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Canadian Quotes:
WELDON GRAY

APRIL/MAY 2016
ISSUE #101

CANADIAN Woodworking & HOME IMPROVEMENT

DEVELOP YOUR SKILLS • TOOL YOUR SHOP • BUILD YOUR DREAMS

Exotic Wood Card Holder

p.40

oneTree
Exhibition Highlights
p.8

Know Your Tools:
Drill Press
p.10

Finer
Details:
**Bosch
Lute**
p.26

Black Walnut:
Furniture Favourite
p.34



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FEATURES

8 OneTree Exhibit BY ROB BROWN

When a large bigleaf maple tree had to be felled, the Robert Bateman Gallery thought something special needed to be done with it. View a selection of the pieces built from the tree, and see more online.

14 Garden Shed BY MARK SALUSBURY

If stylish storage is on your to-do list this spring you're in luck. Take a look at this tasteful and fully functional garden shed then start dreaming big.

28 21st Century Writing Desk BY CHRIS WONG

Writing has changed a fair bit in the last century. The biggest change is the advent of the computer. Because of the computer, this desk uses a rarely incorporated design feature for a desk's surface – texture.

34 Appreciation for Black Walnut

BY JESSE VERNON TRAIL

Learn about some of the lesser know facts about the black walnut tree, and the wood that comes from it.

DEPARTMENTS

2 Editor's Letter

4 Letters, Coming Events

6 Web Shavings

10 Know Your Tools: [Drill Press](#)

12 Canadian Quotes: [Weldon Gray](#)

26 Finer Details: [Bosch Lute](#)

44 Top Ten: [Metal Fasteners for Woodworking](#)

48 Wood Chuckle

Back Cover: [Lute by Weldon Gray](#)



8



14

12

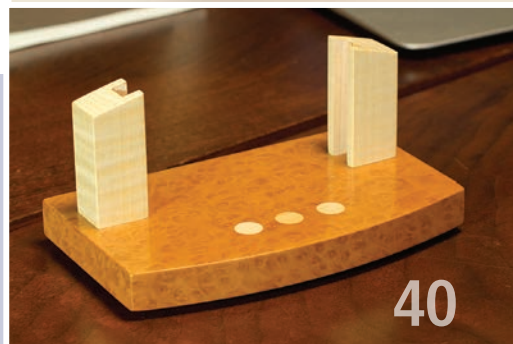


COVER STORY

Cover photo by Rob Brown

40 Make an Exotic Business Card Holder

Why not display your business cards in true style, with this exotic wood business card holder. BY ROB BROWN



40

Like life, editing a magazine often throws some curves at you. Just when I thought this issue was wrapped up we got word that a few large last-minute changes had to be made. Not a big deal, as these things happen. Like Yogi Berra said, "It's not over till it's over." I think he would have been a great magazine editor, by the way. I'm used to making last-minute changes while making furniture as well. Often, with projects nearing completion, I make a mistake or realize there are improvements to be made, so things get tweaked as necessary. All furniture makers, even the pros, make mistakes. It's all about how they get fixed or how they are made to look like they were put there on purpose. A great furniture maker is comfortable with adjusting on the fly to produce a piece that looks and works wonderfully.

Getting away from the philosophical side of magazine editing, I hope you enjoy our latest issue, with all its last-minute changes. There is a wide range of projects in our pages. Starting with the simplest – a business card holder I made with exotic veneers. Moving up the difficulty scale is Chris Wong's 21st century writing desk. A textured top might at first seem the wrong choice for a writing desk, but with computers leading the writing world nowadays I think it's a great idea. And the most-time consuming and expensive project we've run in some time is a garden shed. Mark Salusbury built this shed with the help of his wife, and details how you can do the same with someone.

Speaking of time-consuming and expensive, not to mention incredibly impressive, is the work of Saskatchewan luthier Weldon Gray. His body of work is jaw-dropping – my jaw literally dropped when I saw his work for the first time. I had no idea how he did some of the things he did. In our Finer Details column, Gray shares the techniques he uses to create one of his most awe-inspiring pieces; his version of the Bosch lute. In our Canadian Quotes column, I share some of Gray's thoughts about making high-end instruments in Canada. You won't want to miss an online slideshow of his work. Go to the Videos section of our website to view it.

Rounding out the issue are our usual Community, Top 10, Know Your Tools, and Woodchuckle columns, as well as an article on one of North America's most prized woods, black walnut.

Rob Brown



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CANADIAN Woodworking & HOME IMPROVEMENT

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- Table Tilt: -5° to 45°
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- Quick Release Blade Tension Lever
- Weight: 94 kg
- Made in Taiwan

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- Motor: 3/4-HP, 110-V, Single Phase
- 4 Speeds: 80, 180, 1300 & 3,000 FPM
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- Precision Balanced Cast Iron Wheels
- Weight: 189 lbs

new

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- Motor: 1 HP, 110 Volt, 7 Amps
- Impeller: 10" Aluminum
- Air Suction Capacity: 825 CFM
- Noise Rating – 72dB
- Intakes: One 4"
- Weight: 27 Kg
- Made in Taiwan

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2 HP Dust Collector w/Canister Filter

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

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CX400 - Reg \$699



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

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- Disc Size – 12"
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6" x 89" Oscillating Edge Sander

- Motor: 1-1/2 HP, 110 V, 18 Amps
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letters

Rock On!

Just want to thank you for your article and plans for the wonderful Charles Rohlf's rocking chair. I just completed mine and it turned out just great.

I started with a couple of salvaged old 2 inch thick oak doors. I did have to buy oak boards for the medalions, the back and the rockers.

As you can see, I raised the rockers to 4 inches and added a rock lock feature to protect little fingers and toes.

It was a very challenging project with all the curves and angles.

The result was well worth the effort.

Thanks again,

John M.



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Bill L.
Baie Verte, NL
has won two Freud Fusion
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Dan P.
Murillo, ON
has won a \$250 gift card
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Great Woodchuckle, Don!

I just read your article. It's the first time I've read any of your work. Hilarious! You have a wonderful way with words. Love your sense of humour!

Norma W. – via email

*Hi Norma,
Thank you for taking the time to write me. I really appreciate hearing from my readers and I'm glad you liked the article. All my articles for the magazine are available at this link:*

www.canadianwoodworking.com/author/don-wilkinson

I hope you enjoy them, and thank you once again for writing me.

— Don Wilkinson

Coming Events

Kingston Woodworkers Association Woodworking Symposium

"The Experts' Signature
Techniques Explained"

Frontenac Secondary School

April 16th, 2016

www.kingstonwoodworkers.ca

London Spring Home & Garden Show

Apr 16 - 17, 2016

Western Fair District AGRIPLEX

London, ON

The Made of Wood Show

Acton Mills Arts Center

April 16th to May 18th, 2016

www.madeofwoodshow.com

Canadian Furniture Show

May 28 - 30, 2016

The International Centre

Mississauga, ON

For more woodworking events:
www.CanadianWoodworking.com
List your club and event FREE.

Subscription Draw Winner

Ron M.
Mount Forest, ON

Thanks CW&H!!

I am enjoying the dado blade set in my small workshop. I enjoy doing lots of small projects. I have done outdoor furniture, picture frames, screen doors for my daughters, and many gifts for children and grandchildren. Once again thanks for the dado set.

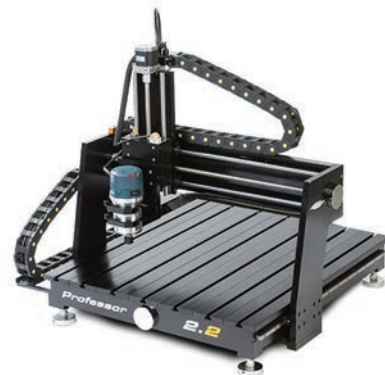


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- Table tilt: 0-45° right
- Cutting capacity/throat: 8 1/2"
- Max. cutting height: 3 3/4"
- Blade size: 62" (1/8" to 3/8" wide)
- Blade speed: 2460 FPM
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- Speed: 1725 RPM
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- Chuck size: 1/2" • Number of speeds: 1
- Max. stock width: 13 3/8", Thickness: 4"
- Max. chisel travel: 4 1/8"
- Max. mortising depth: 3"
- Max. distance column-to-chisel: 5 1/8"
- Chisel size range: 1/4" - 1/2"
- Table size: 13 1/2" x 6" • Overall height: 29"
- Approx. shipping weight: 60 lbs.

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- 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.



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- Number of speeds: variable (650-3800 RPM)
- Tool rest width: 5 1/8"
- Spindle size: 1" x 8 TPI RH
- Spindle and tailstock taper: MT#2
- Overall dimensions: 38 3/4" long x 12" deep x 17" high
- Approx. shipping weight: 89 lbs.

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- 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 3/32" x 1/8"
- Cutterhead speed: 10,000 RPM
- Number of cuts per inch: 52
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- Approx. shipping weight: 78 lbs.



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6" JOINTER WITH MOBILE BASE

- Motor: 1 HP, 110V, single-phase, 14A
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- Max. depth of cut: 1/8"
- Max. rabbeting capacity: 1/2"
- Cutterhead diameter: 2 1/2"
- Number of knives: 3 HSS
- Knife size: 6 1/8" x 3/8" x 1/8"
- Table size: 7 1/2" x 46"
- Table height from floor: 33 3/8"
- Fence size: 4 1/2" high x 29 1/2" long
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- Max. cutting height: 6"
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- Table height: 35 3/8"
- Footprint: 21" L x 19 1/2" W
- Arbor: 3/4" • Arbor speed: 3450 RPM
- Capacity: 3 1/4" @ 90°, 2 1/4" @ 45°
- Rip capacity: 30" right, 15" left
- Overall size: 57 1/4" W x 35 3/8" H x 37 1/2" D
- Approx. shipping weight: 348 lbs.



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- Motor: 3 HP, 240V, single-phase, TEFC, 3450 RPM, 12A
- Precision-ground cast iron table size: 73 1/2" x 9 3/8"
- Cutterhead knives: 4 HSS, 8 5/8" x 1 3/16" x 1/8"
- Cutterhead speed: 4800 RPM
- Cutterhead diameter: 3"
- Max. depth of cut: 1/8"
- Max. rabbeting depth: 1/2"
- Cuts per minute: 19,200
- Deluxe cast iron fence size: 35" long x 5" high
- Approx. shipping weight: 508 lbs.



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Best Build

Check out the "Best Build" subforum in our **Woodworking** section of our forum for our latest Best Build thread – a Queen Anne secretary desk. This month's winner, Craig Kosonen, receives a **Veritas dual marking gauge** from Lee Valley.

To find out more about this project, go to:
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Neil Bosdet
"Food Art"
Mixed species



Philip Cottell
"Regeneration"
Maple

oneTree Exhibit

When a huge bigleaf maple tree in the Cowichan Valley had to be taken down, it was sawn up into lumber and distributed between 46 artisans. From November 2015 to January 2016, the completed pieces were on display at the Robert Bateman Centre in Victoria, BC. Here are some of the pieces in the exhibit.

BY ROB BROWN



Randy Mugford
"oneTree Coffee Table/Bench"
Concrete, wood



Reuben Forsland
"Raven"
Maple, holly, cedar



John Lore
"Tidepool
Dining Suite"
Maple, walnut,
rock, glass
& Stephane
Demopoulos
"LC 1.0"
(chair set)
Maple



Robin
Shackleton
"West
Coast
Celtic
Bodhran"
Maple, yew,
goat skin



Robert
Anderson
"The oneTree
Violin"
Mixed species



ROB BROWN

rbrown@canadianwoodworking.com



Scott Gillies
"Convergence"
Maple



Steve Neil
"Whiskey
Cabinet"
Maple, black walnut
(Photo by Art Carlyle)

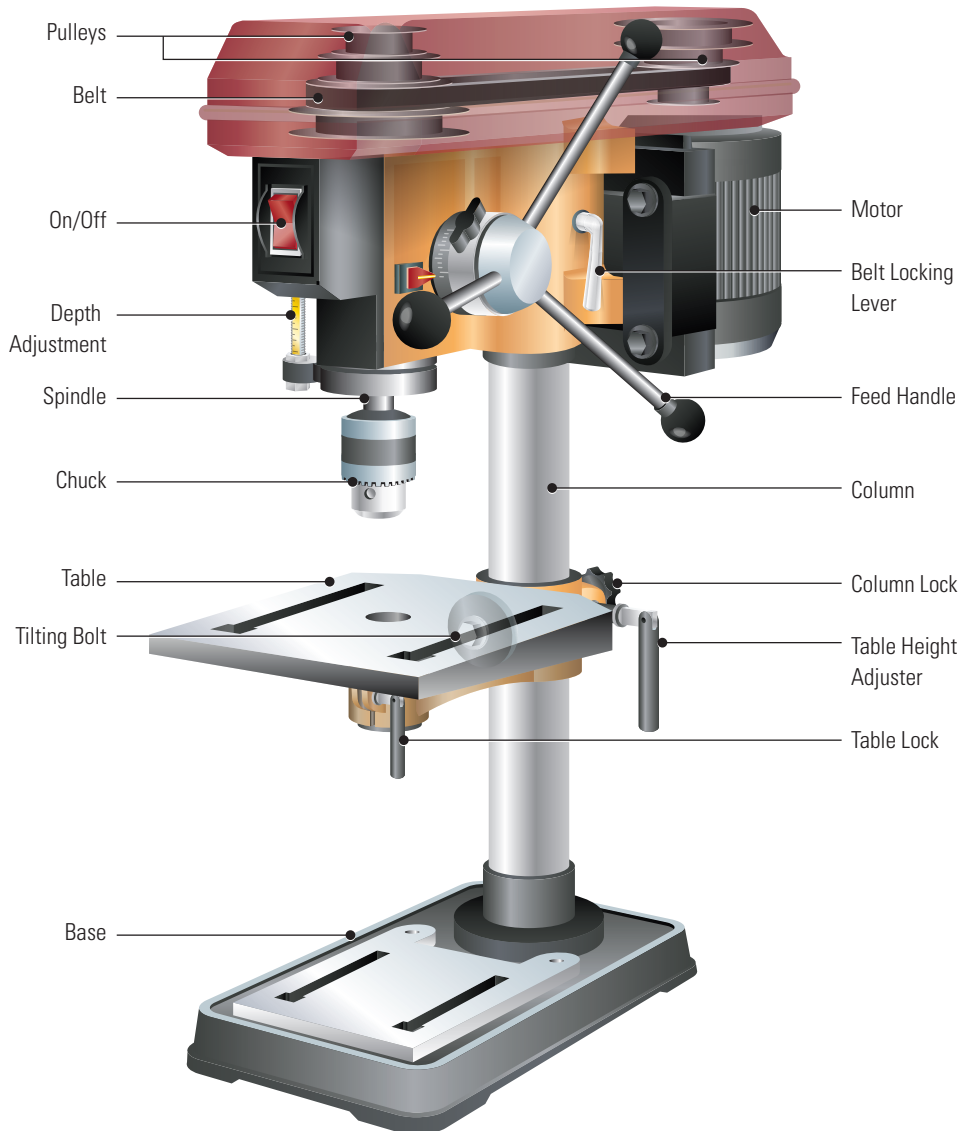
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RELATED ARTICLES: Saskatchewan Woodworkers' Guild's
2014 Show (Aug/Sept 2014)

SLIDESHOW: View a slideshow of all these pieces,
and many more, on our website.

Drill Press

BY CARL DUGUAY



To drill straight and true holes quickly, easily, and consistently, you'll need a drill press. The model you choose should be based on the type of drilling you do. For small-scale work (such as box making, crafts, and toys), or if you have limited shop space, a bench-top model may be sufficient. For furniture and cabinetry work, a stationary model will likely be a better choice. When buying a drill press, look for a large swing (twice the distance between the column and spindle center) to more easily drill in the central portion of wide panels. A long stroke (the distance the chuck travels vertically) will make it easier to drill through thick stock. You'll find that a #2 Morse spindle taper, and a 3/8" to 1/2" chuck is common. If you do a lot of drilling, you'll save time with a variable speed drill press rather than having to manually switch belts.

Price: \$80–\$2,000

Swing: 8–24"

Stroke: 2–6"

Motor: 1/3–1-1/2 HP

Speed range: 120–3,900 RPM

Chuck size: 3/8–3/4"

Spindle taper: MT2–MT4

Get the Most Out of Your Drill Press

Bigger Tables are Better

A large table that moves up and down smoothly on a robust rack and pinion system and locks easily and securely in place is great to have. If you don't have a large table, a plywood one, with all the bells and whistles, can be made in your shop.

Use the Right Bit

Sharp bits not only cut smoother holes, but also cut through stock quickly. For general drilling, twist, brad-point, and spade bits work well. For holes with super-crisp rims that are accurately sized, use Forstner bits.

Drill in Stages

Keep holes from plugging with wood chips by retracting the bit every 1/2" or so of drilling depth. Bits won't heat up as much, and will maintain a cutting edge longer. You'll find this especially helpful if your drill press has a 1/2 HP or smaller motor.

Watch Your Speed

For best results, match drilling speed to the type of material and size of hole you are drilling. In general, select a slower speed for larger bits. Consult the drill speed chart that comes with your drill press.

Pimp Your Drill Press

There are lots of ways to enhance your productivity with a drill press, including a mobile base, a keyless chuck to speed up bit installation, a mortising attachment to speed up mortise production, and a sanding drum for smoothing curved stock.

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Weldon Gray

...on research, losing track of time and joining the circus.

BY ROB BROWN



Hurdy Gurdy – Gray finds the hurdy gurdy to be the most difficult instrument to make. With many moving parts it's easy to understand why. Gray says that, with a little imagination, it looks like one of the warships in Star Wars.

68 years old, Graylore Lutes, www.graylorelutes.com
Location & size of studio – double-car garage at my home in Saskatoon

How long have you been building instruments?
Thirteen years

What sort of instruments do you specialize in?
Ancient, medieval and Renaissance musical instruments. These include the organistrum, hurdy gurdys, psalteries, wire strung harp, oud, various lutes, balalaikas and the vihuela.

Tell us a couple of interesting things about your personal life.

I worked at a Hanna-Barbera theme park called Flintstones Park sculpturing dinosaurs. Now I demonstrate and perform with the instruments I make.

If you were not a luthier what would you be?
A circus performer

Do you prefer hand tools or power tools?
Power tools

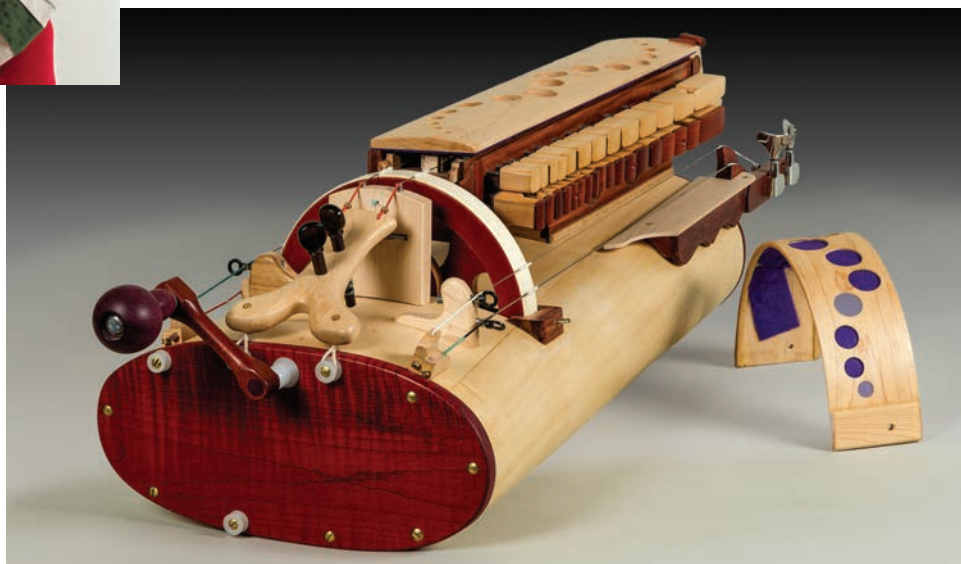
Solid wood or veneer?
Solid wood

Figured wood or straight grain?
Figured wood

Flowing curves or geometric shapes?
Both

Favourite wood?
Roasted curly maple

Least favourite wood?
Bloodwood



Photos by Trent Watts (Lead Photo by Weldon Gray)

quotes

I have a 24 ft. x 32 ft. heated shop in my attached garage. It's like a second home.



Sometimes I lose track of time and wonder how the day went by so fast.



I have a large television, which is on all the time. I watch sitcoms, documentaries and movies while I work.



I love my Dremel tools and chisels. I also love carving.



To come up with the designs I make I research ancient instruments, some of which are extinct, on the internet. I also use books that my wife buys for me.



I had wonderful art and woodshop teachers in high school who helped me get started.



I make a few instruments a year for customers.



I started in woodshop classes in high school. After high school, I worked in construction framing houses and as a carpenter.



My work as a luthier has been mainly self-taught.



I joined the medieval group here in

Saskatoon and heard a local group of musicians "Troubadour du Bois" play at a concert. I wanted to buy a lute, but soon realized that they were not easy to find. So, having made a guitar in high school, I thought I would try to make a lute.



The very first musical instrument I made was a double-neck solid-body electric guitar in 1965. My first medieval instrument was a lute. I learn something with every instrument I build. I would like to think they are getting better.



I allow six months to make an instrument. That gives me lots of time and I am under no pressure.



I like to find a piece in my research that moves me; a piece that I don't see commonly anymore. I find as many pictures and writings about it as I can and draw pictures and plans, to figure out the size and scale of the instrument. I then find the wood that I would like to use and away I go.



Some of the most common woods I use are different kinds of maple for bracing and foundational pieces, and spruce for the soundboards.



Common questions are "How long did it take to make it?", and "What is it worth?" I don't consider the time when I make an instrument. I enjoy every minute, figuring out how to do things



Harp – This harp is a replica of the Lady Lamont Harp; the original is in the Museum of Scotland. The 32 string shoes that the strings go through are made of silica bronze, and were the hardest part of the build.

and solving problems. Each instrument is a challenge for me. This is a hobby that I love. If I had to worry about what it is worth, I probably wouldn't be interested in doing it.



I probably spend around 400 hours or more on many instruments, but I don't keep a log of hours. I enjoy working with my wide-screen TV on, or listening to Renaissance music on my iPad. I lose all track of time.



I can work on something that interests me for a long time to get it perfect. When I am in my shop the outside world disappears and time stands still. Otherwise, I like to get things done fast and right away.



Most of my mistakes end up as kindling for a wiener roast.

ROB BROWN

rbrown@

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SLIDESHOW: View a slideshow of many of Gray's pieces on our website.



GARDEN SHED

From Concept to Completion

This versatile addition is a personalized sanctuary, storage in style, covering a host of needs. It's also a really satisfying one- or two-person project.

BY MARK SALUSBURY

You can only bang your head so often, stumbling backwards out an overly low and narrow doorway while trying to deftly guide a fistful of whatever past obstacles to avoid the inevitable crashing avalanche of tools and pots before something has to give. Tin garden huts are fine for storing small stuff, but if you want a space you can spend time in, making a proper shed to suit your needs and style is surprisingly easy.

Researching shed/barn styles online, in books and magazines reveals a lot of potentials, mostly defined by roof line: gambrel, saltbox, colonial, etc. Deciding on a style, there's

plenty of scope to build and customize to suit your needs and preferences.

Our total cost, including taxes, was about \$5800. As for timeline, from drawings to putting padlocks on the doors my wife and I spent a little over two months building this shed. It wasn't full-time work for us, as we had to work it around our other commitments and the weather. Most of the work could be done by one person, but a second pair of hands was necessary from time to time.

Building permit

We wanted a colonial style that matched the architecture of our home and workshop and offered floor space, access and

head-room to store our garden tractor and attachments, plus garden tools and seasonal furniture and a bright space for tinkering or potting at a bench area. Double-doors at both ends will provide ample access.

We photocopied a picture of the style of shed we were considering, along with a copy of our property survey, and headed off to get a building permit at our township office. Working with a permit has many advantages. You get setback, siting and construction advice to meet local codes. Local officials can be really helpful regarding taxation and new methods and materials, often saving money, steps, materials and labour, especially if you are new to building. For instance, we learned that a building less than 200 square feet is not subject to municipal taxes in our area. Working with a permit is also valuable with regard to insurance, plus it adds plenty of equity to your property when it comes time to sell; realtors get the most from a code-conforming property they can list confidently.

Time for drawings

Once permitted to build, drawings were the foundation for everything to follow. Mainly an analog guy, I work to a scale of 1"=1' on graph paper. First the floor plan showing joists and rim joists under-laid by the skid foundation. With outside dimensions established, I then drew the west window wall, the height driven by my wish to use full 8' sheets of plywood cladding to extend from the rim of the top plate to overlap the floor and joists 3-3/4" at the bottom. The 3/4" floor was drawn 3" up from the bottom. Next, the bottom plate was added, then a double top-plate flush with the top. Double studs were drawn in at each corner, 16" on center along the wall, then sill plates, jack studs and headers for each window. I'll make my own windows and doors so I'm free to draw rough openings as I please; otherwise, factory-made elements would have governed the size of rough openings. To keep labour manageable, I designed to build and assemble the wall in three parts to be joined once erect. Next, I did a drawing for the windowless east wall, designed to go up in three sections. Lastly, the identical north and south walls required only one drawing, showing the 60" wide door opening. Knowing the final width of the shed, drawing out the trusses and gable ends came next,



The Right Depth – A moveable 4" wide board helps you to gauge the depth of stone.



Level it Out – By using future rim joists and a spirit level you can assure the beds are flat and level.

showing all lengths, angles and components. Other drawings would follow to plan and rehearse each phase of construction and, most importantly, develop a materials list so we could shop for supplies without waste or shortage.

Skid foundation

On site we staked out the sheds boundary with string; 10' wide and 19'-9" long. The plot we selected is level with well drained, firm soil and is away from the roots and branches



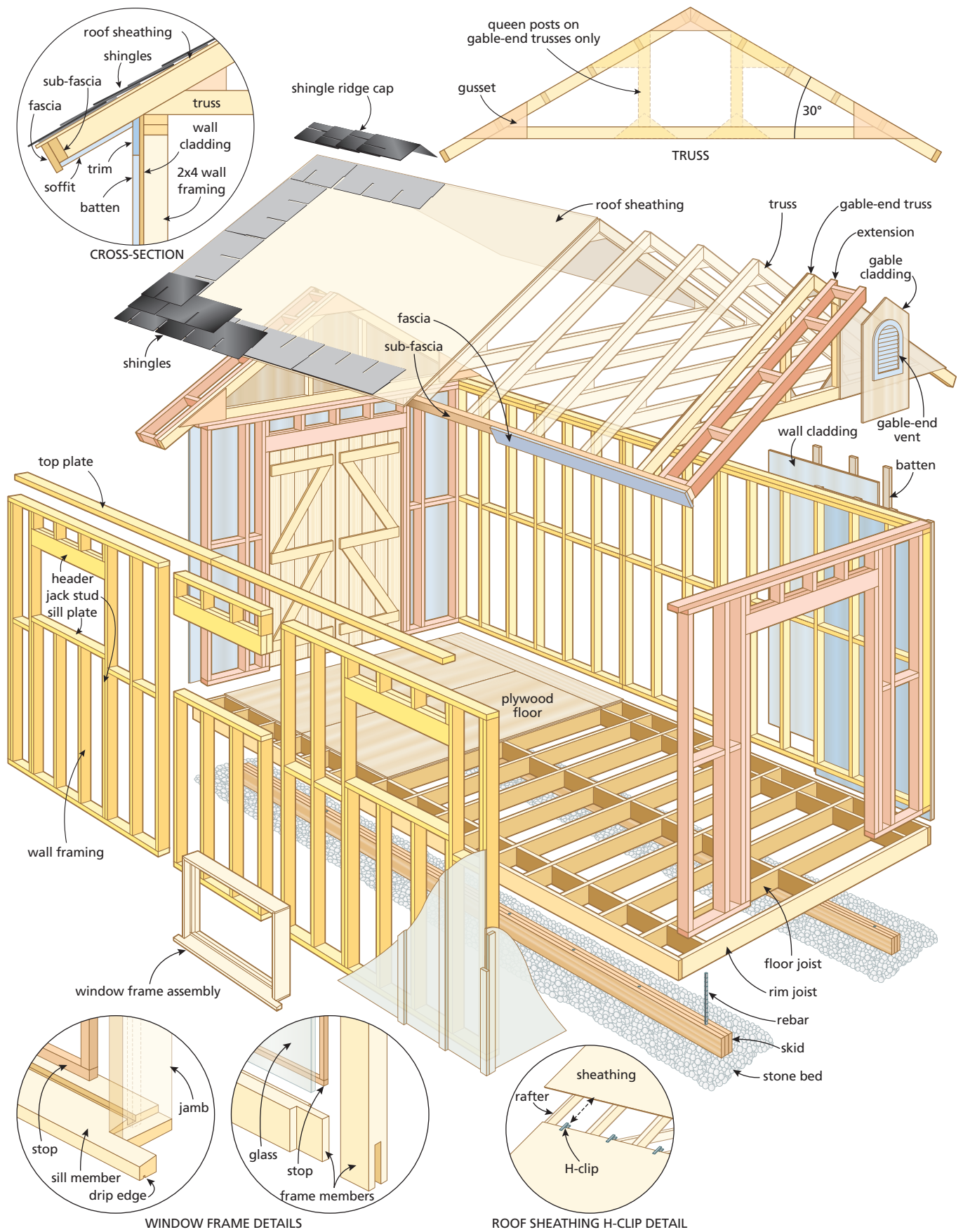
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of trees; an excellent base for a stable foundation, unaffected by movement and the damaging effects of roots, overhanging branches and mould-promoting shade.

A skid foundation suits our site well, is easy and inexpensive to create and allows for adjustment and levelling precisely. Getting the foundation perfectly aligned and level cannot be over-stressed. Accuracy here will make all future steps easier and more enduring.

To make the two skids, I use 20' stock. I laminated three 19'-9" lengths of pressure-treated (PT) 2 × 6" beams using generous ribbons of PL Premium construction adhesive and 3" coated deck screws. These I assembled on the flat concrete floor of my garage for best alignment and left to cure overnight.

From our site's center line length, we measured 40" on either side and two 22' long trenches wider than our garden rake, 6" deep and 80" center to center. A flat-bladed transfer shovel produced square-sided, flat bottomed trenches with no soil disturbance; keeping the soil firm beneath is important. Using a 4" wide board on edge as a fill gauge, we added 4" of crushed limestone for drainage. With the gauge board removed, we used our rim joists (same width as our skids) on edge to check for elevation and level, both along the lengths and spanning from trench to trench; tamping, levelling and re-tamping with our garden rake, creating sound beds for each skid. Next, the cured skids are accurately centered 81" apart on the stone beds and anchored by hammering 24" lengths of rebar through previously drilled holes spaced about 30" apart. We then filled and tamped around each skid with more gravel. Landscape cloth was laid over the entire shed footprint and beyond to deter plant growth.

Floor joists

We spaced the 10' long PT floor joists 16" on center across the tops of the skids, aligning marks at 40-1/2" from the center of each joist with the center of each skid. Next we toe-screwed only the two end joists to the skids using 3" construction screws, leaving the remainder loose. We then bridged the end joists with our rim joists, followed by screwing through the rim joists into the ends of each floor joist, carefully aligning each joist with the 16" center marks along each rim joist's length. All joists being equal lengths, it's easy to produce a regular shape once assembled, but we took our time measuring across-corners on both axes to assure a square footprint. Tweaking can be done by unscrewing one end-joist from the skid, tapping the joist/rim joist assembly to perfection then re-screwing once corner-to-corner lengths are identical. We stretched a string taut over the rim joists length and tuned both perfectly straight. Satisfied, we toe-screwed all joists to the skids, then installed galvanized joist hangers, using coded hanger nails, at each joist/rim-joist union and inside corner plates within the outside corners.

We then installed 2 × 6" PT blocking between each floor joist along the center of the framework and 4' on either side of center. I plan on driving and parking machinery in our shed so I want a floor that's strong and stiff, plus has good nailing surface all around the 3/4" exterior-grade plywood flooring

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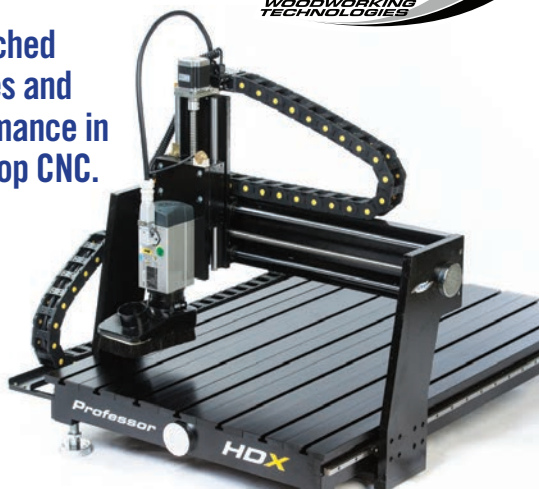
Ready for Flooring – With the joists spanning the skids, and capped by the rim joists, you can add blocking, joist hangers and landscape cloth.

sheets. Sanded on one face, it will finish well and be very durable. We centered and laid full sheets of plywood parallel to the joists, adding 2' strips parallel along each rim joist, each panel applied with generous ribbons of PL deck adhesive along every joist edge and 1-3/4" coated screws every 12". Then, where needed, we trimmed the ply back 3/8" within the floor frame margins using a circular saw and straightedge guide, assuring good joist-to-cladding contact later.

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The First Wall – Once it was built in three sections, and erected, Salusbury joined them together and braced them.



Second Wall – With the second wall built in two sections it can be positioned and screwed in place. Screws through cladding draw this wall tight to the rim-joists. Notice the third wall on the floor, ready to be erected.

could be pressed into to yield 11 identical trusses. Fitted within the jig, each set was joined using plywood gussets applied with PL Premium and 1-1/4" coated screws, first on one side then flipped to do the other, excepting the two gable end trusses, which require gussets on only one side; they will receive gable extensions later. Roof trusses are spaced 24" on centers so we only needed 11 trusses in total.

Four walls

With the trusses assembled and stacked out of the way, we turned to making the walls. To keep them manageable we made the west window-wall and the east solid wall in three sections. The 2 × 6" headers and 2 × 4" corner studs were laminated with 1/2" ply between, yielding strong units the same thickness as the width of the studs they would join to. Assembled and clad while lying on the shed floor, each section went up one by one, drawn to the previous section by clamps and initially held vertical with screws every 16" through the cladding and into the rim joists followed by screwing the sections together top to bottom and temporarily bracing plumb.

Make the roof trusses

The finished floor makes a perfect surface for jiggling and assembling the roof trusses. My design was for a 30° roof pitch with the bottom chord 10' across, matching the shed's width. Using a mitre saw with some stop blocks, I cut precise multiples of all the truss components. On the shed floor, we laid out two rafters and a bottom chord exactly as they would be assembled, screwing them to the floor. Then we installed temporary blocking at key points, forming a jig the rest of the assemblies



Truss Jig – Salusbury laid the floor, then set up some blocking to assist with assembling the trusses. Here, the first truss is ready to be removed.



End Walls – The end walls are now secured in place, and both have the upper layer of top plate installed. A temporary middle wall-bridge is also installed.



Upside Down – Salusbury is now ready to flip the completed gable-end, and extension, in place. It will be fixed in place with a temporary stop brace.

With the long walls erect and braced, the end walls were framed on the shed floor, then lifted/swung, unsheathed, into place snug between each of the long walls, replacing the temporary braces one end at a time. To make these walls manageable during installation, we framed each with their bottom plate running the full length of the wall, spanning the door opening; these will be cut out later when the door is to be installed. Leaving the end walls unclad until installed made

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them easier to heft. Once erect, the narrow cladding strips will bridge the ends of the long wall and cladding, tying the walls together.

Install the trusses

With the end walls installed, I capped the top plate with a 2 × 6 rather than a 2 × 4 so I could overlap at the corners for a stiffer joint and a broader fastening surface for the trusses to secure to. Then, with a spare 2 × 6, we temporarily bridged the midpoints of the two long walls, maintaining a consistent distance between each along their lengths, making installation of the trusses a snap.

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Before the trusses go up we make and add the gable extensions to the gable-end trusses. Six-inch blocks between 2×4 rafters cut the same as the rest of the truss rafters produces a 9" extension, complementary to the 14" deep soffits the trusses will yield. The four extensions get fastened flush with the outer face of the gable-end truss rafters.

To mount the trusses, we marked out where each of the trusses would sit along the long wall's top plates. As our structure is 19'-9" long to stay beneath 200 sq. ft., we measured 24" on center in from each end then centered the middle truss. Because the rafters will extend down 30° beyond the walls, I nibbled out notches in the cladding where the trusses would sit. To support the end gable truss, a temporary brace fastened vertically above the door opening, left short enough to not interfere with the gable end extension, is fastened first. Next, the gable ends with extensions attached are lifted, inverted, one rafter at a time, to straddle the walls' top plates and roughly centered. Hanging upside down with their extensions facing inward, they are easily swung upward by two people until they rest against the vertical brace, flush with the outside of the end wall and nudged into place. With the trusses' bottom chord exactly matching the width of the structure, each truss dropped in place and aligned effortlessly. Once located, toe-screw both ends through the bottom chord into the top plates with 3" construction screws.

Once both gable end truss assemblies were installed, we inverted and flipped the rest of the trusses, stacking half



Small Notches –To locate the trusses, Salusbury notched the cladding where the trusses overhang.



Temporarily Secured – Long material secured to the underside of the rafters secures the trusses in place.



Sub-Fascia – Sub-fascia on the ends of the rafters supports the sheathing and soffit, and the soon-to-be-applied fascia.

against each end gable. Then it was a simple job to slide a truss along the top plate to its location, align its chord tips to match the top plate edges, quickly check for "square" and "plumb" then screw it to the top plates. A low scaffold and a 10 ft. ladder were a big help during this part of the project and for installing sheathing and roofing. Trusses installed, strapping bridging all trusses near their peaks will hold them vertical and equally spaced until the roof sheathing is applied.



Gable Ends – Gable detail, showing soffits and rough-sawn trim and battens stained to match the cladding. Notice the angled edge of the horizontal member, aiding in water runoff.

Next we remove the oh-so useful temporary mid-wall bridging. Outside, we screwed 2 × 4 sub-fascia across all the rafter ends, capping the rafter ends and providing support and a nailing surface for the roof sheathing, plus a base for both the soffit and fascia trim pieces.

Roof sheathing

We now applied the 1/2" ply roof sheathing, beginning with temporarily attaching short blocks of 2 × 4 on edge to the sub-fascia as a gauge. We aligned the sheathing with the outer face of the 2 × 4 so the sheathing will overhang the sub fascia 1-1/2"; 3/4" for fascia trim plus a 3/4" drip edge. We worked from the center toward the gable ends and from the sub-fascia upward to the peak. Each sheet was screwed down with coated 1-1/4" screws every 12", the vertical joints staggered and the lateral joints reinforced with 1/2" "H" plywood sheathing clips bridging the sheathing, centered between each truss.

Shingles

Shingling begins by laying a starter course of shingles with the tabs directed inwards, along the roof edges and up and over the gable ends. We secured them with four 1-1/4" roofing nails per shingle, allowing the edge of this course to overhang the sheathing 1/2". The first course of shingles is then applied with the joints staggered half a tab but directly on top of the starter strip, the bottom edges aligned. We worked our way the length of the roof, then started the next course by shifting shingles half a tab upwards, aligning the bottom edge of the shingles just below the root of the tabs of the previous course. Working accurately, we checked our progress regularly by measuring the edges of the shingles every couple of courses relative to a lateral sheathing joint, ensuring we installed each course parallel to both the fascia and roof peak.

At the ridge, I wrapped the shingles +/-2" over the peak and nailed them down on the opposing face. The same resulted on each side of the roof. Along the peak I then applied the ridge course, cutting shingles into tab-width strips, applying one, then overlapping each strip leaving about 5" of the previous tab exposed. This course I nailed down with 2" roofing nails.

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Always be accurate

It was about at this point of construction we realized how being accurate at each stage of construction makes it easier to do the next step; the building actually helps you by being just as you need it to complete the next phase. It was really satisfying to realize we were "gnat's whisker" accurate at the completion of each stage of construction, building on previous precision.

With the shingling completed and the gable end shingles trimmed to a 1/2" overhang, it's time to begin the trim phase beginning with the soffits and eaves vents. But now is a perfect time to paint the shed floor; while it's drying we can make and finish trim, doors and windows. Two coats of tan flooring enamel will protect the floor and make cleaning up spills a snap.

A bit about painting

We choose to use wooden trim but dread repairing blistering, peeling paint, so we have adopted a couple solutions to allay those fears: overall sealing and solid body stain. We first used these methods when we built my wood-clad and trimmed workshop 17 years ago, which has yet to require any paint repairs anywhere. We prime/seal all surfaces of all wood, after it has been cut to size, and prior to installation, using the most appropriate sealer/primer for the material and its planned use. For the pine trim we used exterior stain/pitch blocking primer overall, then painted all faces, ends and edges that would be exposed with two coats of quality exterior paint. For the 5/8"

plywood cladding, we primed all surfaces after it had been installed so we could seal the interior wall studs at the same time, followed by a colour coat of exterior solid-body stain, rather than paint for its breathability; white on the interior surfaces and coloured outside. The battens, ripped from 7/8" utility pine, were primed/sealed overall with the same pitch blocking product as the pine trim, then stained, overall, with the same breathable exterior solid-body stain as the exterior of the ply cladding. By sealing all faces and ends prior to installation, the wood is almost impervious to absorbing atmospheric moisture inside or out, plus it is kept in equilibrium, minimizing the potential for movement, warping or bowing over time.

For air flow, we chose continuous soffit vent strips as intake and gable-end vents for exhaust. With the 2" vent strips in hand we measured and ripped 1/2" ply parts to make the soffit stock, which we trimmed to length and fit once primed and painted. At the same time, we painted the two store-bought gable end vents and installed them.

We then cut, dry-fit, numbered, primed and painted the fascia parts and installed that all around. As the fascia stock is the same sort of material as the trim for windows and doors we cut it roughly to length, eased the edges and primed and painted it at the same time, setting it aside for later, cut ends to be sealed just prior to installation.

Meanwhile, batten stock and edge trim for under the soffit, and to bridge the joint between the top of the end walls and the gable-end was ripped, primed and stained. Once it was ready, we installed it 16" on center directly opposite the wall studs within, except for those that would meet the yet-to-be-made doors and windows.

Door and window details

Doorways and windows are simple sub-assemblies. A doorway is a jamb supporting the door(s); a window is a jamb supporting a sash. The doorjamb consists of a head jamb, two side jambs and a threshold. A window is the same, short of swapping a sill for a threshold. Both are based on the shed's rough opening dimensions.



Edge Alignment – Plywood splines align and strengthen joints between door planks.



Completed Doors – Doors are ready for installation, with their inner faces shown at left, and outer faces shown at right.

REVOLUTIONIZE

verb: to disrupt, change, transform, shake up



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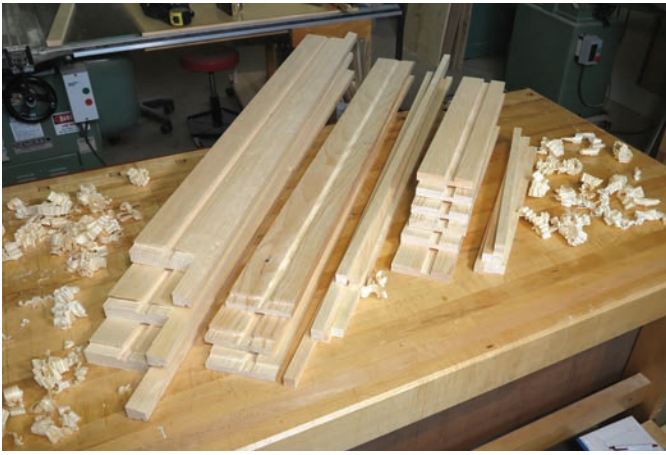
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Machined Window Frames – Window sills, jambs and stops are ready for assembly.

For jamb stock, 4-1/2" wide 1 x 5 material will span the walls thickness of 3-1/2" studs plus the 5/8" thick cladding plus 3/8" for the thickness of potential interior wall board. I chose select pine for this application.

Make door jambs

To make door jambs, I took my 78" tall x 60" wide rough opening and subtracted 1/4" for shimming the top and each side. Side jamb elements then are to be 77-3/4" tall and head jamb 58-3/4" to set into 3/8" deep dados in the side jambs, yielding an inner jamb height of 76-1/2" and inner and outer jamb widths of 58" and 59-1/2", respectively. As my threshold will be within the side jamb, I know to trim it to 58" once I've ripped and planed its profile.

Thresholds must serve several functions. They have to be durable; offer a broad outer face for the doors to seal against, blocking wind, weather and rodents; they need a ramping profile inside so stuff can roll over them easily, plus provide a broad flat top surface to support a pair of portable ramps I use to drive rolling stock from ground level up into the shed. From rough 8/4 flat-sawn ash milled to 1-3/4" x 6", I created a 1" external vertical face crowned by a 5/8" wide x 30° chamfer transitioning to a 4" wide top surface then a 1-3/4" wide x 30° downward slope leading to a 5/8" internal vertical face.

Make the doors

To keep the entry as wide as possible, the doors will overlap the jamb and threshold; 3/8" top and each side and 3-3/4" below the threshold to align with the bottom of the wall cladding once installed. Allowing for 1/8" clearance above and on the sides of each door, my 77-3/4" tall doors combined outside width will be 58-3/8", making the individual doors 29-3/16". I ripped each door plank to 7-5/16" for equality. Next, using a dado set, I ripped 3/8" x 1/2" deep rabbets in what would be the joined edges to receive 1" wide continuous splines ripped from 3/8" exterior-grade fir ply. With the planks joined and excess glue pared away, I selected 4-1/2" x 3/4" pine for the "Z" braces. All cross braces are the same length, cut 4" short of each door's width allowing clearance along each edge for the jamb overlap and a 2" wide



Finished Frames – Machined and assembled jambs and sills. The sills overlap the exterior of the shed, and provide a pleasing visual detail.

sealing strip applied inside each left-hand door for the right-hand door to close against. The mid-brace is centered and the upper and lower ones located 6" in from the doors' ends, thus all diagonal braces could be cut exactly the same length and angle to fit snugly. Titebond III glue and 1-1/4" coated screws fasten the braces across the door planks. I feel pine is elastic enough to get away with this; if I had used a hardwood, I would have allowed for seasonal movement across the planks, merely screwing the braces on through expansion slots. After priming and painting, 6" T-hinges will be screwed

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to the doors' face, opposing the center line of the cross braces for plenty of screw depth using 1-1/2" #12 screws.

Construct the windows

With the doors drying, I made the three matching awning style windows. Again beginning with the rough opening dimensions, 24" tall and 48" wide and again using 1 x 5 stock to make the side and head jamb elements. To begin, I cut the head jambs 47-1/2" long, then cross-cut a 3/8" x 3/4" rabbet on each end to receive the side jambs.

Next, the sills must be of thicker stock so a 10° slope can be ripped on the outer face to shed moisture and a 1/4" deep drip groove ripped underneath to stop moisture migration. Considering wall thickness, from straight-grained, rough 6/4 select pine, I dressed it down to 1-1/4" x 5-3/4". For length, by adding 6" to my 48" rough opening, I can create 3" sill extensions on each side, totalling 54". Extensions visually support window side trim plus an apron beneath. Next, measuring 23" either side from the center, I lay out for 1/2" deep x 3/4" wide dados to receive the side jambs. With the dados cross-cut, at the bandsaw it's time to cut away the sill material beyond the dados the

same 4-1/2" width as the jambs to produce the sill extensions.

Now I know the length to cut the side jambs to

Personalized Details

– Salusbury decided to add a trio of small squares to the corners of the door frames. It is details like these that you and others will notice for years to come.



Window Details – Once the window trim is secured in place you can see how the sill extensions play into the overall look. Notice the drip edge under the sill.



No Critters – Critter screening allows airflow, but deters unwanted occupants.

produce an overall jamb/sill height of 23-1/2".

With all parts cut to length, I ripped a 3/8" deep by 3/4" wide groove in all to receive 3/4" x 3/4" strips for the window stops. Here I want the outer face of the stops to be 1-1/2" in from the outer face of the jamb, the thickness of my planned sash.

I assemble, glue and screw the jamb and sill assemblies together, aligning the stop channels by dry fitting 3/4" stock into each corner during assembly. Stop stock will be trimmed to length and fitted once the frame has cured.

From my completed jamb dimensions, I can make my sashes from select straight-grained stock milled 1-1/2" thick. Upper and lower sash rails will be 2-1/2" wide to carry hinges and locking hardware and also offer a broad joint surface at each corner. Side stiles will be 1-1/2" wide. An awning-style window with 3 mm glass of this size is quite light so there's no need to make it more robust. I'll be making precise open mortise and tenon joinery with 3/4" tenons, so I trimmed rails and stiles the full inside width and height dimensions of the jambs less 1/4", taking my stiles measurement from under the head jamb to where the side jambs contact the slope on the sill outside. Once the rails and stiles were assembled, squared and glued with Titebond III, I ripped the lower rail to mate with

the sill angle. I then routed a $3/8" \times 1"$ rabbet within the sash, squaring the corners with a chisel to receive the glass, which, once bedded will be backed with $3/8" \times 3/4"$ pine strips. After mating each sash to a jamb, I located and marked out my hinges along the top sash rail, transferred the marks to the mating jamb, routed and pared the hinge mortises then fitted and installed the hinges. After fitting and refining the sashes for a fine fit within each jamb, all were disassembled, primed and painted, ready to receive glass once dry.

Time for trim

With windows and doors completed, it's time to install each, trim them, and install the final battens. After weeks of preparation it's all about to come together in a flurry. Windows first...

From inside the shed I drilled holes through the cladding exactly within each corner of the rough openings. Outside, I joined the holes with a pencil line and straightedge. Cutting along each line, I opened the rough opening for the first time to receive the windows. The sill extensions stop the window at the bottom and a temporary block installed outside, once the window was slid into place, will keep the window on the same plane as the cladding during installation. Shims (laminated counter-top samples) between the sash and frame keep the sash centered while cedar shims are inserted between the frame and rough opening. Once square and plumb, the frames are screwed into place with a couple of 3" construction screws spaced along each frame face and into the rough opening. An hour later I had three windows installed. With the trim already cut to length, primed and painted, in another hour I had all the windows trimmed and ready for the remaining battens to be cut and installed. Each batten, above and below each window, was measured and cut from already prepared longer batten stock. Once dry fit, I sealed the cut ends and secured them into place, 16" on center as before using coated 1-3/4" screws.

A slightly different process was required for the doors. Because the hinges had to mount on top of the trim, the trim had to be precisely installed first for proper clearance around each pair of doors. With the jamb/threshold assemblies installed within the rough opening, I lightly marked the exact center of the finished opening on the face of the head jamb. I then centered and secured the head trim followed by the side trim, overlapping the jamb $3/8"$, resulting in a working clearance $3/8"$ wider than the combined doors width. To install the doors, I secured a temporary ledger flush with the bottom of the wall cladding. The doors rest on this, creating horizontal alignment and $1/8"$ clearance on top, while allowing me to center and space the doors laterally one by one. I had applied the hinges to the doors previously so all I needed to do was align a door between the center of the opening and the edge of the side trim then mark, drill and screw the hinges in place; left door first then the overlapping right door.

Lastly, to deter "critters" from taking up residency under our shed, yet offer our structure generous drying airflow, we applied screening all around the shed. From a roll of $1/2" \times 1/2"$ squared galvanized wire fencing we cut strips wide enough to cover the exposed vertical face of the joists, down to the ground then out about 8", flush with the margins of the landscapers cloth we'd spread when we secured the skids.

These we fitted and stapled all around the shed, folding the surplus out, flush with the ground, overlapping each strip generously at their ends. Using landscapers nails, we secured the screening to the ground at regular intervals then covered the top of the screening along the joists with strips of $3" \times 5/8"$ shop-made trim from the same PT as the joists. We'll cover the screening with rocks when we landscape ... air in, critters out!

Finishing touches ... personalizing anything you create makes it unique and reminds you it's yours every time you see it. I included a cluster of three squares, proud of the surface of my trim above each window and door. Like the glint in an eye, they add life. We were so pleased that our building inspector noticed them first and commented favourably before giving our project a resounding pass.

MARK SALUSBURY
salisbury@nexicom.net



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ADDITIONAL MATERIALS: View this article on our website to see a number of 2D illustrations of the shed with measurements. **RELATED ARTICLES:** Materials for the Great Outdoors (Oct/Nov 2012), Build a Grill House (Apr/May 2015), Board and Batten Wood Siding (Feb/Mar 2016)

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Lute of Illusions



The original Bosch Lute was made in the 1500s. There is only one of them in the world, but a skilled luthier from Saskatoon completed a very similar lute. Learn how he assembled all the pieces that make up the back of his version of the Bosch Lute.

BY WELDON GRAY

When I saw a picture of the Bosch Lute, with the illusion pattern on the back, I decided to take up the challenge of figuring out how it was made. Not only was it an intricate pattern, but it was also done over an unevenly rounded surface. The original is in the Museum of Music in Paris, France.

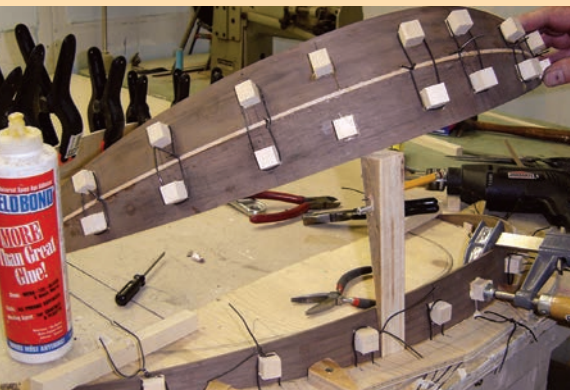
After studying the picture I realized I had to ignore the predominant star pattern and concentrate on the vertical and diagonal lines, and how they intersect. It has an algorithm that never repeats itself. No two stars are the same size, and no two triangles that make up the stars are the same size. The surface area of the body changes throughout the back as it curves. It becomes smaller at the top, wider in the middle and smaller again near the base. Because of the compound curve each triangle must be carved individually. I started in the middle and worked in circles until the entire oblong egg-shaped sphere was covered with the triangles that made up the stars.

Assemble the form

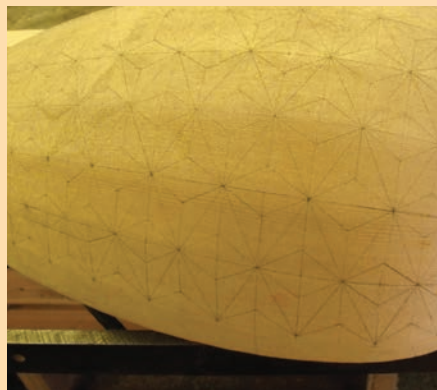
If I just shaped and glued together the triangles, not only would the resulting shape be too weak, but it would be very difficult to obtain the properly curved surface. I decided to create a base from thin strips of curved spruce that were glued together to form the perfect shape to work on top of. Once the pieces were shaped with a jig and hand plane, I used small blocks to attach small ties to and bring the parts together.



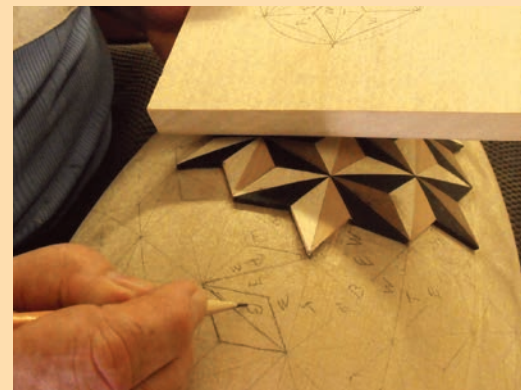
Spruce Strips – After building a wedge-shaped jig to work to, Gray bends a thin spruce strip around its curved edge and flushes the sides of the spruce strip with a block plane. These strips are for the base that the triangular pieces will be glued to.



Careful Glue-up – With all the strips cut, Gray uses temporary applied blocks and twist ties to assist with gluing them all together. This specific glue-up was for a different lute, though the process is the same.



Lots of Lines – The first set of lines are created by the edge joints between the spruce strips. The second group of lines were added at a 60° angle to the first lines; then the shorter line segments were added.



Proper Pattern – Once all the lines are on Gray adds some letters so that he is sure to shape the correct species of wood for each triangular location. One mistake would be heartbreaking if it wasn't caught right away.

Draw layout lines

Once dry I used the joint lines running the length of the base to help lay out the pattern. The other lines were laid out more by eye than anything. These lines are not parallel, and could only be partially guided by a flexible straightedge.

Before I start shaping pieces I create a master species template so I can keep the four wood species organized. To start, I mark the species initial on each triangle of the spruce form, near the center of the pattern. As I work I add more initials as needed.

Shape the parts

Each piece is measured against the lines I marked, as well as the existing pieces already in place. The triangles at the center of the lute are larger than those towards the edges of the lute; no two pieces are the same size or shape. I use a simple shop-made jig and a power sander to shape each piece until it is the perfectly shaped triangle I require. A concave shape is also added to the undersurface of each triangle with another jig and drum sander. This concave surface allows each piece to fit snugly against the spruce base. I continue this tedious process until all the parts have been fitted and glued to the spruce base.

Smooth the surface

With all the triangles fixed to the base I used 40-grit sandpaper to level the outer surface of the lute. I couldn't sand the lute any further as the ebony dust would contaminate the holly. To smooth the surface for a finish, I scraped the pattern, generally working in the direction of each individual piece's grain. Another tedious task.

WELDON GRAY

graylorelutes@shaw.ca www.graylorelutes.com

Weldon enjoys performing on stage as the Wacky Wizard, a family-entertaining magician, or playing and talking about his medieval instruments at the local 100-year-old Roxy Theatre. He also enjoys going out for coffee with his wife Alice.

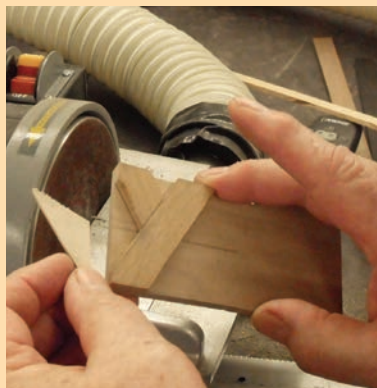


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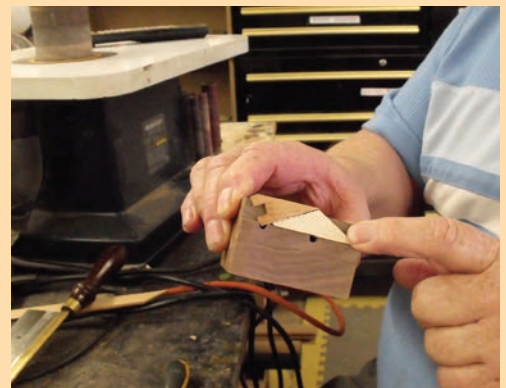
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One of a Kind – Gray cuts each piece to fit the other pieces, and the layout lines. No two pieces are the same.



Perfect Triangle – A simple shop-made jig allows Gray to shape each piece by hand with his disk sander.



Concave Underneath – A second jig holds the piece while Gray uses a drum sander to add a concave surface to the underside of each piece, in order for it to mate cleanly with the spruce base.



21st Century Writing Desk

Transform Simple, Straight Lines into an Elegant Flowing Form

Although the design of this table may appear complicated, the construction is remarkably straightforward. Simple and reliable techniques make it easy to taper the legs and flow them into the side stretchers.

BY CHRIS WONG

The table can be broken into three sets of components: the top; side assemblies (each consisting of two legs and two side stretchers); and two long stretchers. Let's revisit the build to see how I did it.

An inspiring top

Making the top was the most enjoyable part of the build. It was also the starting point, and I later designed the base to complement it. I started by milling two mahogany boards 3/4" thick and gluing them together to make a 13" x 26" surface.

Using a #7/12 gouge across the grain, I took small scoops out of the surface, creating a random pattern across the entire surface from corner to corner. Working across the grain eliminated any tendency for the wood to want to tear out, and the sharp gouge cut cleanly with little force required.

To prevent the workpiece from sliding backwards as I carved, I clamped a scrap of wood to my bench directly behind it. I used a scrap the same thickness as the top to provide support while carving near the front edge.

It was a slow but enjoyable process, and I took frequent breaks to mitigate fatigue and strop my gouge. When the textured top was complete, I cut it to final size with my table saw.

The base complements the top

To complement the top I wanted to create a delicate-looking base. It also had to be well built to avoid racking and stable enough to avoid being tippy. One of my preferred ways to make table bases that are strong and rack-resistant is to use sturdy legs and stretchers attached with mortises and tenons. To make them delicate, I minimize the width and thickness of the components and remove material where possible with tapered or concave cuts. The trick is to do this while maintaining the structural integrity of the parts. It's a



Texturing the Top – With a sharp carving gouge Wong evenly covers the top's surface with shallow hollows. It's slow going, but is very rewarding, and is what defines the piece when it's complete.

balancing game, and knowledge of the physical properties of the materials being used is key.

I based the design and dimensions of the base on the size of the top. The top was small to begin with and making the base much smaller could make it too tight to put one's knees under comfortably, or potentially make it tippy.

Start with strong joinery

After milling the base parts to size I looked at joinery options. Since the size of the structural components was limited, strong joinery was especially important. I opted for double tenons at each joint, which provided solid registration and a substantial amount of long-grain glue surface.

I chose to use my Festool Domino Joiner and floating tenons. I selected the appropriate tenon thickness by stacking five of them next to my material and comparing the height of each - the closer they were, the more strength the joint would have. The 6 mm thick tenons looked like a good choice.

Using the Domino Joiner, I prepared a sample set of mortises in an off-cut from a stretcher to check their exact placement. This not only served as a test to ensure adequate spacing between the tenons, but as a reference for future shaping operations. One of the downsides of floating tenons was that the likelihood of exposing the joint while shaping was more likely than with traditional mortises and tenons, as there were twice as many mortises.



Double Mortises – To ensure strong joints Wong spaced the mortises out so the distance between mortises was about equal to the thickness of the mortises themselves.

When I was satisfied with the set-up, I cut all the joinery required to assemble the two side assemblies and glued them up one at a time. Anticipating further shaping around the joints, it was important to keep the mating components flat (don't undercut them) and to apply glue to all the mating surfaces – not just the tenon faces and mortise walls.

Smart, simple shaping

While the glue dried, I began to get things ready to taper the legs and create the curves that made the side stretchers appear to flow right out of the legs. This process relied on a set of specially-cut shims, a rabbeting bit, and a bearing-guided straight bit (either a flush trim bit, with bearing on the tip,

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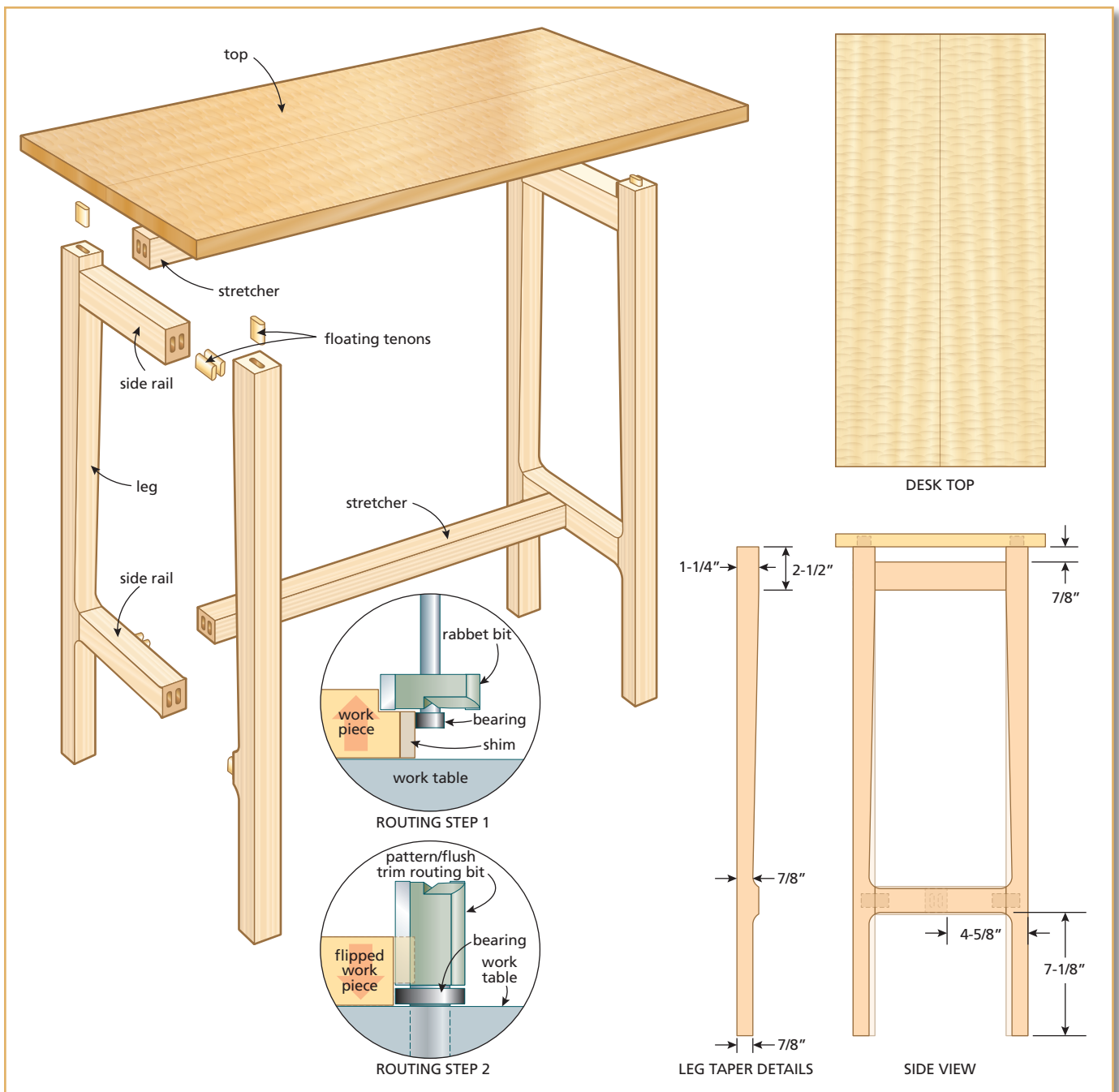
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How Wide Are the Shims? – The shims need to span the distance from the lower face of the leg assembly to just above the location of the router bit bearing – in this case 7/8" wide.



An Even Taper – With a board longer than required Wong adds a pencil mark at the 17" point. As the jointer is on, and set to cut 3/8" deep, he lowers the pencil mark over the blade and proceeds to cut a taper into the side of the board.



Cut the Shim Off – Fresh from the jointer, Wong adjusts his table saw to remove an evenly tapered shim from the board.

or template bit, with a bearing on the shank).

For this table, I used a 1-3/8" diameter rabbeting bit with a 3/8" offset. The design called for the legs to taper from full width just below the top stretcher to 3/8" less where it meets the top of the lower stretcher. The leg, from the bottom up to the lower stretcher, was to be reduced in width by 3/8".

Since my rabbeting bit automatically cut to a width of 3/8", I needed to create shims to control the cut, which gets

Materials List

Part	Ltr	Qty	T	W	L	Material
Top	A	1	3/4	12	25	Mahogany
Legs	B	4	1-1/4	1-1/4	28-1/4	Ash
Side Rails	C	4	1-1/4	1-5/8	7-1/2	Ash
Stretchers	D	2	1-1/4	1-5/8	20-1/2	Ash
Floating Tenons	E	28	6mm	20mm	40mm	Domino Tenons

wider towards the bottom. With the router bit set at a depth to take a moderate cut into a leg assembly, I calculated that a 7/8" wide shim provided the best registration for the bearing. I took a piece of wood about 6" wide with parallel edges and 24" long (for manageability) and planed it down to 7/8" thick for shim material.

Make the shim

To taper the legs, I needed shims tapering from 3/8" thick to nothing over 17". I set the infeed table of my jointer to 3/8". With the machine running, I positioned the tail of the board over the infeed table 17" away of the cutter

head, tipped the tail end of the board down onto the infeed table and made a single pass to create a 3/8" x 17" taper. To finish the shim, I carefully set my rip fence then cut the shim from the board at the table saw.

The bit needed to only cut into the lower stretcher as much as was required to allow the complete radius to be shaped where it met the leg; any deeper would have decreased the stretcher's strength and could have exposed the joinery. To keep the router from cutting excessively deep, I made a non-tapered shim 5/16" wide and 7-1/2" long to fit above the lower rail while I routed the rabbets.

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Shims in Place – Double-sided tape secures the shim to the inside of the leg, and a straight spacer to the upper face of the lower stretcher so the rabbeting bit can work its magic (top).



Just Deep Enough – Just Deep Enough – Once the shims are removed ensure the routed radius is continuous. If it's not, the spacer and/or shim must be made thinner.

Using thin, double-sided tape, I secured the tapered shim to the inside of the leg with the thickest part towards the top, and the flat shim to the adjacent side of the lower stretcher. Having only one tapered shim meant that I had to interrupt the routing process to reposition the shim, but I could have prevented this by making a second shim. I was confident that I could start and stop the router without touching the top stretchers, so I didn't make a shim to limit movement in that direction.

I set up a router for the rabbeting, but a router table could have easily been used as well, as it would guarantee no tilting of the cutter would have taken place. With the rabbeting bit's bearing registering off of the shims, I was able to easily create an even ledge with nice radii around the inside of the leg assemblies. I moved the 5/16" flat shim to the underside of the lower stretcher and profiled the lower sections of the leg assemblies too. I didn't use the tapered shim on the leg below the stretcher.

The rabbet created a template, of sorts, for a piloted straight bit to follow. I used a jigsaw to remove the bulk of the waste, trying to stay about 1/8" away from the edge of the rabbet. I then trimmed the rest of the waste off with a router in my router table. I chose the largest diameter bit I had for the smoothest cut.

More assembly

With the shaping of the side assemblies complete, it was time to join them with the pair of long stretchers. One went into the legs between the top two stretchers, and the other was positioned between the lower stretchers, slightly towards the back to allow for some extra leg room. When I was happy with their placement, I cut double mortises at each intersection just as I had before. You might consider placing the lower stretcher towards the back of the side stretcher, or even joining the back legs, if you want a little more leg room. A little glue, a couple of clamps, some sanding and the base was complete.

Attaching the top to the base

I was aware of many ways to attach a table top to a base, but most methods required aprons immediately below the table top. Since this table's top was supported by the ends of the legs only, my options were limited. My solution was to cut and glue Domino tenons in mortises cut into the underside of the table top and have them friction-fit into extra-wide mortises in the tops of the legs. The friction fit, as well as gravity, allowed the top to stay connected to the base, and the extra-wide mortises allowed for seasonal movement. Had I not achieved a friction fit, I was prepared to pin the tenons into the legs with 1/8" dowels.

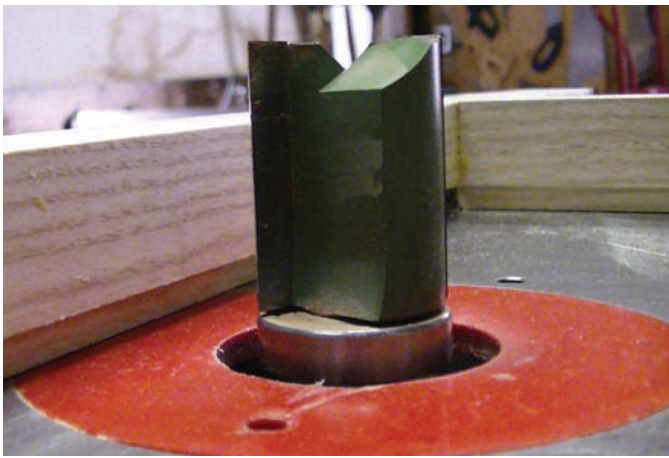
To cut the mortises, I started by turning the table top upside down on a piece of cork to protect the carved surface. Then I centered the base on the top using one combination square for the left-right positioning and one for the front-back positioning. I traced the position of each leg onto the table top and separated the two. From there, it was all about accurate layout and cutting of mortises. Fortunately, the Domino Joiner makes it easy with alignment marks on all surfaces.

No Domino Joiner?

If I didn't have a Domino Joiner, dowels would have worked for positioning. I would have elongated the holes in the back legs to allow for wood movement. Another solution would have been to use store-bought metal hardware such as Figure-8 connectors, screwed into the tops of the legs and bottom of the top. If you know of another way to attach the top and allow for seasonal movement, share it on the Canadian Woodworking forum or in the comments section of the online version of this article.

Finishing

The carved table top left many of the pores open, so I wanted to use a film finish to make the surface appear more sealed. I brushed on three coats of water-based semi-gloss polyurethane. The finish raised the grain of the sanded surfaces, so I sanded them smooth with a foam-backed 800-grit



Straight Bit is Next – To smooth the inside edges of the parts Wong uses a straight bit with a bearing. Its height must be set so the bearing runs against the rabbeted surface. Wong removed most of the waste with a jigsaw before performing this step.



Secure the Top – Friction fit mortises in the tops of the legs, and underside of the top, housed loose tenons and keep the top in place.



CHRIS WONG
chris@flairwoodworks.com

sanding pad after two coats. The carved top wasn't susceptible to raised grain, so it didn't need this treatment.

I enjoy making interesting and original designs, and I am very happy with the result. The table is lightweight, weighing less than 10 pounds, but still very stable. The top looks and feels great, and I expect it to wear well over time. I might just have to spend some more time with my laptop computer here at my 21st Century Writing Desk.

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An Appreciation of BLACK WALNUT

Walnut is one of the most highly prized domestic woods, and for good reason. For colour, grain, figure, workability and other valuable attributes, the wood is in a class all by itself among domestic hardwoods.

BY JESSE VERNON TRAIL

At one time, long ago, there were extensive, highly impressive forested areas of magnificent black walnut. Besides being important for its highly nutritious nuts, early European craftsmen cherished black walnut above all other woods. Because of this, many trees were felled. As a result, over time,

most of the wild black walnut trees have all but disappeared from the North America landscape. During the war years and the depression, farmers, for need of money, would cut down their walnut trees as a source of income. Over a long period, there were even so-called “walnut rustlers” – thieves that used many illegal ways to cut down and steal walnut trees, sometimes involving chainsaws, midnight cutting raids and even

helicopters to take away the stolen trees quickly. The trend continues even today. The wood is just that valuable.

Early loggers would dig around the roots of well-established trees, rather than cutting the tree down. This would expose the roots, which were then severed until the tree fell over. The shape of this wood where roots meet stump at ground level, had a natural curve to the grain which made for strong, and highly attractive gunstocks. Today, this market is limited. Now gunstocks can come from any part of the tree, particularly where fine figure is found.

The Trees

In open areas, the black walnut is a beautiful, stately tree, often with large branches that fork low down on the trunk, and a rounded crown of strong ascending and spreading branches. The crown covers most of the tree’s height, but is open. In the forest, trees have a long, clear trunk and smaller crown. Leaves are compound, about 1' long, with 15 to 23 leaflets. The familiar nuts need no description here. Even the bark on the black walnut tree is highly attractive. On young trees it is light brown, and on mature trees, dark brown to almost black, with rounded intersecting ridges. The trees grow to about 90 ft. tall, with a crown spread up to 80 ft. Cultivated trees may only reach 50' or so in height. The trunk diameter is usually about 2-3'. Trees have a deep tap root, as well as deeply set lateral roots. Black walnuts prefer a deep, rich, well-drained loam soil. Once plentiful in southern Ontario, Quebec and areas of eastern USA, wild trees are now rare in Canada.

Squirrels play an important role in the natural reproduction of black walnut by gathering the nuts and hiding them in the soil. The germination of some of these buried walnuts is the principle means of distributing the species throughout the forest. Of course, for those wishing to start their own walnut grove, the squirrels would pose a problem, but wire fencing and other control means can easily be put in place.

Colour

Black walnut is highly prized for its rich coloured heartwood. The

heartwood can range from a light pale brown to a dark chocolate brown with darker streaks, and can sometimes include purplish to reddish hues. The sapwood is pale yellow to nearly creamy white.

To steam or not to steam?

There are many woodworkers who do not consider the sapwood as being very valuable, and this is why most black walnut in the US is steamed. Steaming is done in a steamer (like a giant pressure cooker) shortly after the logs have been cut, and the boards are left there for a few hours. This darkens the sapwood by forcing some of the dark heartwood pigments into the sapwood. The result is a more uniform colour of lumber. However, some woodworkers would say that this steaming basically homogenizes the colour of the lumber. They feel that the natural, somewhat rainbow-like effect, of beautiful browns, golds and creams is lost. It is rather ironic that the dark colour of walnut wood is often favoured for contrasting with lighter coloured species of wood, in certain projects. It's interesting that Canadian-produced black walnut lumber is not steamed.



Lots of Contrast – Highly prized black walnut heartwood is a rich brown, while it's often discarded sapwood is a pale, creamy white. Though there is rarely a great reason to cut the sapwood off as scrap, it's today's trend.



Alternate Leaves – Hardwoods can be divided into two broad groups – alternate and opposite – depending on how their leaves are arranged on the branch. Though a quick look can be deceiving, the leaves on a black walnut tree are spaced alternately, meaning there is space between where each leaf's stem attaches to the branch. (Photo by Louis Landry)



Black Walnut Nut – About 2" in diameter, walnut nuts usually hang in clusters of one to three. They mature and drop in autumn. (Photo by Louis Landry)

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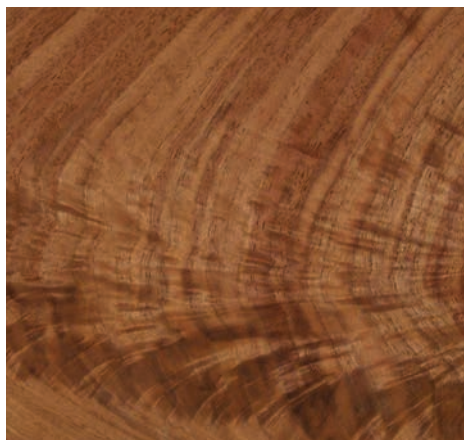
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Grain, figure, texture

Black walnut wood has a greater variety of often exquisitely beautiful figure types than any other wood. This is often a highly desirable feature. Figure grain in lumber refers to the appearance of the wood, and can be strikingly beautiful. Crotch figure from black walnut is cut from a part of the tree where the trunk divides into smaller limbs and branches and can be swirly in appearance. Burl figure is cut from a large growth on the side of the trunk or branch where grain swirls around. Curl figure refers to waviness or swirl in the wood grain and can be found in several parts of a fine specimen tree.

More generally, the grain of black walnut lumber is usually

Figured Walnut – Curly (left), crotch (center) and burl (right) are all common, and gorgeous, figures that can be found in walnut. (Photo by A&M Woods)

straight, fine and open, but can be irregular and more occasionally wavy or curly. The texture of the wood is rated as medium with a moderate natural lustre that grows more lustrous with age.

Other Features

Black walnut wood is rated as very durable in decay resistance. It should be noted that black walnut trees can be tapped, just like sugar maple, for a tasty syrup.

Veneer

Although the lumber is highly prized, today, because of high costs and lessened availability of highest quality timber specimen, walnut is mainly available as veneer. Even so, there is a tremendous demand for walnut veneer for woodworking items like furniture, cabinetry, interior finishing and much more. Black walnut veneer is often used to cover less expensive woods in many woodworking projects. Because of cost, the veneer available today is usually much thinner than many years ago. The best logs are often turned into veneer, though a good veneer log is quite rare.

Workability

If your woodworking project calls for strength and durability, then black walnut will meet your needs. It is easily worked with either hand or machine tools, particularly when the grain is straight and regular, and this includes turning and carving projects. The wood has good dimensional stability and shock resistance. It holds paint and stains very well (though walnut is rarely stained), providing an exceptional finish that is readily polished. It nails, screws and glues well. It also has good steam bending characteristics and moderate bending and crushing strength with low stiffness. Black walnut is quite a good wood for carving, as it tends not to chip and isn't overly dense.

Price and Availability

Black walnut is one of the most valuable domestic hardwood species and is of prime importance as a timber tree. In Canada

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Nice Grain – The grain of black walnut board is usually fairly straight. Small pores are visible on its surface.

the supply is almost exhausted, so most of our black walnut lumber comes from the US. Select US black walnut wood is expensive; generally it is the highest priced domestic hardwood in North America.

Due to overharvesting the availability of high quality black walnut has diminished. Reforestation is a necessary part of any plan to harvest and use the wood. If you have the means, you could consider establishing your own walnut grove, but consider the following first.

Black walnut currently accounts for less than 1 percent of



Works Nicely – With its even grain, and medium density, black walnut is a nice wood to work with hand tools.

the hardwood production in the US. It represents about 2 percent of the total US hardwoods commercially available, and of course much, much less in Canada. It is estimated that most walnut logs only yield 20 percent select boards, as knots are quite common in sawn boards.

As well as few top-grade boards per tree and the small demand for Canadian walnut lumber, there is the cost of getting the trees to market. Cuts into your potential profits may include items such as hiring a logging truck, a two-man crew and possibly a skidder. Perhaps large acreages of walnut trees for lumber are best.

Back to the positive – a large diameter tree (about 18" or more at breast height) with a tall, straight trunk can be worth tens of thousands of dollars. The price per log triples from saw log to veneer quality log. Going back to 1978, a veneer company paid \$39,000 for a single black walnut tree. The demand continues, but perhaps not quite at this high a price. In a 1982 report, trees of standard harvest size had sold for as much as \$12,000. Then think of the value of an old, huge walnut tree growing in an open area with low branches for figure and much more.

Because of the demand for and value of black walnut wood, considerable interest exists in improving the lumber production through research and developing new cultivars. Black walnut is truly a tree of great value for many woodworking projects.

JESSE VERNON TRAIL

Jesse is an author and instructor in environment, ecology, sustainability, horticulture and natural history. Check out his first book, "Quiver Trees, Phantom Orchids and Rock Splitters: Remarkable Survival Strategies of Plants", at www.ecwpress.com/products/quiver-trees



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Make a Business Card Holder

What better way to show off your woodworking skills, and start a conversation, than with an eye-catching business card holder.

BY ROB BROWN

When I started my business I had postcard-sized business cards made up. One of the first things I did was to make a nice holder to display them while I was showing my work at home and design shows. Though I'm going to detail a holder for a standard-sized business card holder here, the same steps and techniques can be followed to make a postcard-sized version.

While you're making one, it might be a good idea to make a few more as gifts.

Design

Because this holder is quite small I wanted to keep the overall design simple. A rectangular piece, with gently curved front, would provide a stable base, while straight uprights with grooves hold the cards in place.

Materials

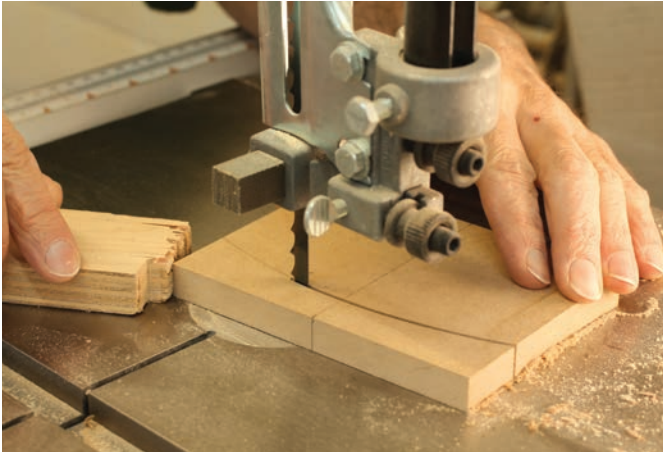
Solid wood is great, but for a punchy project like this, figured veneer is even better. Two contrasting species and figures is what I feel works best, but I'll let you make the final decision. I used MDF for the base and solid maple for the uprights. If you don't enjoy working with MDF you can use plywood or solid wood.

The veneer I chose had a tight figure to it. Since the areas where the veneer will be seen are small, a larger pattern will not look as powerful.

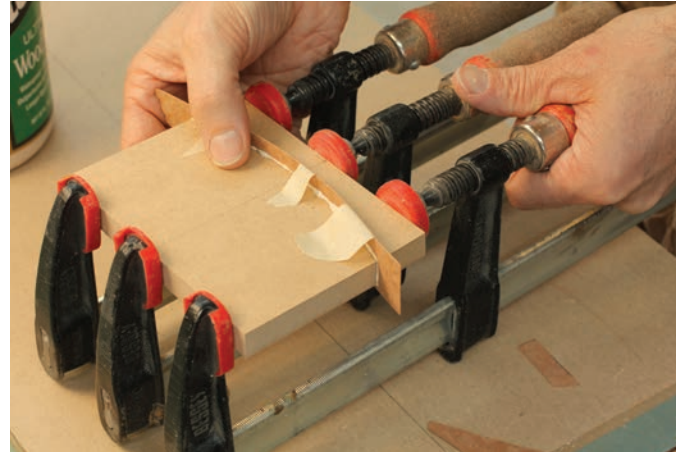
If you don't like the idea of using veneer, solid wood will work out just fine for this project. I would reach for something with figure, or a bold colour, though. It will actually be a much quicker, easier build if you skip the veneer.

The base

Cut the base material to 5" wide × 4" deep and draw a centerline on its upper surface. With a set of trammel heads



Even Curve – When cutting the curve into the base Brown made sure to use a smooth pressure to cut an even curve. Very little sanding was required.



Curved Caul – With the offcut acting as a curved caul, Brown clamps veneer on the curved edge of the base.

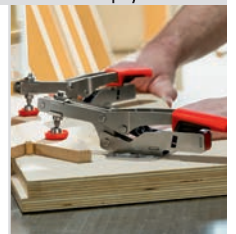
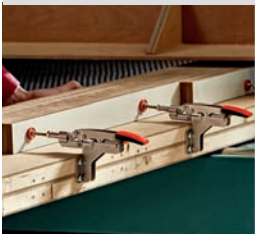
and a beam add an 8" radius curve to the base, so the center of the base is about 3" wide. Use your bandsaw to cut the arc in the base, but don't throw away the offcut just yet. Do your best to produce a smooth cut, as there will be minimal sanding before applying the veneer to this edge. Speaking of that rough-cut edge, gently smooth it, but don't remove too much material. The offcut will act as a caul to press the veneer in place while the glue is drying, and too much sanding will produce variation between the two parts, causing gaps.

Add some veneer

Lay out and cut pieces of veneer to cover the top and bottom surfaces of the base, as well as the four sides. At least 1/8" overhang is recommended, though even more is safer. Apply the bottom veneer and trim it flush when dry.

The next step is to add veneer to the curved front edge of the base. If there happens to be a gap after it's been applied, the top veneer will cover this up. Add glue to the curved edge, rub it in and let it dry for a few minutes. This helps the final glue line from being too starved and weak. Apply another layer of glue

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Three Decorative Plugs – Drill the holes with a 3/8" brad point bit, then cut and install the plugs. Carefully flush them when dry.

to the edge, bring the strip of veneer into place and secure it with some tape if needed. Bring the outer caul into position and apply some clamps. As the caul is thin it should flex to close any gaps nicely. Not much pressure is needed. Let the glue dry thoroughly before taking the clamps off and flushing the veneer with a knife, block plane and sanding block.

Applying the back and side edges, in that order, is next. Use short, straight cauls to apply even pressure, then flush the veneer with the upper and lower surfaces. The upper veneer can now be applied using cauls and clamps. When dry, trim the overhanging veneer flush.

The three contrasting plugs are strictly for looks and should be drilled, installed and flushed now.

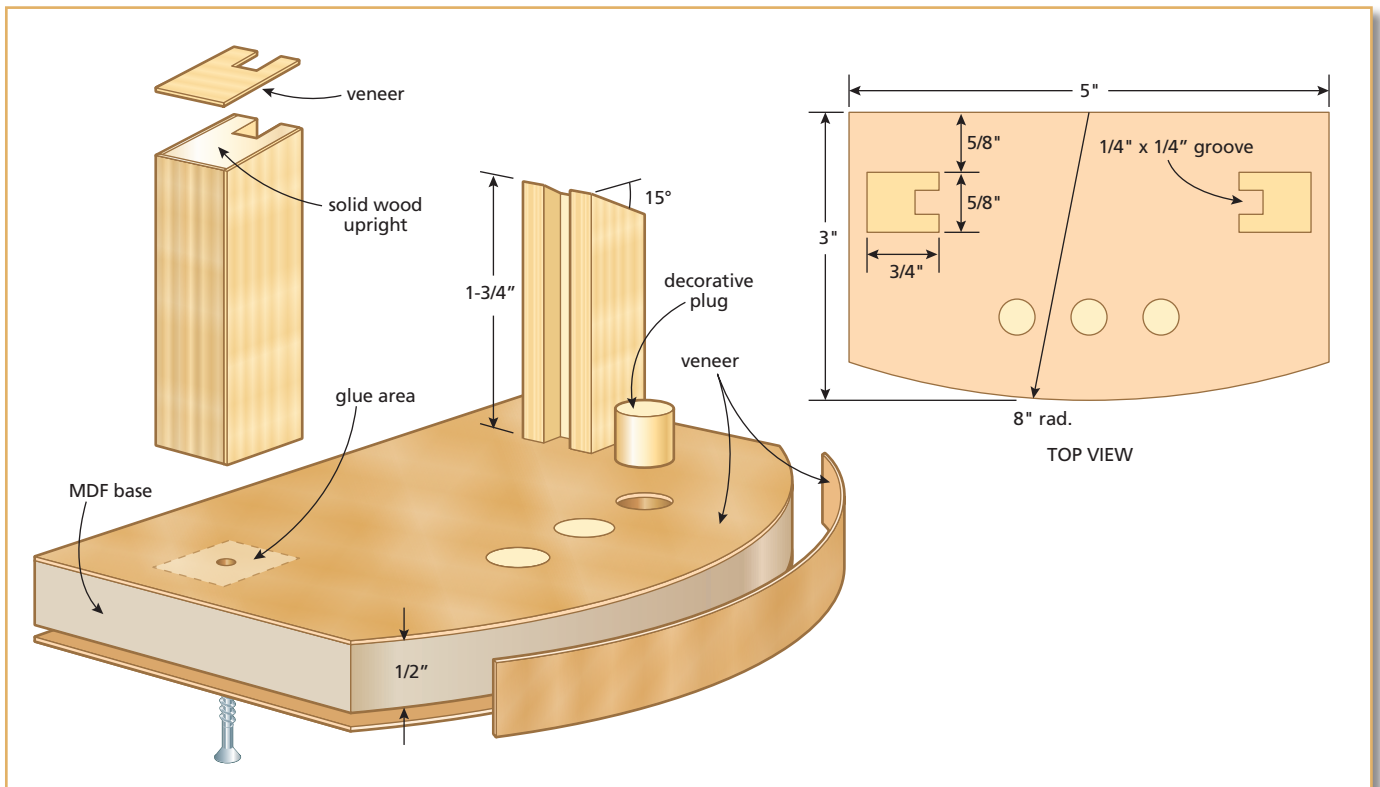


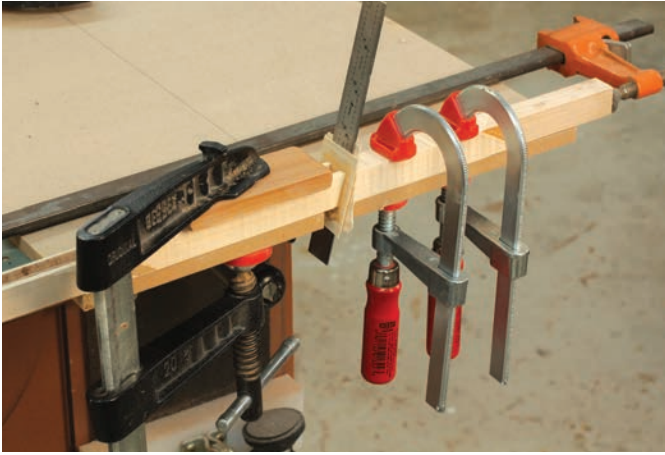
Apply Veneer – Sandwich the solid core between two slices of veneer, and use a caul on each side to spread out the clamping pressure. This is the technique Brown used to apply all the veneer.

Uprights

Break out a 12" long piece of non-porous hardwood to 5/8" thick x 3/4" wide. Cut strips of oversized, contrasting veneer for all four sides. The whole 12" length of this strip will not be used in the final piece, but it makes machining much safer and easier. Apply two opposing veneers with clamps and cauls, let them dry, and then trim them flush before doing the same with the other two sides.

The grooves that hold the business cards can now be cut. Machine a 1/4" wide x 1/4" deep groove into the center of the 5/8" wide edge. Break out the two uprights from the stock by making one cut right in the center of the piece.





Angled Clamping – Once the two uprights are separated from each other, and cut on an angle, Brown applied veneer to their ends. One of the uprights was oriented with the groove facing up and the other had its groove facing down. With one upright clamped to a flat board that had a small notch cut into it, Brown brought the two uprights together, with their angled ends almost touching. He then inserted a metal rule between the parts to act as a caul to spread clamping pressure, and used a longer clamp to bring the two parts towards each other.



Add a Finish – With the parts complete, sand them and apply a finish to each part, before gluing and screwing the uprights to the base. Brown padded on shellac, as it's quick and easy. A piece of tape over each screw hole will keep finish off the wood, and provide a better surface for gluing down the road.

Those two cut surfaces will be the base of the uprights. Now cut the two uprights to length, with a 15° angle on their upper ends. Ensure the angle is cut the correct direction, relative to the groove, with the longer edge towards the center of the holder. Add a small piece of veneer to the upper edges, then trim it flush with a sharp knife and straight file.

Joining the parts

The width between the uprights depends largely on the depth of the grooves you machined into the sides of the uprights. The distance between the two inner faces of the

grooves should be about 1/16" wider than the width of a business card. A standard business card is 3-1/2" wide, but I would check yours before proceeding.

Position the uprights on top of the base in the correct location, and pencil in a light outline. Drill two clearance holes in the base, and a pilot hole in the bottom of each upright. Install the uprights and check the width with a business card. If the distance is too small it will likely be easier to deepen a groove in an upright than to reposition one of them. A 1/4" wide chisel or the edge of a flat file will help out here.

Add a finish

It's probably easiest to apply a finish to all the parts before they get assembled. Once all the pieces are sanded, add a small piece of masking tape where the uprights will meet the base. This will protect any finish from weakening the joint between the uprights and the base after assembly. Just be sure the tape is only under where the uprights will be located.

I wiped on many coats of shellac until I was happy with the look and feel of the parts.

Assembly

Remove the tape on the base and rub a bit of glue into the lower end of the uprights. Again, this will fill up the end grain and produce a stronger joint. After a few minutes add a bit more glue to the joints and drive home the two screws to secure the uprights. This might be the simplest, most stress-free assembly ever.

Apply an adhesive bumper under each corner of the holder and fill it with business cards.

Postcard holder

If you have postcard-size business cards the basic process to make a holder is exactly the same. The overall dimensions of the base I made were 8" x 3", and the uprights were 2-3/4" long; all the other details were the same as the standard-size business card holder I outlined here.

With this business card holder on your desk the person who notices it will surely be impressed with how gorgeous it is. With any luck they will actually be a woodworker too, starting a conversation, and possibly making a solid business connection.

How do you display your business cards? If you've made another type of card holder share it with others at the end of this article on our website.



ROB BROWN

rbrown@canadianwoodworking.com

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Top 10 Metal Fasteners for Woodworking



There are dozens out there, but some are crucial to have on hand, while others are in the 'nice to have' category. Make sure you have the following items in your shop at all times.

BY ROB BROWN

1 Flat-Head Robertson Wood Screws – Though they come in many sizes and materials, all woodworkers and DIYers need to have a very healthy selection of screws on hand. Avoid Phillips and slot heads, unless you enjoy getting angry. Here's my breakdown, by screw diameter, length and material/use:

#4 x 1/2", 5/8", 3/4" steel and brass

#6 x 5/8", 3/4", 1", 2" steel

#8 x 1" to 4" steel

#10 x 2-1/2", 4" steel

#8 x 1-5/8" – 3" exterior

2 Miscellaneous Screw Eyes and Hooks – Tiny ones for hanging small photos, to huge ones for heavy tasks around the shop. I often hang lights from my shop ceiling while taking photos of my work, and large hooks are strong and easy to move where needed.

3 Large Shelf Brackets – Adding shelving high on the walls is going to allow you to store seldom-used items out of your way. When in doubt, go strong. The last thing you need is to realize you shouldn't have put that last board on the shelf, high above your head, after all.

4 Finishing Nails – These long, thin helpers are great for the obvious tasks of nailing pieces in place with minimal visual distraction, but they're also good for more exciting tasks like unplugging glue bottles and making pivot points for trammel arms.

5 Pneumatic Pins, Brads and Nails – Now that you have your compressor and nailer you've realized how valuable they are. The only trouble is that you're going through pins, brads and nails like crazy. You don't want to be left empty-handed

as the glue is starting to dry on a jig you're building. Grab a selection of different lengths in the gauges you require.

6 Lag Bolts – These hefty beasts are far from a fine wood-working fastener, though they work wonders around the shop. Right now I have most of my large storage fixtures attached to the wall with lag bolts. I also have some clamps, storage brackets and a host of other items held in place with these monster screws. As a general rule, longer is better, though a selection of lengths from 1-1/2" to 4" will come in handy.

7 L-Brackets – Whether it's shop storage cabinets, basement shelving or some shop jigs and fixtures, L-brackets are a time saver. Even though they are ugly, they're simple and strong, and that's sometimes the most important part of the job. The 3/4" x 3/4" L-brackets are sometimes small enough to be hidden behind rails and the larger versions are almost bombproof. Grab some of both.

8 Nuts and Bolts – It's a shame there are so many widths and lengths of bolts, as you almost need a backpack to carry them home. But that's also what makes them so useful. Grab a variety of lengths and widths of standard nuts and bolts, as well as a few exterior-grade ones.

9 Washers – A selection of flat washers work great with the nuts and bolts you just decided you need more of, but I find their assistance as spacers quite satisfying too. Keep your eyes peeled for the cup washers – both the zinc and brass types. If you really want to go over the top, buy some countersunk washers.

10 Magnets – Clean a small drawer or tray out and fill it with standard and rare earth magnets of all types and sizes. And grab some dedicated washers that can be screwed to a mating piece if needed, as the combo is attractive and versatile. Magnets are just fun to have around.

Drywall anchors? Tabletop mounting clamps? Do you think a metal fastener should have been included in this list? Share your thoughts in the comments section, at the end of this online article.

ROB BROWN

rbrown@canadianwoodworking.com



Photos by Rob Brown

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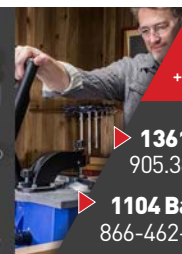


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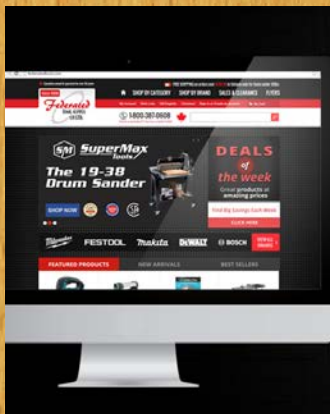


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Basement Boatbuilding – Part 4

BY DON WILKINSON

Today, as I write this, it is December 1st. This means that, yet again, I have missed the deadline for submitting my Christmas-themed story. Now, normally, this could be a problem in the publishing world, but because this is *Canadian Woodworking Magazine* and I have a very understanding editor, I'm not going to let it bother me. Besides, it's his fault for not giving me a heads-up as to when the real deadline was. And another besides: this way I can finally wind up the kayak story. That is, unless I've used up too much of my word count with this preamble. (They only allow me so many words per article before they start deducting from my pay; I still owe for an article back in 2013).

In the last issue, as far as I know, I had successfully completed drilling the several thousand tiny holes needed throughout the mahogany plywood hull and deck. I assumed with that many holes to choose from, at least some would be more or less in the correct location. Time would tell. As would any possible leaks. Maybe I'd let The Boy test-paddle it first. After all, this kind of situation was the very reason we had him in the first place. And he did fairly well testing my hang-glider, I recall, even if he can't.

In spite of everything – and by “everything,” I mean me – the kayak ended up looking pretty much like a kayak is supposed to and I was ready to apply the fiberglass that should bind the entire thing together and hopefully make it a viable and float-worthy craft. I was confident that with enough epoxy, it would float. Heck, with the amount I used, pretty much anything would float. Well, maybe

not your average American, but anything else, for sure.

Unbelievably – and I still have a hard time with this – the fibre-glassing went without a hitch and by the end of the weekend I was totally whacked out of my mind. (A little hint for those who wish to build your own kayak: Don't do it in a basement without lots of ventilation. And be sure the tiny blue hippos stay out as well, even if they are wearing their tuxedos.)

A few more weeks went by as I attached lines, fitted the rudder and installed the seat. Finally, the kayak was ready for its debut sea trials and I anxiously awaited the coming Thursday. (That was the day my new life insurance kicked in.) In the meantime, I had to somehow get the kayak out of the basement.

After carefully lifting the gleaming masterpiece from the cradles that, well, cradled it, I backed the boat out of the room and promptly ran it through the glass doors in the dining room. Apparently backing out wasn't going to do the trick. I attempted to swing the bow around to make the turn into the hall and discovered that it's fairly awkward to turn a 19' boat around a 90° corner into a 3' wide hallway. And don't even think about going up the stairs. In retrospect, it might have been a good idea to consider these issues prior to building the boat in the basement.

Luckily, I had an alternative solution. No, two. No wait, three. The first two, Kelly promptly rejected. Apparently I can't be trusted with a jackhammer or a chainsaw.



She then pointed out with great derision, and what I considered an unwarranted air of superiority, that there was a window located above the kitchen sink. According to her infinite wisdom, the kayak could be carried straight through the dining room, into the kitchen and then right out the window.

I'm still not sure exactly why I was so happy when, after measuring the width of the kayak, I discovered the window opening was precisely about two inches too narrow. I gleefully pointed out this flaw in Kelly's suggestion.

Then Kelly pointed out that I owned not one but two recip saws. Surely one of them should be able to remove the window frame from the concrete opening. Sure enough, she was right once again and almost too soon, and much too easily, the window was out and the kayak slipped gracefully, and with surprisingly few scrapes and/or swearing, through the opening.

Okay, I admit it, Kelly is smarter than me.

Maybe I'll let her be the first to try out the kayak, as her reward.

P.S. Merry Christmas!

DON WILKINSON
YukonWilk@gmail.com



Illustration by Mike Del Rizzo

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Woodworking Handbook

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Weldon Gray Lute

The body of this eight course single string lute is made from roasted curly maple, while the soundboard is made of Lutz spruce. On the back of the neck is a medieval design carved into it, for aesthetics. This is Gray's favourite lute to play.

Turn to page 12 to read a collection of Weldon Gray quotes, and learn how you can view an online slideshow of his work.