smaller than the hole.

Finishing

Spray a generous amount of WD40 into the chamber to coat the ball. Let the block dry in room temperature, but away from any air vent or direct sunlight, for at least a few days, as the block will crack if it is dried too quickly. Sand down any uneven surfaces or distortion caused during the soaking or clamping process. Apply a few coats of oil finish to the cube inside and outside and, if desired, a wax finish on the outside.

As you can see, this cube is easy to make, but can prove challenging even to those who are good at solving the Rubik's Cube!



LORRAINE CHOI
internetcontact@telus.net

Lorraine Choi has access to all kinds of power and hand tools that her husband keeps in their garage, but this was her first attempt to complete a project all by herself.



The Perfect Panel for Your Next Project



columbia
FOREST PRODUCTS™

From North America's leading producer of beautiful, easily fabricated and responsibly produced decorative hardwood plywood, comes a new series of options, to Home Depot locations throughout Canada.

For projects you'll stain and finish, you'll find popular Maple and Sliced Red Oak panel faces. For projects you'll paint, there's convenient Sanded Aspen. All made with soy-based PureBond formaldehyde-free technology, for your peace of mind.

Come see this new selection today and build the project of your dreams tomorrow.

A Breath of Fresh Thinking™

PureBond
FORMALDEHYDE-FREE TECHNOLOGY

PureBondPlywood.com

For information, ideas and Home Depot locations, visit www.purebondplywood.com

Subscribe & Save • Give a Gift to a Woodworker

HOLIDAY SALE



SAVE \$10 GIFT OFFER

Renew your own subscription and give a gift –
both entered into 2 ongoing draws EVERY ISSUE!

1st Gift **\$24** PLUS TAX
Additional gifts only **\$14** PLUS TAX
THE BEST PRICE YOU WILL SEE!

**Cross someone
off your gift list
TODAY!**

PLUS 2 CHANCES TO WIN



Biscuit Joiner Kit from King Canada
Model Number KC-8306
Retail Value \$149.00



ALL SUBSCRIBERS, EXISTING & NEW, HAVE A CHANCE
TO WIN A \$250 GIFT CARD FROM LEE VALLEY!
Draw period ends Jan. 31, 2017

Finish your Christmas Shopping today **ORDER NOW!** OFFER EXPIRES DECEMBER 31ST, 2016

ONLINE
www.CanadianWoodworking.com/give

MAIL
the postage paid card
in this issue

FAX
the card to 1-902-462-3336

EMAIL
orderdesk@canadianwoodworking.com

PHONE
Call our friendly Customer Care
Team **1-800-204-1773**

OFFER CODE: PA2016

Make a SMARTPHONE CASE

Technology is often shiny and cold to the hands and eyes. Pairing these modern objects with wood is a great way to visually and physically warm them up.

BY ROB BROWN

This project, while it's quite small, and only has a few parts, is more difficult to make than it first appears. Because the tolerances need to be tight in order for the smartphone to not only fit into the case, but to also not fall out easily, this is a great project for someone who can work accurately.

Design

The overall design is fairly standard; though everyone's case will vary, my finished case is 3/8" wider, 3/16" taller and 3/16" thicker than my phone. If you want to modify your case, that's fine too.

Where you have a lot of options for customizing this project is with the type of veneer you use, and if you add any designs to the exterior of the case. From

chip carving and wood burning to adding texture or laser engraving, there are many options.

Materials

I chose not to use solid wood for the front and back of this case. Instead, I opted to use a two-ply surface that I created in my shop with veneer and slow-cure epoxy. The two-ply veneer is going to be very stable, while a thin strip of solid wood will not only be less stable and prone to warp, but it won't be all that strong.

When selecting veneers I would suggest using either a straight-grained piece or a very densely figured piece. If you use a piece that isn't densely figured you will likely not get a good idea of what the figure is doing, as the pieces for this case are quite small. There's also nothing wrong with using multiple species and creating some sort of a pattern.

I went with a straight-grained wood called tineo for the show faces of the front and back panels. I used maple for the cross-bands and back veneer that made up the front and back panels, and cherry solid for the edges, as cherry matches the tineo very nicely. The benefit of using species with contrasting colours is that you'll be left with a thin strip of the lighter species showing through, creating a pin stripe.

Laminating with epoxy

Mark a window the size of your finished case on a piece of paper, then cut this window out. You can position this opening over the veneer you've selected to see what grain pattern looks best. When you're happy with the grain pattern, mark and cut out two pieces of veneer for the show face of the back and front. Next, cut two pieces for the back veneer. Finally, cut two pieces of veneer, with the grain running perpendicular to the show face. These pieces will be the cross-bands.

I first used two layers of veneer – one show face and one cross-band – for the front and back, but it was too weak and flexible. A third layer added a lot in terms of rigidity.

Mix up enough epoxy to cover eight surfaces then let it sit for about 10



Look through a Window – In order to see just the grain that will be visible on the final case, use a paper cut-out the same size as the finished case. Move it around until you're happy with the grain pattern that appears, then trace the location and cut out the veneer. Be sure to cut out the veneer oversized to allow you some room to work.

minutes. While it's sitting, cut out three pieces of material to act as cauls; one for between the front and back, and one on the top and bottom of the stack. You'll also need to cut out four pieces of paper the same size as the cauls to ensure the epoxy doesn't stick the workpieces to the cauls. If the paper you're using is extra-thick I would consider using two plies of paper against each section, as the epoxy soaks through paper that isn't overly thick.

Give the epoxy a final stir and apply a light coat to the four surfaces that will be adhered together. Let this sit for 20 minutes so it can soak in a bit, then reapply a bit more epoxy to be sure there is light, even coverage on all surfaces. Bring the veneer, paper and cauls together in the proper order and apply medium clamp pressure, before letting the epoxy cure thoroughly.

Straighten one long edge on the front and back panel with a hand plane. Don't use a jointer or table saw to trim any of these edges, as the part is so thin and small it's not only hard to handle, but it can get caught under your rip fence and shift during the cut.

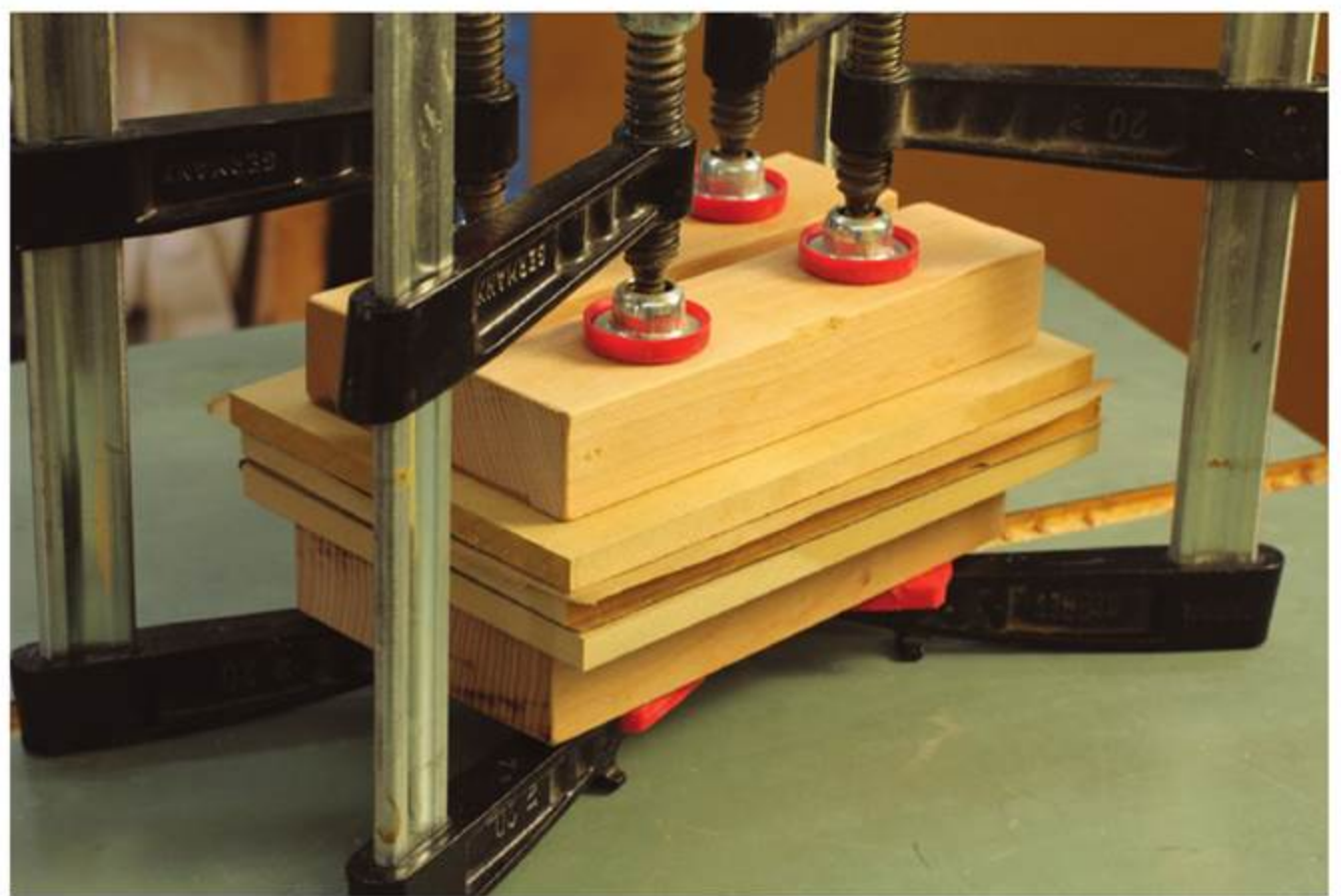
Add three strips

A strip of solid wood will be sandwiched between the front and back faces to keep them a certain distance apart, and give the case some rigidity. Cut them slightly thicker than the thickness of your phone. Keep in mind to also add the thickness of some flocking or adhesive felt, if you plan on adding some to the inner surface of the case. Some trial and error is necessary here, as you plane, dry-assemble, test-fit your phone, then plane the strips some more until you have the perfect fit you're looking for.

The three wood strips will meet with mitres at the bottom two corners. I ripped the strips to 1/4" wide, then cut a 45 degree angle on one long piece and trimmed it to rough length. I glued it in place along the long edge of the back panel, and when it was dry I cut and added the last two strips. Because I was going to add adhesive felt to the inside surface of the back, and have it curl up against the sides of the solid wood strips, I



Apply Epoxy – Apply an even coat of epoxy to all the mating surfaces, allow it to soak in a bit, apply a little bit more and bring the parts together.



Clamp it Up – Light and even clamping pressure is needed to press up the front and back panels. At least one layer of paper between each part and the caul is essential, as the epoxy bleeds through and is very strong.



Trim it Straight – Once the epoxy has dried you'll find it's quite easy to plane the long edges of each panel, even though the middle layer in each part is end grain. The epoxy is great for keeping the part from chipping out.

made sure to account for the thickness of the felt when cutting the short solid strip to length.

When the strips were dry I trimmed the back panel flush with the strips, and cut it to rough length.



Cut Mitres – With the solid wood strips cut to width and height, use a mitre sled or bench hook and handsaw to mitre the strips. You can leave the two sides long, but make sure to cut the bottom piece to length carefully as it determines how wide the interior cavity of the case will be. Take the thickness of the felt or flocking into account when doing this.



Glue the Strips On – Once the first long strip and the shorter strip are glued to the back panel, you can put your phone in place to help out with positioning the second long strip. Again, take the felt or flocking into account.



A Quick Trim – A hand plane will flush the case back to the side strips. It's best to not use a table saw to rip this sub-assembly to size, as it's small and can be hard to control during the cut.

Functional recesses

You should customize the front panel, and any other area of your case, to function how you want it. You can add no openings in the front for maximum protection, though you'll have to remove the phone from the case every time you want to use it. I chose to add enough openings so I could answer the phone

without removing it, but I would have to remove the phone from the case to do anything else. This provided me with a fair bit of protection, and a medium amount of functionality.

I planed one straight edge on the front panel, then traced the outline of the back panel/side strip sub-assembly onto the face of the front. I then measured the size and location of the areas

CWI Woodworking Technologies...

Hepa Filtration Removes 99.67% of all Dust Particles Larger than 1/3 of 1 Micron!

DustFX



CWI-DCP015H • 1.5 HP
Portable Hepa Cyclone
Dust Collector



CWI-DCP020H • 2 HP
Portable Hepa Cyclone
Dust Collector



CWI-DCP030H • 3 HP
Portable Hepa Cyclone
Dust Collector



CWI-DCP015H • 3 HP
Portable Hepa Cyclone
Dust Collector w/ Automatic
Cleaning



CWI Woodworking Technologies may be a new name for machinery in Canada but our products are built to be the best of the best. Service, Quality, Features and Performance are part of our DNA.

cwimachinery.com

Materials List

Part	Qty	T	W	L	Material
Show Veneers	2	1/32	3-3/4	5-5/8	Primary Veneer
Crossbands	2	1/32	5-5/8	3-1/4	Secondary Veneer
Back Veneers	2	1/32	3-1/4	5-5/8	Secondary Veneer
Long Solid Strips	1	5/16	1/4	5-5/8	Solid Wood
Short Solid Strip	1	5/16	1/4	3-1/4	Solid Wood
Adhesive Backed Felt	1	To Fit			

*These dimensions are for Rob Brown's Apple iPhone 5s. Please adjust these dimensions to suit your smartphone.

on my phone I needed access to, and transferred them to the front panel.

With a 1/2" diameter straight bit in my trim router, I clamped a straight edge to my front panel and routed the groove to allow me to slide my finger across the screen in order to

Add Some Face Openings – With the final dimensions marked on the front panel, and the location of the cutouts laid out, Brown clamped a straightedge to the workpiece and routed a 1/2" diameter groove between pencil lines. This groove allows him to slide his finger across the touch screen to answer his phone.



Microphone Access – In order to allow his voice to be picked up by the phone, Brown routed a small groove in the end of the case that was aligned with the microphone on his phone. An edge guide installed in his trim router allowed him to make a few passes until a through cavity was created.

New Brand Built on 50 Years Experience

Bigger Capacity, Amazing Performance, Easy Changeover. Combination Jointer/Planers!



5-Row Carbide Helical Head
Performance Technology



12"

CWI-JP1203 • 3 HP 12" Combination Jointer/Planer w/Stinger Carbide helical Head and Easy Lift Cast Iron Tables



16"

CWI-JP1604 • 4 HP 16" Combination Jointer/Planer w/Stinger Carbide helical Head and Easy Lift Cast Iron Tables

Scorpion

QUALITY • FEATURES • PERFORMANCE

Available in Canada at:

canadianwoodworker.com
1-800-665-2244





A Good Grip – To offer some friction to the case, Brown added shallow V-grooves in both sides of the case where his fingers were most likely to grasp the case while in use.

answer a phone call. Next, I drilled a 7/16" hole with a brad point bit near the bottom of the screen to allow me to access the main button on my phone. In order to allow my voice to be picked up by my phone while I talked I routed a 1/8" wide groove in the end of my case. I used an edge guide in my trim router, and created the groove with a few passes, deepening the cut each time. The final groove was so I could hear the other person on the line. It was also 1/8" wide, and I cut it with a straight edge clamped to the front.

Attach the felt

It would be impossible to fix the adhesive-backed felt in place, or to flock the area, after the case front is attached. I cut the felt to size so it was slightly shorter than the interior height of the case, but wide enough to barely cover the inner surfaces of the two longer side strips. This extra width cushions the phone while it's in the case, and gives a better friction fit.

Assemble the case

I trimmed the overall size of the front panel to fit the rest of the case accurately. The grooves and holes in the front panel were cut very accurately and need to be located directly over the areas of the phone precisely in order for the phone to work properly. To ensure the front panel is glued to the rest of the case accurately, I trimmed the front panel flush on all four sides of the rest of the case. This meant I could use a few clamps side-to-side and top-to-bottom to ensure the front panel didn't slide around during glue-up.

I applied a small amount of glue to the solid strips and carefully positioned the front panel in place, added some light clamps to keep the front panel positioned properly, then added some spring clamps to close the glue joints. Once dry I used a block plane to ensure the edges were smooth. Although I chose not to, you can radius the four corners with a belt sander, to make it look a bit sleeker.

Once the finish was applied, this case was going to be very smooth to the touch. The thought of the well-polished case, with phone inside, slipping out of my hands during use flashed through my mind. I decided to add a series of shallow V-grooves



A Simple Finish – Though a durable finish would have also worked well, Brown selected a finish that was very easy to apply and repair – shellac. The fact that it brought the grain out nicely was also a consideration.

on either side of the case to offer some grip. The imperfectly spaced and cut grooves add lots of friction, as well as give the case a great visual that only a hand could create.

Apply a finish

After sanding all the surfaces, and easing all the edges, it was time for a finish. How I saw things, there were two options: either apply a very durable finish and hope the case doesn't get damaged, or apply a finish that is very easy to touch up so when the finish does look tired it will be easy to bring the case back to life. I chose the second option, and went with an amber shellac. It's very easy to wipe one with a lint-free rag, dries very quickly and can be touched up down the road with only a few minutes' work.

I wiped on two quick coats, then allowed the finish to cure for about an hour. I then sanded the finish with 320-grit paper, applied two more coats and let it dry again. After another hour I did a thorough sanding with 320-grit paper and applied the final coat. After the finish fully cured overnight I rubbed it out with #0000 steel wool and wax, buffing the finish to a nice, even sheen that felt great in my hand.

Polyurethane spray finish from a rattle-can would also have been a good choice for this case, as it's durable and easy to apply on a small project.

I slid my phone in place and quickly asked my wife to call me. I let her know that she sounded even better on the phone when I used my new case.

What sort of details did you add to your smartphone case to give it a custom look? Share your project with others at the end of this digital article, on our website.

ROB BROWN

rbrown@canadianwoodworking.com



Go Online for More

RELATED ARTICLES: Make a Tablet Stand (Dec/Jan 2016)



Levelling a **PROBLEM FLOOR**

From carpenters to floor installers to homeowners, nobody likes an uneven floor. Learn a few tips on how to level a floor before laying a brand new floor. Once the job is complete you'll be thankful you spent the extra time.

Lead photo by Dreamstime Illustration by Len Churchill

Time, gravity and structural deficiencies can wreak havoc on residential floors. If you're contemplating laying a new floor and need to shim some low spots, or gutting a bathroom or kitchen in preparation for new fixtures or cabinetry, you are presented with an opportunity to correct the problem as part of the scope of work and improve the results of subsequent projects.

Identifying the Cause

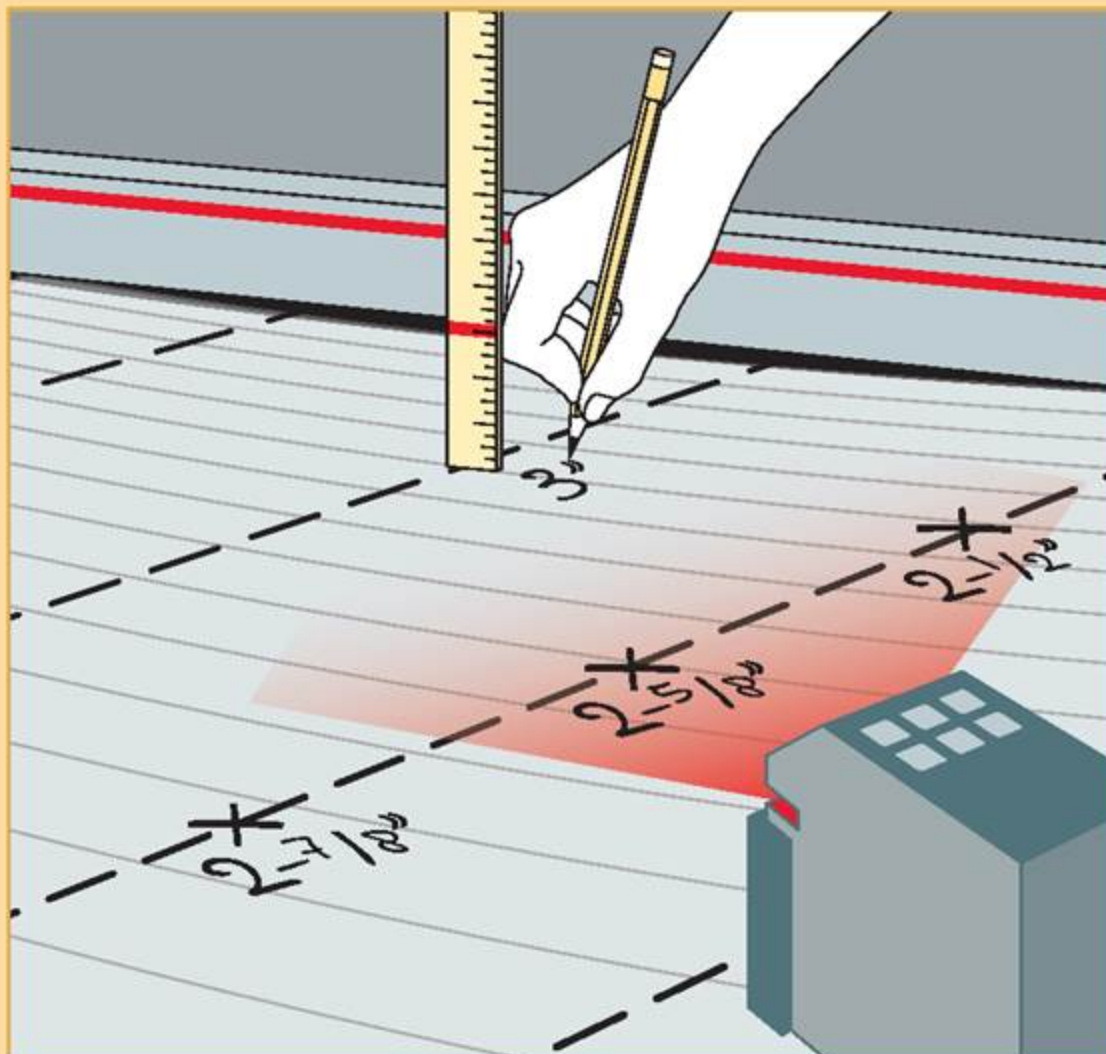
If a floor has sagged or dropped, it's important to figure out why. Identify and correct the underlying problem, whether it's due to undersized framing, rot, a sinking basement post, or offset load paths between floors. Ultimately, if a structure has sagged and a floor has fallen, it needs to be supported to stop further sag and then the uneven or out-of-level area needs to be shimmed to correct it, over top of the existing sub-floor.

Levelling

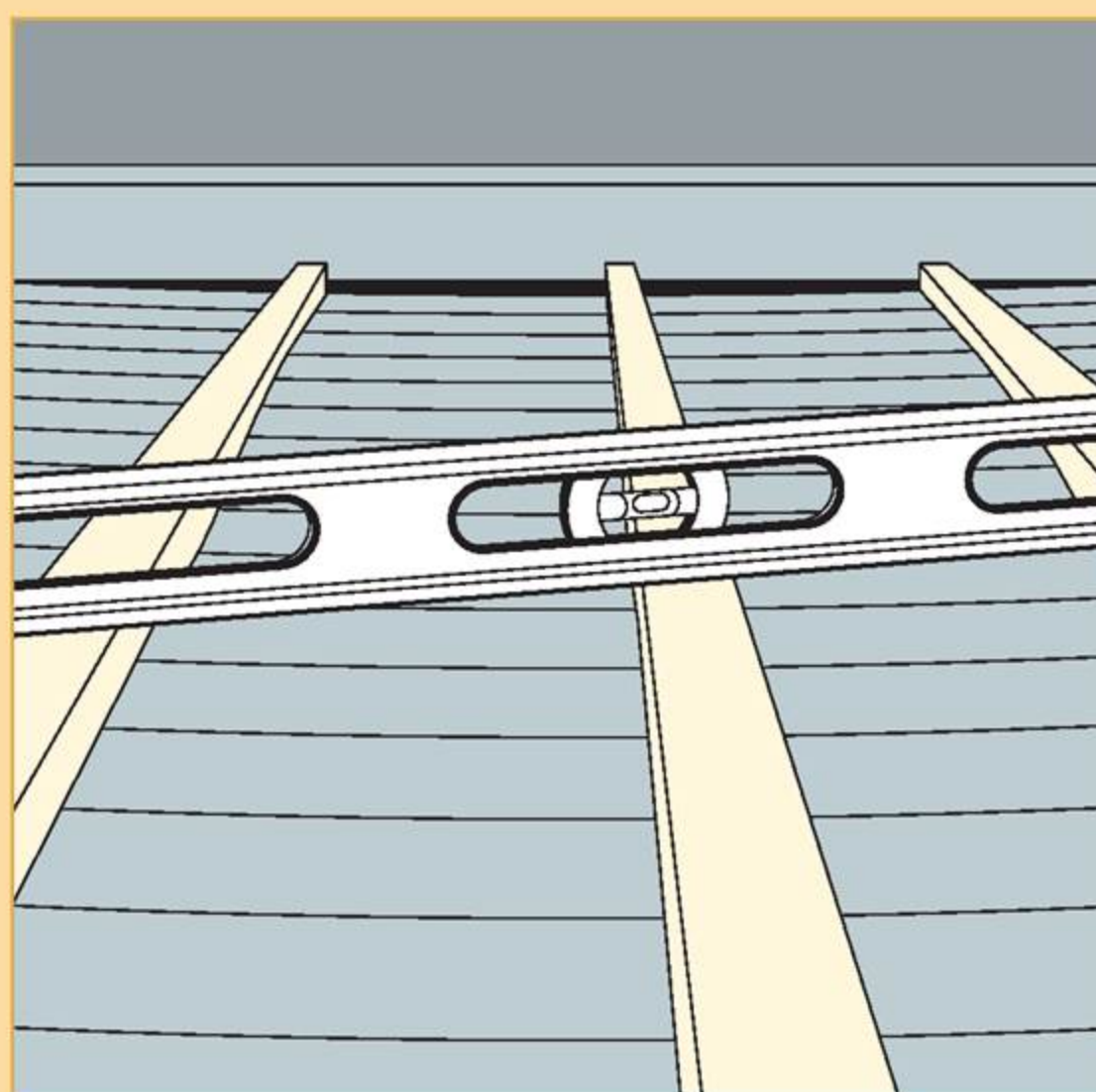
If you've got a defined space like a bathroom, a shower stall or a kitchen and you want to level the floor, your best tool will be a laser level. Figure out which way the floor framing is running, and chalk or draw lines overtop of the existing floor joists. Then shoot measurements from the height of the laser line to the sub-floor and you can write the measurements on the sub-floor with a permanent marker. The smallest number will be your high point, and you can subtract this height from each measurement to determine the thickness of the furring strips you'll need to cut.

If, along the length of one joist, the difference in height from the laser line is consistent, you can rip a consistent 2x furring strip with your table saw. If it changes, however, you will need to rip a tapered furring strip off a straight piece of wood using a circular saw and following a line drawn between several measurements along the length to mimic the subtle curve of the floor, taking care that the saw doesn't bind and kick back when ripping.

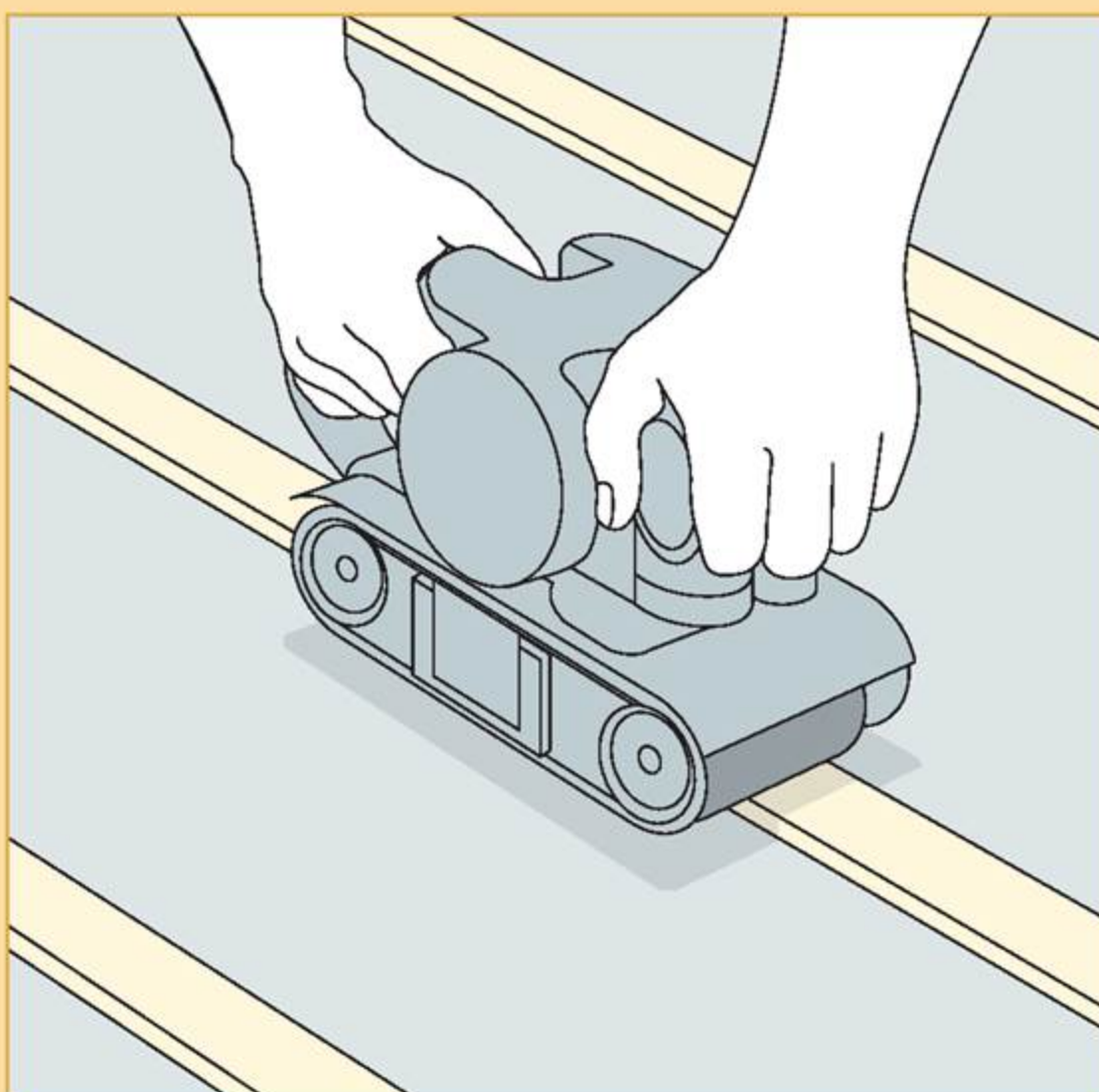
Once you have ripped the furring strips you can lay them down with construction adhesive beneath, screw them into the existing framing below, and then check them



Find the High Spot — With a laser level turned on and a ruler in one hand, go around the room and mark the distance between the laser line and the floor on the sub-floor. The smallest measurement is the one you should aim to level the rest of the floor to.



All Level Now? — With the furring strips in place, use a level to check everything is level. There may be high or low spots that still need evening out.



Remove Any High Spots — A belt sander, equipped with a coarse belt, will remove any high spots on the furring strips.

with a straight-edge or with the laser level again. Any fine-tuning at this point could be accomplished by adding a shim beneath the furring strip to raise the height if there is a low spot, or by employing a belt sander with coarse sandpaper if it's too high.

Once you're happy with the results, a new sub-floor can be laid overtop and fastened into the furring strips with more construction adhesive in between to stop squeaks. The result will be a level sub-floor to lay your finish floor on.

Evening Out the Low Spots

In areas where there's too much drop to level the floor, the better option is to make it less uneven by shimming the low spots. If it's a small area adjacent to a load-bearing wall, or where there is an isolated dip, it can be shimmed or filled with self-levelling compound. Self-levelling compound however can crack over time so I would use it over a plywood sub-floor instead of over tongue-and-groove boards to limit the movement beneath the compound.

If it's a larger area, a different approach should be taken. I recommend defining it by drawing the edge of the low spot on the floor, then cutting a section of 1/4" or 3/8" plywood to the shape of the low spot, stepped back the approximate length of a shim, and then using wide cedar shim shingles to feather out from there.

In extreme cases you may need to use more than one layer of plywood to reach a desirable height. Once I have a layer of plywood and shingles cut and arranged, I check it with a straightedge. I'm looking not for level here, but for an even blend into the rest of the floor. I go back and use construction adhesive beneath the shims and plywood, and then fasten



Raising a Large Area —

To level large areas to the high spots of the floor you can cut a piece of plywood to fit the low area, then feather out the difference with cedar shims.

the shims with a narrow crown stapler into the sub-floor, and screw the plywood to the sub-floor. Once the low spot has been evened out, a new sub-floor surface of 3/8" or 1/2" plywood can be screwed down overtop the entire floor area, creating an even base for finish flooring. Time and patience will yield results that will greatly improve the safety and aesthetics of the floor.

MATT DUNKIN
greenbydesign@cogeco.ca



Raising a Small Area — If the low area is fairly small you can raise it with a series of overlapping cedar shims. Self-levelling compound can also be used for small areas.





Corbels & Brackets



Appliques & Onlays



Bendix Collection
Crafted by a Tradition of Elegance



Moldings & Accents



OSBORNE
Wood Products, Inc.



Balusters & Newel Posts

Order Online or By Phone:
www.wood-turnings.com 1.800.481.2364

Survey Says!

2016 Canadian Woodworking Survey Results

Topics you asked for more coverage of:



Home improvement projects (60 percent)



Furniture projects (48 percent)



Wood finishing (45 percent)



Cabinetry (44 percent)



Tools (44 percent)

The results of our 2016 reader survey are in. Thank you to everyone who took part. Here's how we plan to incorporate your feedback into the future direction of our print and digital media.

Earlier this year we undertook an extensive survey of our print and digital readers to find out how well we were responding to the needs of our readers, and in what specific ways we could improve our magazine and website.

An engaged readership

One of the most refreshing findings in the survey was how fully engaged our readers are. Northstar Research, which conducted the survey on our behalf, reported that the average industry response rate is 2 percent – our survey had a whopping 21 percent response rate. This tells us that our readers are a dedicated bunch who care for our content a great deal.

Our survey also found that you're a very loyal crew. Just under half of you have subscribed to our magazine for five years or longer. While the print version of our magazine remains the most popular medium, more than half of our subscribers also regularly access our digital library.

When asked which columns in our magazine you like the most, 84 percent chose "Know Your Tools", 63 percent selected "Top 10", and 60 percent like "Finer Details".

Who you are

Over half of you are between 40 and 69 years of age. Two-thirds have been working wood for more than 20 years and almost three-quarters rate their skill level as intermediate.

Ninety-nine percent of respondents have a woodworking shop – about one-third work in a garage attached to the house, with the balance split almost equally between a detached garage or a basement shop. Not everyone has the luxury of a large workshop – 44 percent work in a shop less than 300 sq. ft., 28 percent in a shop of 300–500 sq. ft., and 26 percent in a shop over 500 sq. ft. Over half of you selected home improvement as your main woodworking activity, while 45 percent indicated furniture making.

You read *Canadian Woodworking & Home Improvement* because it provides great project ideas and plans (77 percent), interesting and informative skill building articles (74 percent), and is the best way for you to learn about new woodworking tools (66 percent). A whopping 94 percent used a tip or technique from the magazine. In fact, 76 percent of you rated *Canadian Woodworking* as 'trustworthy' in comparison to other woodworking magazines (61 percent) and woodworking and DIY websites (36 percent).

When deciding on what tools and equipment to purchase, you rely on information from our magazine and website – 56 percent have bought a tool or accessory after



Home Improvement is King – Over half of the respondents to our survey told us home improvement is their main activity, so we have increased the amount, and variety, of home improvement articles in our pages.



Topping the List – When asked which topics you wanted to see more of, home improvement was the #1 answer.



Furniture Project Plans – Furniture still ranks very high amongst our readers, with about half of the respondents telling us they would like to see more furniture projects in our issues.

hearing about it from *Canadian Woodworking*, and 69 percent have bought a woodworking product advertised in the magazine.

You're a tech-savvy lot – 66 percent use a smartphone and 59 percent use a tablet. The 12 percent of you who don't have either of these devices plan to buy one in the near future.

What you asked for

When asked which topics you want us to provide more converge on, you responded:

Home improvement projects (60 percent)

Furniture projects (48 percent)

Wood finishing (45 percent)

Cabinetry (44 percent)

Tools (44 percent)

While there was a fairly wide



Wood Finishing – The topic of wood finishing is a popular one with our readers. We will be increasing our wood finishing content in future issues to meet the demand.

range of suggestions as to how we could improve the content of both our magazine and website, the most frequently mentioned requests were for more in-depth content, more techniques and tips, practical advice on home improvement, information on choosing and using tools, how to finish projects, tool comparisons, and skill-building videos.

What we're doing

Whether you're beginning to learn the craft or are a wood-working enthusiast, we'll continue to bring you projects that will enhance your skills and inspire you to create. And, beginning in this issue of the magazine, we're introducing some new columns. Three of the new columns are home improvement-based, while the fourth focuses on wood finishing.

HomePage will be a one-page column that will have a wide range of short, informative pieces of home improvement information. It will keep you up-to-date on home improvement products, materials, tools, books, events and videos, as well as providing tips and techniques for maintaining and improving your home.

HomeInOn will be about two pages in length and will provide you with in-depth information about home improvement materials to help you make more informed home improvement decisions. For many of us, the home is our most important investment, so these are important long-term decisions.

SmartHome will provide information about smart technologies, products and services to help you enhance your home and work environments. Smart technologies are having a greater impact on both where we live and work, so sorting through what's best for home owners will be our focus.

Finishing Touch will provide information to help you select and use the right finish for your projects. We'll cover the most common types of finishes – what they are and how to apply them – and, we'll look at a variety of specialty topics, including pore filling, staining, dying, toning, glazing, ebonizing, spraying, and French polishing. This will be a series of articles starting with the basics, and getting more in-depth as the series progresses.

All of us at *Canadian Woodworking & Home Improvement* are excited about the new content we're preparing for you, and hope that it serves to enhance your wood-working and home improvement knowledge, skills and experience. We invite you to send us your feedback and suggestions to help us continue to improve our content.



Looking
for tools & materials for
your next project?

Look no further, find the items
you need and SAVE MONEY.
Visit a ReStore near you!
www.habitat.ca/restore

More News From Forrest

5 Newest Blades For Discerning Woodworkers

Forrest sets the standard for excellence with these latest top-quality blades:

- **Ply Veneer Worker.** Best for rip and cross cutting two-sided plywood (finished or unfinished) and cross cutting solid woods. Has 70 teeth, 10° hook, high alternate top bevel grind.

- **Woodworker II 48-Tooth** general-purpose blade. Has a 20° face hook, 25° bevel, and sharp points for clean, quiet cross-grain slicing.

- **"Signature Line" Chop Master** for quiet, precise cutting and less splintering. Has 90 teeth, a -5° hook for feed rate control, and re-designed angles.

- **2- & 4-Piece Finger Joint Sets.** Each reversible, interlocking 8" blade has 24 teeth. Ideal for rabbets and grooves. Sets make 3/16" and 5/16" cuts or 1/4" and 3/8" cuts.

- **Thin Kerf Dados** for clean cutting 3/16" to 1/4" grooves in thin plywood and man-made materials. Available in two-piece and three-piece sets.

NEW Website!
More Blades!



Our blades are American-made and have a 30-day, money-back guarantee. Custom sizes available. Order from Forrest dealers or retailers, by going online, or by calling us directly.

FORREST

The First Choice of Serious Woodworkers Since 1946

www.ForrestBlades.com 1-800-733-7111 (In NJ, call 973-473-5236)

© 2016 Forrest Manufacturing Code CW



Hamilton Wood Show

22nd Annual

FEB. 24, 25, 26
FRI 11-5, SAT-SUN 10-5 | 2017

Canadian Warplane Heritage Museum

Adults \$15 | Senior/Youth \$14 | Weekend Pass \$25

Children 12 and under - FREE

save up to \$2 when you purchase online | hamiltonix.woodshows.com

WOODWORKING

Tools & Machinery, Seminars, and the Canadian Woodcarving Championships

ANTIQUE TOOLS

Buy and Sell
Free Appraisals
(non motorized)

Enter the Canadian Woodcarving Championships

lots of Ca\$h and Prizes!

for an entry form

call 905-779-0422

or visit our website

www.WoodShows.com/CWC



2016 Best of Show

CARICATURE
By: G. Mark Sheridan
Photo by: Expose Studio

www.WoodShows.com

Sign Up for our free woodworking newsletters and e-mail notification of special buys.



Visit us at
www.leevalley.com/newsletter
and sign up today.

1-800-683-8170
www.leevalley.com

Lee Valley

PUT POCKET HOLES ANYWHERE

THANKS TO THE NEW CUSTOM POCKET-HOLE
PLUG CUTTER



CREATE POCKET-HOLE PLUGS
FROM ANY WOOD FOR A CUSTOM
COLOR AND GRAIN MATCH

Kreg

800.447.8638

LEARN MORE AT KREGTOOL.COM/PLUGCUTTER

R&D BANDSAWS

Manufacturer of TUFF TOOTH® Bandsaw Blades



Little Ripper Blade

5/8" x .025" x 3TPI or 4TPI



Woodslicer Swift Blade

5/8" or 3/4" x .025" x 3-4TPI

SALE \$25.00

(Regular price \$36.00. Price for any length up to 150".)

www.tufftooth.com

42 Regan Rd, Unit 18, Brampton, ON, L7A 1B4, (905) 840-0399



FREE GIVEAWAY

- LOTS OF GREAT PRIZES
- EASY TO ENTER
- NEW PRIZES EVERY MONTH

canadianwoodworking.com/give-away

www.theUnpluggedWoodshop.com

Daily Classes
Weekly Courses
10 Week Programs



"Canada's First, Hand Tool Only Woodworking School."



Workshop Supply Inc.

Helping Woodworkers Create

PLUS... wood parts, hardware, jigs, plans, patterns and more!

COMPLETE MAIL ORDER SERVICE

1-800-387-5716 www.WorkshopSupply.com

TOOL FOAM! D.I.Y.



CENTURY MILL LUMBER



FAMILY OWNED & 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

OFFERING QUALITY PRODUCTS, FRIENDLY SERVICE AND COMPETITIVE PRICING!

3993 Stouffville Rd. • Stouffville, Ontario

1-866-634-1851 • 905-640-2350 • www.centurymill.com

Brettwood
MACHINERY WORKS LTD.

800-799-2199 • brettwood.com

FREE SHIPPING TO MOST PLACES IN CANADA

YOUR FUJI SPRAY DEALER IN CENTRAL ONTARIO

FUJI SPRAY



FREE CATALOG DOWNLOAD

Follow us on

WE'VE GOT IT.

Ontario Wood
The natural choice



CALL, CLICK OR VISIT OUR SHOWROOM

50 Venture Drive, Units 4 & 5 Toronto, ON M1B 3L6

TOLL FREE **1.800.551.0192**

WOODCHUCKERS.COM

Federated
TOOL SUPPLY CO LTD. Specialists in Quality Tools & Machinery
www.federatedtool.com
1-800-387-0608 1581 Oxford St. E London
Browse our store online Have items shipped right to your door

william wood-write
A PENTURNER'S PARADISE
Pen kits • Project kits
Accessories • Tooling

www.penblanks.ca • 1-877-585-0403

TEGS TOOLS & MACHINERY You'll find it here!

GO CORDLESS!

BOSCH **DEWALT** **HITACHI** Inspire the Next

FESTOOL **Makita**

2 HAMILTON LOCATIONS + EASY ONLINE ORDERING

► **1361 Rymal Rd. E.**
905.388.0784

► **1104 Barton St. E.**
866-462-TEGS

Canadian family owned and operated for over 35 years **TEGSTOOLS.COM**

B.C.W.
361 Brant County Rd 18, Brantford, ON

- Lumber • Plywood • Hinges
- Drawer Guides • Edge Banding
- Birch • Oak • Cherry
- Maple • Melamine

Our bottom line is value for your dollar.

(519) 770-3460
bcwlumberandplywood.com

USED + REFURBISHED + NEW WOOD/METAL MACHINES TOOLS, ACCESSORIES, PARTS

DELTA • ROCKWELL • GENERAL • POWERMATIC • SUPERMAX • BEAVER & MORE!

NOW STOCKING SUPERMAX DRUM SANDERS

YOUR #1 DEALER!
COME SEE OUR DISPLAY.
RUN BY FAMILY.
TREATED LIKE FAMILY.

50 West Pearce St., Unit #1 - 2
Richmond Hill, On Canada
L4B 1C5

FORD since 1936
MACHINERY SUPPLY

Tel 905-882-6317
Fax 905-771-6831
www.fordmachinery.com

THE WOOD SHED
EST. 1990 | SMITHVILLE, ON

CALL US AT 905.957.3933
6566 SIXTEEN RD, SMITHVILLE, ON

START YOUR NEXT PROJECT IN THE SHED!

- DOMESTIC AND EXOTIC LUMBER
- SHEET GOODS
- TURNING AND CARVING BLANKS
- FIGURED LUMBER • LIVE EDGE SLABS

woodshedlumber.com

STOCKROOM supply
1-877-287-5017

INNOVATIVE WOODWORKING TOOLS & SUPPLIES
We specialize in quality abrasives, and related products, including drum sanders and miniature saw mills

RIKON POWER TOOLS

StockroomSupply.com

Reach Woodworkers and DIYers across Canada

ADVERTISE IN THIS SPACE

For as low as **\$399** per issue

519.449.2444
Woodworking
CANADIAN HOME IMPROVEMENT

Carl Buys Some Tools

BY DON WILKINSON

It started with a screwdriver; a slotted one because he needed to open a paint can and drive a screw into the wall to hang a picture. Then he bought a hammer to drive in the screw because he found it too difficult to use the screwdriver. Besides, the screws he bought were Phillips head. Then he bought a ladder so he could hang the picture higher than 4' off the floor but then the picture was crooked so he needed a level. And maybe a tape measure. And a different hammer, because the ball peen he had originally purchased couldn't be used to extract the screw he had hammered into the wall at the 4' height. Then what's-her-name pointed out the gaping hole left in the wall from when the hammer slipped. So now he needed a trowel and a sanding block.

Thus began the great tool purchase extravaganza of 2016. By the time he was finished he had purchased at least one of every tool ever known to man, including a stone axe he found while at the local museum.

Yes, Carl had decided to buy his own tools since he could no longer borrow mine after I told him they had all been "stolen" by a band of wandering gypsies. So Carl went on a tool buying spree of such proportion that he single-handedly saved the local Rona and Home Hardware stores from a slow extinction.

Now, on the surface, Carl deciding to start his own tool collection wasn't such a bad idea. For one thing I was hoping it would keep him from lurking around my shop and tool shed with those big buggy, puppy dog eyes popping out of his head as I tried to demonstrate what each tool did. I swear, that man learned all about life from watching Tool-Time reruns.

He's Canada's answer to Tim "the Tool Man" Taylor. Just not as competent, that's all.

I hadn't seen Carl for awhile, not that I was missing the poor dim boy, you understand, but the other night he came by after supper and before I could hide he tracked me down and invited me to come over to visit his "shop" and see his newest tool purchase. I'm going to have to install an Early Carl Warning System.

Carl's shop isn't really what you might call a "shop" in the normal sense, in that it's simply a large, crumbling, concrete block structure of indeterminate age and even more indeterminate structural integrity. There is a large crack zipping up one wall that I could see my house through, and a large missing portion of roof sheeting that allows one to watch the birds or stars passing overhead. The rear right corner of the floor sags a good 7" where the creek had undermined it during one of the annual floods a few years ago. That of course, is where he had set up his shiny new, and somewhat crooked, table saw.

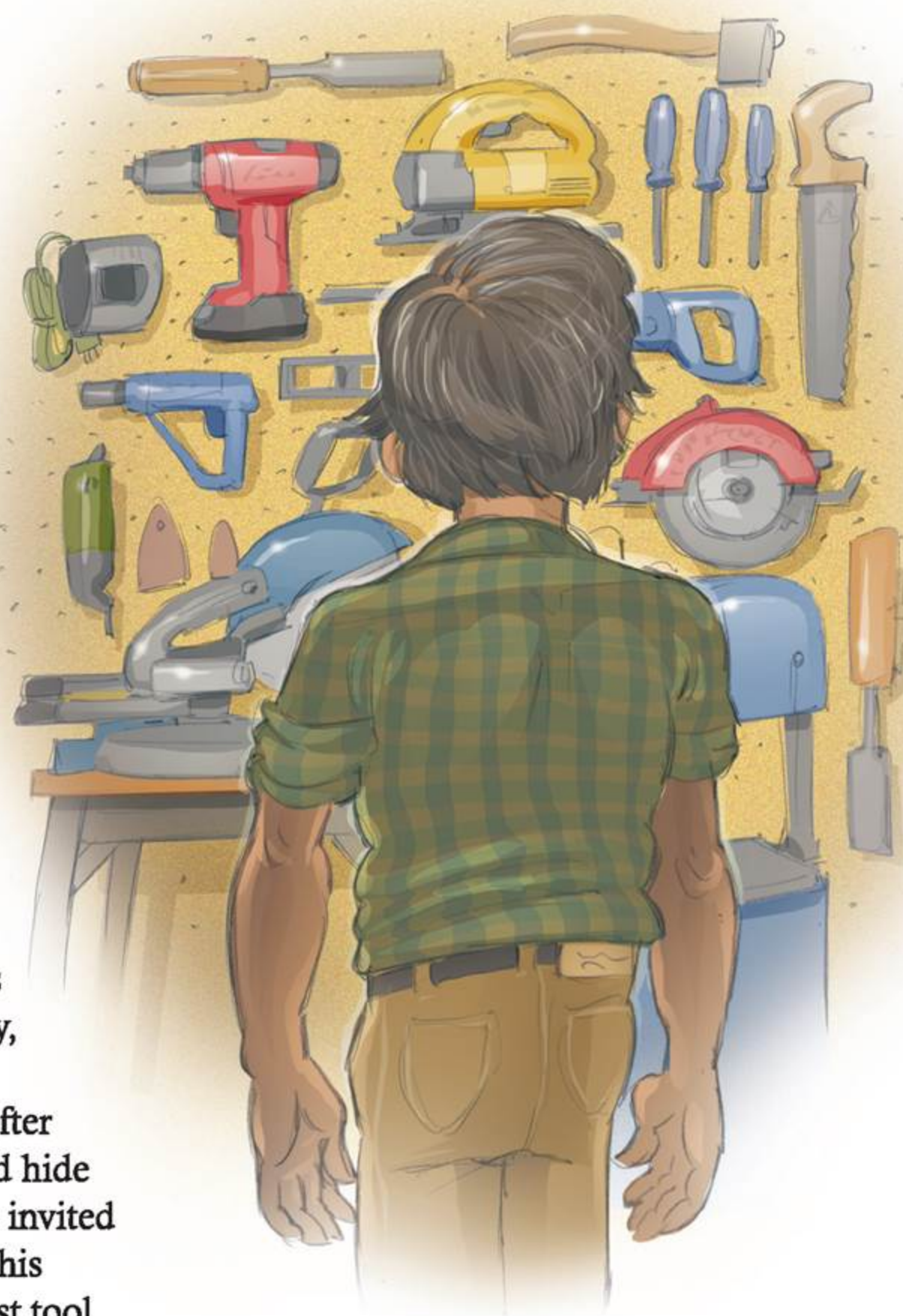
Carl had purchased a table saw that supposedly could stop the blade instantly on contact with skin, which I thought was an inspired purchase. It seems he had seen a demonstration of the saw where the salesman had used a hotdog wiener in place of his finger and run it through the spinning saw blade, whereupon the blade had made an impressive bang and vanished into the bowels of the saw, leaving the wiener unharmed.

I could foresee hearing that loud bang a lot. Carl was so impressed by this that he plunked down his money instantly. But now that he owned the beast he was wondering just why anyone would want to use a table saw to cut up hotdogs. I honestly couldn't answer his question.

I was getting more than a little depressed as Carl dragged me from wall to wall of his shop, proudly showing me every tool he had purchased, almost all of which he couldn't use and most of which he couldn't even identify. Carl had tools that I had struggled for years to purchase. And not just cheap knock-offs either. No, Carl had bought the best, the top-of-the-line models, the ones that guys see advertised in the magazines and drool over. The ones that I can no longer afford. It wasn't fair. For crying out loud, he even had tools that were better than mine.

I decided to borrow his brand-new \$1200 sliding compound mitre saw. I had some ceramic tiles that needed trimming.

DON WILKINSON
YukonWilk@gmail.com



Making Connections

The reward of developing any skill is time well spent. And while practice will certainly make perfect, the traditional hand-cut mortise-and-tenon joint need not be a daunting undertaking. The secret to a tight-fitting joint begins with precision layout, followed by proper tools to chisel out the mortises and cut the tenons. At Lee Valley, you will find all the necessary hand tools to help you perfect what you do, including mastering hand-cut joinery.

Browse our catalog online or download it to the Lee Valley Library app for iPad, iPod, iPhone or Android™ devices.

1-800-683-8170 leevalley.com

1. Carver's Mallet 27E05.01
2. 4 1/2" Beech Mallet 35E01.02
3. Veritas® Rip Tenon Saw 05T14.01
4. Veritas® O1 Bench Chisel, 3/4", 05S20.12
5. 12" Stainless-Steel Cabinetmaker's Rule 06K20.12
6. 12" Utilitas® Hook Rule 15N04.03
7. Veritas® DX60 Block Plane with A2 Blade 05P70.01
8. Veritas® Precision Square, Imperial 05N35.01
9. Veritas® PM-V11® Mortise Chisel, 3/8" 05S31.06
10. Veritas® PM-V11® Mortise Chisel, 1/4" 05S31.04
11. Veritas® Dual Marking Gauge 05N70.01

Find us on:



 **Lee Valley**



Halifax • Ottawa • Kingston • Toronto • Waterloo • Burlington • London • Windsor
Winnipeg • Saskatoon • Edmonton • Calgary • Kelowna • Coquitlam • Vancouver • Victoria



Robert Akroyd

Cherry Chair

A client of Akroyd's wanted a chair that was loosely inspired by mid-century Danish furniture. He designed and made this chair, which included mortise and tenon joinery and a pair of 3/8" threaded rods that hold the heavily shaped cap rail in place.

Turn to page 16 to read a collection of Robert's quotes.

