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AUGUST/SEPTEMBER 2011
ISSUE #73

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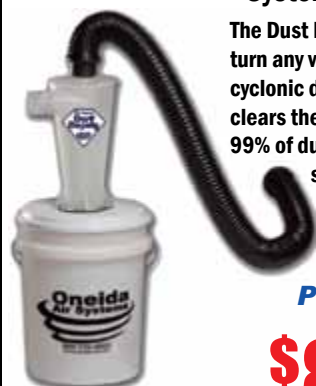


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It has been one year since I joined the *Canadian Woodworking & Home Improvement* team. Time has flown by and I can honestly say I've learned a lot and had a lot of fun. I've had the opportunity to speak with some great woodworkers and writers, test out interesting new tools, and learn how to put together a magazine. Here are a few of the things I've learned over the past year.

Tool comparison articles can be tricky. There are so many things to write about, and the challenge is to keep them focused and informative in a way that will help you – the reader – decide what is the best tool for you. It often doesn't matter what is the best tool overall, as everyone expects something different. The tool comparison article in this issue took some time to wrap our minds around as there are so many options for someone considering a Japanese handsaw. We eventually narrowed it down to 12 saws, but it wasn't easy. And keeping track of those saws sometimes proved a challenge, as they often look similar. This has also been the case in a number of past tool comparison articles.

Photography is important. Who wants to open a magazine to find ugly, dark photos of dingy basements? The visual aspect of a magazine adds to the reader's overall experience. We're trying hard to make this magazine look great and contain great information. I'm especially excited about some of the photographs we feature in this issue.

I have to be honest or risk losing credibility to our readers. As soon as I pay more attention to our advertisers, or manufacturers in general, the readers quickly and easily see through it and realize it's biased information. This lead me to the realization that I can't make everyone happy. But if everyone finds at least one or two articles in each issue that they enjoy, I consider that a success. That said, I'd rather each reader like most, if not all, of everything we do.

Finally, I hear from our readers less often than I anticipated. There are two ways to look at this; generally people only speak up when they don't like something or they don't feel strongly enough about what they're reading to get in touch with me. I encourage you to write to me with your thoughts. A couple of months ago, we received a letter from a female reader who was tired of one of our writers suggesting that women weren't woodworkers. That letter is in our Reader's Letters section, and our writer's response is our latest edition of Woodchuckle.

So ... I look forward to hearing your thoughts.



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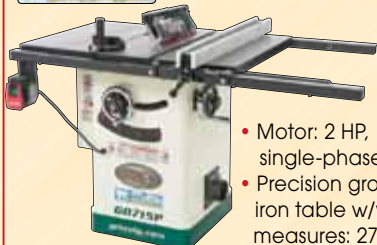
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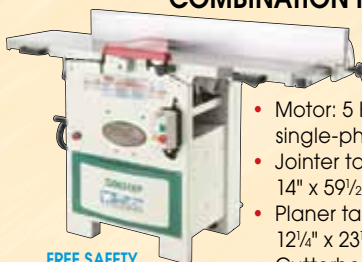
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readers' letters

Sanding Mop

While reading your article, "Bench Top Drill Press" in Issue #60 of Canadian Woodworking Magazine (June/July 2009), I discovered a reference to an accessory called a 'sanding mop'. To me, that appears to me to be a rather generic term. I have never seen them, much less used them. Where can they be had? Perhaps you can attach a photo of one from your shop.

Thanks,
Gerald W.
Deer Lake, NL



Gerald,
You can find them at Stockroom Supply, a Canadian company. Paul Moore invented the sanding mop and now sells them. They are available in a number of sizes and are great for sanding mouldings and other items with a lot of contour and relief to them. For more information, visit www.stockroomsupply.com.
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Don Wilkinson

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Women and Woodworking

I love your magazine. I love Don Wilkinson's articles. Don, I read them first, you remind me of my brother. So cool! But I don't have a wife. I get the magazine for myself. I have been scrolling and doing a lot of other woodworking for 15 years now, and I'm a woman. The joke in my house is that my husband's laundry room is next to my shop ... the joke's on me, because he doesn't do laundry either.

Please, this is 2011. I know there are still more men than women doing woodworking, but there are many women that enjoy the craft too. I hate reading that your magazine is a great gift for men.

And Don, your last article asked about men who could or should have a workshop but can't because of their wives wanting more room for the kids etc. Then yada yada blah crap about the fairer sex. Some men might want the fairer sex to come out of the workshop and ... what? Cook, Clean, or whatever?

Anyway, I love your magazine. I am a woman, a wife, a mother, a grandmother, a nurse, and I love woodworking ... a lot! On my rare days off.

Liz C
North York ON

Thanks for the kind words regarding my articles. I wish you had continued a little more in that vein.

I am fully aware that there are women who like woodworking too. My wife is one, but she prefers that I do it while she enjoys the finished products. She has no desire to buff her nails with a belt sander or lose weight by removing parts of her anatomy. That's my job.

All the stories in Woodchuckles are based on true events that have often enhanced, and sometimes marred, my woodworking career. For some reason, very few women have used my shop or services so I have few stories about women that I can use (without getting into serious trouble).

But if I have somehow offended you and other woodworking women, here is a heartfelt: "I am sorry." Although I have to admit that your use of the words: "Yada yada blah crap" deeply hurt. I strive to speak only pearls of pure wit and great wisdom.

Don Wilkinson

**Woodworkers' Gallery
will return next issue.**

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eNews is Good News

I subscribe to two US woodworking magazines and it is really refreshing to have a Canadian alternative.

Also, I have been getting your free eNewsletter for the past few months, and find them quite informative – particularly concerning events happening here.

Keep up the good work!

Roger P
Westmount, QC

**Bill Marshall
1942-2011**

Bill passed away peacefully at his home on May 9. Bill was co-promoter of the Halifax, Moncton, K-W, and Ottawa Wood Shows and will be missed by exhibitors and woodworkers across Canada.

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shop tested

Festool RO 90 Sander

I know what you're saying ... "Not another sander!" Well, I can assure you this isn't any old sander. In short, it's a well thought out sanding powerhouse. I never realized so many features could be added to one sander, but Festool has accomplished the impossible. Firstly, they modified (dare I say "perfected") their systainers by removing the old latches, which were hard on fingers, and added a T-lock that easily rotates and locks, making getting at what's inside a breeze. Don't worry; the new systainers are compatible with the originals. Once I had the sander out of the box and on the wood, I realized it is much more than just a small sander that will access tight places.

With three modes (aggressive, random orbital and delta), it's up for all tasks. And the sandpaper is about the most durable I have ever used, which saves me time, money and a ton of hassle. Because this unit is so back-heavy, I thought I would have trouble keeping the sanding pad flat on the wood, but I was very impressed by its balance and ergonomics. If you still find all this hard to believe, pick one up for yourself. If you're not happy with it Festool offers a 30-day money back guarantee. For more information, visit www.festoolcanada.com. —Rob Brown



TradeMaster Multi Tool TM11043

In addition to our recent review of more than a dozen oscillating multi-tools, there is one more entry in the category. The TradeMaster Multi Tool Kit sells for \$89.99 from Home Hardware and is similar in looks and performance to the King Canada and ROK models that we reviewed. The corded 1.8 Amp TradeMaster multi-tool runs smoothly and features a variable speed motor ranging between 15,000 and 21,000 oscillations per minute, and has a somewhat short cord at 7 ft.

Overall the kit is comprehensive, but the blades could be of better quality. The unit includes a triangular sanding pad and 15 papers of three different grits, a Benchmark brand scraping blade, offset saw blade and round segment saw blade. The included blades are suited for light duty cutting in soft metals, wood and plastic; when I cut into a piece of poplar it peeled the paint on the

blade and started smoking almost immediately. Benchmark also makes a grout removal blade, and a bi-metal e-cut blade, but blade options don't stop there – the TradeMaster universal adapter accepts most other brands of accessories and non-proprietary blades are becoming available.

Interestingly, my local Home Hardware Building Centre has started carrying a variety of exchange A-BLADE oscillating tool accessories that allow you to buy, use and then exchange worn multi tool blades for new ones while saving money and keeping blades out of the waste cycle. Specific adapters are available for a variety of different brands at about \$5 each, and several different sizes of flush cut blades, scrapers, a rasp, sander and grout remover are available (www.exchangeablade.com). —Matt Dunkin



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Includes
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80-225HC:

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- 3 HP, 220 V, 1 Ph, 15 A motor.

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* Special pricing available from stocking distributors only. Valid until August 31st, 2011. While supplies last.



Another Portrait – Ed Dechant at the saw, working on his latest piece.



A Tribute in Wood

– Cpl. Glen Arnold was killed by a suicide bomber during a foot patrol in Afghanistan on September 18, 2006.



Scrolling for Sacrifice

A scroll saw organization is using a natural resource to express national gratitude to military families

BY MICHELLE STOCKAL

As any woodworker will tell you, an ordinary piece of wood can be used to create an extraordinary statement. Much like in our nation of many, one person can make an exceptional sacrifice. A group of woodworkers wanted to pay tribute to those risking their lives through the Canadian forces that are serving overseas. The Wildrose Scrollers design portraits in wood for the families of fallen soldiers; a simple yet elegant way to offer their respect.

Located in the Edmonton area, The Wildrose Scrollers are part of a plan called the Canadian Comfort and Remembrance Program (CCRP). This service was originally formed by a quilting guild and the military still offers quilts as part of their gratitude package. CCRP hopes to tangibly demonstrate Canadians' appreciation for the great sacrifices made by members of the armed forces. The Scrollers joined the initiative in 2006.

Working through the Canadian military, willing families provide the volunteers

a picture of their loved one. This photograph could reflect the member's military career or be a cherished image from childhood. The family chooses what print they would like to use and the Scrollers turn this photo into a fantastic tribute.

On average, each project takes around 20 hours to complete. Designing the template is often what varies the amount of time needed from piece to piece. The template indicates which parts of the wood to remove. Remove too much and the art will fall apart; remove too little and the image is often not recognizable. Two plaques are cut simultaneously, since the finished work is often delivered to mothers and spouses. When complete, the finished portrait is on $\frac{3}{8}$ " cherry, 9x11". More than one person can participate in this endeavour. Therefore, on the back of the portrait are the names of the volunteers who were part of the production. Stan Buller, the president of the Wildrose Scrollers, speaks with endless pride on the work offered to the families. He and Vice President Kevin Green recall with great fondness the time spent on the projects

to date. The human connection makes this so much more than a simple wood-working project. In all, over 110 soldiers have been honoured.

Why did the Scrollers get interested in this program? The story began in 2005 after the tragedy in Mayerthorpe, Alberta. Portraits for the fallen officers' were given to the families who suffered this heartbreaking loss. Wishing to continue this form of recognition, the Wildrose Scrollers joined the CCRP. This acknowledgment has grown to honour Canadian soldiers primarily serving in Afghanistan.

The Wildrose Scrollers have been able to express their appreciation to those who serve our country. As any woodworker will tell you, the more personal the project, the more it comes from the heart. For further information, please contact Stan Buller at stan@bullmoosessa.ca.

MICHELLE STOCKAL
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Better Blades, Better Skills, Better Results:

Real-world tips for getting the most out of today's best saw blade technology

While it's true that the best saws in the world are only as good as the blades they spin, this is just part of the story. The other part of success depends on you. No matter how good your tablesaw, chopsaw or radial arm saw is, success and safety still comes down to your skills equipping, setting up and wielding these fundamental power tools.

Match the Blade to the Work

Crosscutting and ripping solid wood is a different job than cutting veneered sheet goods. Sawing melamine is different than trimming particleboard. Crosscutting crown moulding is different than sawing 2x6 wall studs. This is why a complete set of traditional saw blades should include a coarse ripping blade for sawing solid wood to length, a fine-tooth blade for crosscutting, a melamine blade for chip-free cuts in factory-finished sheet goods, and a combination blade for rough, general-purpose work. And while owning a group of blades like these works well, there is now one, single blade that's capable of cutting very smoothly and efficiently in all situations. Freud's unique Premier Fusion blade creates absolutely smooth, flawless cuts in all materials – from ripping heavy hardwood to cutting veneered ply and everything in between. The entire world of saw blades will probably follow this one-blade-for-all lead, but for now, Fusion is unique.



The knife-like profile of Fusion's Hi-ATB tooth design slices wood and sheet goods exceptionally cleanly in all situations – from ripping hardwoods to mitering trim.

Bring together superb wood, skilled hands, an enthusiastic heart and great tools, then watch good things happen in your own workshop. It's the reason we all work with wood.

Match the Blade to the Machine

Today's move towards smaller, lighter tablesaws and chopsaws have made it easier to carry tools wherever the work is, but reduced cutting power is usually part of the price you pay for portability. If you have a lightweight chopsaw or portable benchtop tablesaw, you can make the most of their smaller motors by using "thin-kerf" saw blades. Kerf refers to the swath of wood removed by the blade, and thin-kerf models chew through about 30% less wood than full-kerf blades with each pass, delivering that much more cutting power to your work. Freud's Premier Fusion blade is available in both full- and thin-kerf configurations, and is one of the few thin kerf blades that includes polymer-filled, anti-vibration slots to keep the blade running true and wobble-free.



Laser-cut stabilization grooves are filled with a polymer, for greater vibration dampening action.



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Installing FLOATING FLOORS

How a finished floor turns out is mainly in the details. Anyone can make the main field look good, but use these tips to finish the tricky areas so you can complete the job professionally.

BY MATTHEW KINZEL

Doing renovations, I have installed my fair share of flooring. As is often the case with those working in construction, my own home had dropped off the radar. The main floor remained a landscape of painted plywood five years after we first moved in and ripped up the allergen-laden carpet. After an especially long winter, family patience had run its course; the flooring needed to be finished. A floating floor system was the natural choice due to the relative ease of installation and reasonable cost. Including both laminate and engineered hardwoods,

these DIY-friendly alternatives to traditional nail-down strip flooring allow an enthusiastic person to lay a couple of hundred square feet in a weekend.

Assembling the Tools

Measuring and layout require only a sharpie marker and tape measure, although a combination square is very handy for laying out cuts around outside corners and heat registers.

Cutting the flooring can be done with a mitre saw, jigsaw, table saw, circular saw or handsaw; the quality of the cut is not paramount as all cuts will be hidden by the baseboards, so use the tools you're already familiar with. As mentioned by

Steve Maxwell in the Aug/Sept 2009 issue, a jigsaw is a good alternative for someone looking for an inexpensive tool that can handle cross cutting, ripping, and plunge cuts with relative ease and safety. For undercutting door casing/jambs, and completing non-through cuts, a sturdy Japanese pull saw is a valuable asset to have within arm's reach and will come in handy for any future interior finishing projects.

A laminate flooring installation kit is required to snug pieces together without damage. These kits come with plastic shims that work well to keep the perimeter gap in check, but standard wooden shims are fine.

Photos by Cheryl Kinzel

I consider kneepads to be as essential as my saw, both for laying the flooring and for completing the baseboard; go with a style that will protect the surfaces you have already completed. This is not the place to save a few dollars, as your knees can take a beating laying a floor.

To make the work go a bit smoother, I use a rolling cart to keep all the tools and materials off the floor's surface, but within arm's reach. If your flooring task is to finish one small room, this cart is overkill, but for larger jobs something along these lines can make your time more enjoyable and productive.

Prepping the Floor

Any firm, flat, and dry surface is appropriate for laying a floating floor. Take a walk throughout the room checking for any squeaks or instability; usually all that is required is to snug the odd section of sub-flooring back down using 2" deck screws. It's essential to remove any debris or imperfections from the underlying surface. Quite often the new floor is intended to modernize an area that was previously carpeted and more often than not I find myself on the floor for a couple of hours pulling staples that were used to secure the carpet underlay. If you will be installing over concrete, ensure that the slab is dry and that there is no risk of moisture accumulating underneath the flooring.

Underlay specific to floating floors is placed underneath the flooring in all installations and can be purchased in a variety of densities to minimize sound transmission. The difference can be quite profound, so consider spending more if you will be installing above another living space.

The flooring should be left inside the house to acclimatize for at least a couple of weeks in order to minimize shrinkage. Check your manufacturer's recommendations.

Layout

The first challenge is to determine which direction to lay the flooring. Unlike with solid wood, you do not need to consider which way the joists run. All else being equal, the general rule is to run the flooring parallel to the most dominant natural light source in the room.



A Helping Hand – Kinzel uses a rolling cart to keep his tools from damaging the newly laid floor but still have easy access to them. The cart also ensures he doesn't trip over tools and materials – a frustrating and dangerous occurrence.

This minimizes the shadow lines that are created when the light hits the flooring at right angles. In some instances, you may want to ignore this rule and consider other variables such as the orientation of flooring in adjoining spaces and the shape of the space you are flooring. For example, my personal preference is to run flooring at right angles to the doorway to enhance the perception of depth upon entering the room.

When deciding which side of the room to start your first course, give special consideration to where any existing door jambs are located. Jambs and casing have to be undercut with a flush cut saw so that the flooring can be slipped underneath and this is much easier to do if the piece to be slipped under is the first piece in the row. In order to get an exact cut line on the jamb, use a piece of flooring with a



Add Underlay – Install underlay before laying any boards. It should go right up to the walls, and can be taped down.



Undercut Jamb – Use a piece of flooring and a small section of underlay material to get the right dimension.



Know When to Stop – By adding a transition strip, you may save yourself a lot of hassle in the long run.

scrap of underlay underneath it as a cutting guide.

One more critical step before laying the flooring is to ensure that you are not left with a thin strip when you have worked your way to the far side of the room. This looks unprofessional and accentuates any taper cuts needed to compensate for walls that are not completely squared. Measure from wall to wall in three places and take the average to set your overall room width, then compare this to the width of your flooring. If you are left with a space that gives you a final row under half the width of the flooring, you will need to rip the pieces that make up your starter row to compensate. Take equal amounts off the first and last rows to even things out.

I recommend resisting the temptation to run the flooring in one continuous field throughout the house. By separating the rooms with a transition strip, you will minimize the potential for any gapping that could occur, as well as simplifying any future repairs you may have

to do. Also, you are almost certain to have difficulty getting a balanced layout in all rooms.

Laying the Floor

Your first course will need to be shimmed $\frac{1}{4}$ " out from the wall. This allows for any movement in the flooring. If you find that you have a hard time maintaining this spacing due to irregularities in the room, you can gain some wiggle room by trimming away the bottom $\frac{1}{2}$ " of drywall. This creates a space behind the trim for the flooring to expand into.

During the course of laying the floor, you'll have to cut or notch the floor boards to precisely fit around any obstacles. In this case, use tape to ease visibility. Put the board in place as best as you can then mark where the cuts need to be made. It is best to use a square or straightedge (and some forethought) as you want to keep everything as tidy as possible.

The first couple of courses require special care to assemble and keep straight.

Shimming to support these rows is essential. For subsequent rows, you will also want to shim behind the first piece to ensure that your expansion gap is maintained should you need to tap the subsequent pieces into place.

As you lay the boards, strive for a regularly irregular design; in other words, consciously avoid having a recognizable pattern. A general rule is to have end joints separated by at least two dissimilar rows. The offcut from the final piece in a row is generally used as the starter piece for the next, but do not hesitate to cut a new starter piece if this is required to maintain an irregular look.

When possible, skip the tape when you measure boards. Instead, place a $\frac{1}{4}$ " spacer against the wall, set the board roughly in place, press the end not to be cut against the spacer, and then mark the end to be cut.

Not all laminate/engineered flooring is created equal. Some of the cheaper laminates can require a bit of coaxing



Lay Out Then Cut – To keep your floor gap free around the perimeter, carefully mark then cut the waste portion of the board. Baseboard will hide the rest.



Flip Trick – To cut the last board in a row, turn it end for end, butt it against a ¼" spacer then mark it against the mating board. It's quick and accurate.

to snap into place; this is best done with the rubber block provided in the installation kit. If a piece does not seem to fit, stop and check that the tongue is intact and that no debris is stuck between the boards. It is also possible that the previous row is not properly lined up. The problem of misaligned boards is very rarely solved by brute force and nothing is more disheartening in the flooring world than damaging materials already installed.

The large metal hook provided with the installation kit is meant to hook the end of the last board in a row so you can to tap it into place. Don't use this tool on any of the boards within the field or you will damage the tongues.

It can be helpful to add a small dab of glue to the end of the boards to keep everything aligned if the ends do not snap together. This is especially true for outer rows that need to be ripped. I would caution against more than a small drop on the end. On occasion, a section of flooring may need to be taken up to replace a damaged piece or to allow for a future renovation. A glued floor cannot be successfully reassembled.

Cut outs around heat registers are best handled with at least two separate pieces as you can then mark the pieces in place and do not need to plunge cut. Use your square to finish up the layout from your marks. A jigsaw is the tool of choice for removing the waste. It is advisable to have



Double Up – It's much easier to use two different pieces when working around heat registers. Cut the first board in the course so the joint ends up straddling the register.

the actual register with you to test the fit before moving on; chipping out laminate flooring with an old chisel has to be one of the more frustrating experiences available to the home renovator.

Take it slowly and remember the quality of the installation is in the details.

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Creating a Bandsaw Box

This style of box, with its curves and multiple drawers, can seem a bit intimidating at first glance. Once you realize how simple this style of box is to make, you're likely to start creating your own designs. And once you start, these little pieces are very addictive.

BY RYAN SPARREBOOM

Start by Selecting Material

One of the joys of box-making, and indeed woodworking in general, is the diversity of wood selection to choose from. You can choose a single species of wood or multiple species. You can use woods that complement each other or contrast starkly. For my bandsaw box, I chose a board of curly maple and later

decided on cherry and cocobolo for the base and pulls. Here are some basic guidelines to help you with selecting the wood for your bandsaw box:

Decide on the size of your box. I've seen bandsaw boxes come in a wide variety of sizes, from small, single drawer boxes, to large complex, multi-level pieces. The most important aspect to keep in mind is the depth. You probably don't want drawers that are too deep.

Decide on a design. If you already have a design in mind, it may help to select the material that complements the design. Small pieces of highly figured woods are great to use for more simple designs. But a more subtle-looking wood may be appropriate for highly detailed designs.

Ensure your wood is dry. Like any project, once you start cutting the wood, you may experience some movement. Try to limit the amount that any movement will affect the project by choosing wood that is dry and well acclimatized to your area.

It doesn't have to come from one large block. If you have access to a large enough single block of wood, they can certainly be desirable for this type of box. You will avoid glue joints, and grain interruptions. But ensure that you pay special attention to the above point on movement.

Prepare your Material

The preparation for a bandsaw box is really no different than any other wood-working project; you most likely want to start with wood that is straight, square and the proper size. For this box, I started with a single board of curly maple that was 41" long by 5 1/4" wide and 1" thick. I jointed and planed the material square before cutting it into equal 10" lengths for glue-up. Ensure that any snipe from the planer is cut away; you want nice flat faces to glue to each other. If you're using a single block of wood for your box, you really only need to ensure that you have the face and back parallel to each other, and the bottom of the box square to those faces. This makes it easier to register the block on the table of your bandsaw once you start to cut.

Once the material is dressed, you can go ahead and cut the board to the lengths required and glue them up. When you glue up the block, pay attention to grain orientation to get the nicest look in the final block. I make the glued-up block a little bigger than necessary and I don't worry too much about perfect alignment during the clamping process. It can be squared again after glue-up.

Now the Fun Begins

Draw out your final box design, to the actual size, on paper. Once I have the design set, I then glue that design to the



Map Out The Design – Draw the drawers and overall shape out on paper. It will probably take a few tries to get something that looks pleasing to the eye, so be patient.

front of the block of wood. I use a spray adhesive for this task. This template will serve as your cutting pattern.

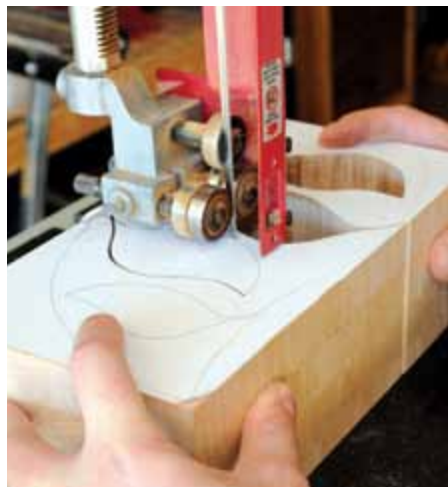
When you are drawing out the design, pay close attention to where you will start and end the cuts for your drawers, and ensure the curves or angles you choose can be done with the machine and blades you have. For my box, I chose to make the entry points of my drawer cuts a feature, rather than try to hide them later. With the drawers cut in the shape of leaves, the entry cuts are positioned to mimic the stems of the leaves. With a different design, you may choose to hide the cut lines by gluing and clamping them shut after the drawers are removed. There is nothing wrong with this method either and it can work quite well. If you're going to do that, I suggest starting the cuts along the grain of the wood, instead of across the grain; the glue line will be less noticeable. Another consideration when drawing out your drawers is that some designs, like mine, will require you to stop the cut and back the blade all the way out,



Remove the Back – Before you cut out the drawers, resaw the back off the body.

before starting the cut for the other half of the drawer. Make sure you are comfortable with this process; otherwise, stick with a single flowing line to encompass the drawer so it can be cut without interruption.

Once your design has been mapped out and your template glued on to the front of your block, you are ready to start cutting. Don't make a common mistake and get ahead of yourself here; it's not time to cut the drawers out yet! Well, not unless you want the drawers to fall out the back of the box. The first cut will be to rip off the back of the box. Set your saw up with an appropriate blade (I used a $\frac{3}{8}$ " 6tpi blade), to cut approximately $\frac{1}{4}$ " off the back of your block. Make this cut like a normal resaw either with a fence, or by marking and making

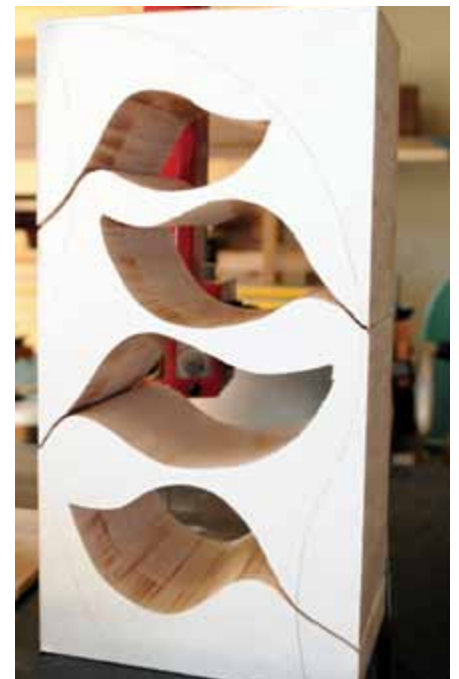


Cut out the Drawers – With your drawing pasted on your body, start to make the bandsaw cuts that will define the drawers. After this stage, you will get a pretty good idea of how the overall design looks.

a freehand cut. Save this $\frac{1}{4}$ " slice, as you will need to glue it back on later. Depending on how smooth of a cut you get with your saw, you may not need to do anything to the surfaces you'll be gluing back together, or, you may need to sand or plane the faces flat again. Once the back is removed, you are ready to cut out your drawers.

To cut the drawers out, choose a blade that suits the tightest curves you have laid out in the design. The tighter the curves you have to cut, the narrower the blade you want on your bandsaw. Ensure that you tension the blade properly, because you don't want it cupping in the middle of your cut or you will be left with drawers that won't fit back in their cavities. Following your template, with your block on its back on the bandsaw table, begin your first cut for the drawer. Make each cut sequentially until all the drawer blocks are cut out of the main body of the box.

With the drawer blocks cut out, you should take this opportunity to sand the inside of the drawer cavities, before gluing the back onto the box. You may find a spindle sander works for a portion of this task, but for any tight corners, hand sanding will be your only real approach. I don't strive for a glass-smooth surface on the inside of the drawer cavities for



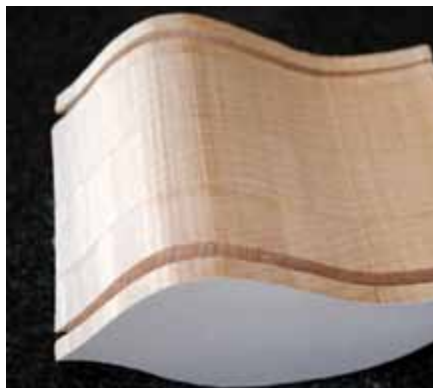
two reasons. Firstly, they're hidden, and more importantly, the more material you remove by sanding, the more of a gap you will have around your drawers when they go back in. Once the sanding is done, you may want to glue the saw kerfs back together, if appropriate. If you're skipping this step, like I did, then it's time to glue the back on. Apply glue to the box body only, and clamp the back on in exactly the same orientation that it came off.

Making the Drawers Useable

The next step is to hollow out the drawers for use. I've seen different methods used for this, including forstner bits and plunge routing. But those methods can give you results that are sloppy and inaccurate. Instead, I use the bandsaw. Set your fence approximately $\frac{1}{4}$ " away from your blade then rip the front and back off of each drawer block. This is necessary so that you can hollow out the center portion of the drawer, and then glue the front and back back on again. With the fronts and backs cut off, stop and take a



Square Things Up – When you're dealing with drawers that are not 90° , you will have to use a square to draw layout lines onto the drawer bodies. These lines will guide you in creating the drawer cavity.

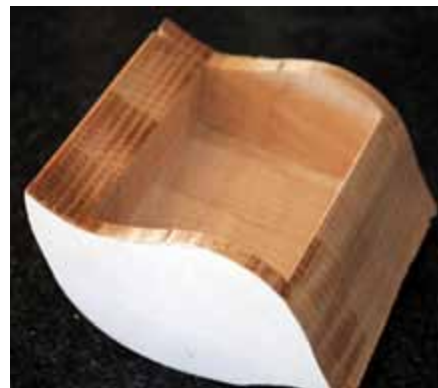


More Resawing – In order to remove the material inside the drawer, resaw the fronts and backs off.

few minutes to line up how you want to cut your drawer cavities. Typically, you want the bottom of the drawer to be parallel with the bottom of your box, and the drawer sides to be at 90° . If your drawers are curvy and intentionally askew, like mine are, then here is a simple method to line up your next cuts.

Take the box body and lay it on its back, then drop the drawer fronts and backs that you just cut off, into their appropriate drawer cavities. Place the drawer centers on top of those in the box. You want to mark the parts you're going to be cutting, so the drawer centers have to be on top where you can mark them. Now, take a carpenter's square and draw lines parallel to your box bottom on each drawer for the bottom. Draw lines 90° to the bottom for the drawer sides. When you're marking out these cuts, make sure that you will have enough material remaining at the corners so that the drawers will still be solid enough. I prefer to stay on the fat side of $\frac{1}{8}$ " or so. Now you can take these drawer centers back to the bandsaw and cut along your marked lines.

You can now either sand these drawer cavities smooth, or, like I do, leave them as they are. I leave them alone because I flock the inside of my drawers once they're finished. I think the suede flocking gives the box a very classy look. But you may choose to leave the natural wood look on the inside of the drawers, in which case you'll need to spend some time here sanding the insides. Either way, when you're ready, you can glue the fronts and backs back onto the drawer bodies.



Hollow out the Drawers – After removing the waste, carefully glue the drawer fronts and backs onto the drawer body. If you're after a natural wood look, sand the parts before assembling them.

Make it Take Shape

You have now reached the part of the project that I find the most fun, cutting out the main shape of your box. With the back glued on, and the drawers set aside, take your box body back to the bandsaw. With an appropriate blade installed in your saw, begin cutting the exterior shape. With the shape of the box cut, the majority of the cutting is now done, and you have lots and lots of sanding ahead of you!

Before I got my oscillating belt/spindle sander, I did all of the sanding with a random orbit sander (ROS) or by hand. The belt/spindle sander is much more efficient than either of those methods, but you will have to use what you have. Sand all your parts progressively until you're happy with the results. If you do choose to use a ROS, I would strongly suggest getting a foam interface pad that goes between the sander's plate and the sand paper. This foam pad will allow you to sand the curves of your box and drawers without damaging your sander or the work piece. Take your time with the sanding; it really pays off.

For pulls, you can purchase small brass knobs, or other similar pulls, but I like to make my own. For this box, I chose to use a contrasting wood and a very simple design for the pulls. From a scrap piece of cocobolo, I cut small ($\frac{1}{4}$ " diameter) plugs with a plug cutter on the drill press. I sand the plugs to shape them slightly, then to attach them; I used a $\frac{1}{4}$ " forstner bit to countersink a shallow hole in the drawer front. I don't drill all the



Define the Overall Shape – Cut the outside of the box to shape on the bandsaw.



Add Some Pulls – There are lots of options for creating small drawer pulls. Sparreboom machines small dowels, which he glues to the drawer fronts, but you can add pulls however you like.

way through the drawer front, because I don't want the pull protruding on the inside; rather, just deep enough to have a little extra glue surface, approximately $\frac{1}{8}$ ". Then I glue the mini pulls into the countersunk hole. For tiny jobs like this, I prefer to use CA glue; it is easier to control in small amounts and holds extremely well on oily woods like cocobolo. Make sure you don't attach the pulls until you are completely finished sanding the drawer fronts.

The Base

Depending on your design, you may not want to use a base. For this box, I chose some slightly curly cherry to complement the maple box. I have used maple and cherry together before on past projects, and love the way the two woods tend to show each other off. First, sketch out a design that complements your box. It will help to cut out your design on paper,

and actually sit the box on top of it. This will give you a good idea of size and proportion you want to achieve for the base. Next, position the box on the base drawing and outline the bottom of the box with pencil on the top of the base material. If you are going to give the base some topography, like I did, you want to ensure that you still have a flat area to attach the box. You can use a belt sander to quickly hog away material to give your base the shape you desire. Just make sure you leave that flat area. Finish sanding the base with the random orbit sander, again, I recommend using the foam interface pad for the uneven surfaces.

With the box, drawers and base sanded as finely as you like, you can now attach the box to the base and begin your finishing. I used glue and two countersunk screws to attach the base to the box from the underside.

Finish it up

The last few steps to completing your bandsaw box are really a matter of personal choice. For me, a small project like this is a perfect opportunity to refine my wipe on finishing skills. I like using rub on oil finishes such as Tung oil, boiled linseed oil (BLO), Danish oil, and wipe on polyurethane, especially on figured woods like curly maple. I sometimes choose to make up my own finish, by combining oils, to make the wood really stand out. For this box, I mixed equal parts of pure Tung oil, BLO, wipe on Poly, and mineral spirits. I wipe on a coat of this finish, wait about 20 minutes and then wipe off the excess. I allow at least 24 hours dry time between coats and do about four coats total. Between coats, I give a light sanding with 400- or 600-grit paper dampened with mineral spirits, just to knock away any dust nibs.

After the four coats of finish have been applied, the wood is likely at the point where it won't be absorbing any more finish, and it will be building a bit of a gloss. When fully dry, I buff the project quite vigorously with a soft cloth such as an old t-shirt to bring out the shine of the oil finish.

A great final touch is to add flock to the drawer interiors. Flocking is a simple process that was a bit intimidating at first, but it is really very easy and gives



A Final Flocking – Adding flock to the drawer interiors brings a classy touch to your box.

beautiful results. It must be done after all other finishing is complete and dry for several days. I tape off the edges of the drawers that I don't want flocking on, and then I apply the paint on adhesive as per the directions on my flocking kit. Then it's a simple matter of spraying the suede flock on with the spray tube. Ensure that you get a full thick layer of coverage on the entire adhesive area; the excess will be knocked off once the adhesive is dry and can be reused.

With the flocking done, reinstall the drawers in the box. Depending on your cuts and sanding, you may have a larger space above the drawers than below. You can adjust for this by adding something like low friction tape or thin adhesive felt from your local craft store to the bottom of the drawers. These boxes make fantastic gifts and can be used for little jewelry boxes or other keepsakes. Now that you have a sense of the process, you're ready to create other designs. Don't be afraid to experiment.

RYAN SPARREBOOM
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Build a Coat Tree

A simple solution for entryway clutter.

BY ROB BROWN

This is a great little project to allow you to hone your sliding dovetail skills. It also allows you a bit of artistic freedom when it comes time to finish the top section. Once complete, it should give you and your family a place to throw a few jackets and hats throughout the year. It's the perfect time to use a wood



Router Dovetail Slots First – After testing on some scrap (or an extra long column), use an adjustable stop to fine-tune slot length. A screw in the end of a piece of wood makes for easy adjustment. Clamp the stop, adjust the screw, then machine the slot in each side of the column. You want to end up with at least $\frac{3}{16}$ " between the corners of the slots for strength. For this operation, always make sure you feed the stock from right to left as the rotation of the bit keeps the work-piece against the fence.



you've never worked with before, as it's a smaller project that doesn't require a lot of material. Most of the dimensions are not crucial. The base should have a large enough footprint in order to keep the coat tree from falling over, but otherwise you have permission to adjust these figures as you see fit. If you really want to end up with a stately giant to greet you and your guests, use thicker material all around. Heck, you can even try your hand at an octagonal column tree if you're looking to make things difficult.

Start with the main column

Break out the main column. It finishes at $1\frac{3}{4}$ " square and 66" long. It can be glued up from a couple of pieces or machined from $\frac{8}{4}$ stock. You can leave it a bit long in order to have some set-up material to dial in the dovetail slots just right. An extra 6" should be enough. With a medium-sized dovetail bit in your router table, adjust the fence to cut the grooves in the center of the post. Clamp a stop to the table's surface in order to get a consistent slot length. You want the slot to be slightly shorter than the width of the legs, so the slot doesn't show above the legs when everything is assembled – just under 2" should be fine. Adjust the height of the bit so when you machine all four dovetail slots there is at least $\frac{3}{16}$ " between the corners of the slots. If you end up with too little material between the slots, just cut

a few inches off the end of the column, adjust the bit height and start again. Break out the legs in two $\frac{7}{8}$ " thick blanks that are at least 12" long. To make machining the dovetail tenon easier and safer two legs will come from one blank. The legs are 2" wide so two 5" wide blanks should be enough. Joint one edge then cut a 10° angle on one end of each of the two blanks with a mitre saw. Keep the router bit at the same height as when you machined the slots, but adjust the fence to cut the dovetail tenon on the angled end of the blanks. (Refer to our April/May 2010 issue for more info on sliding dovetails.) Draw the shape of the legs onto the blanks, keeping the length of the dovetail slot in mind. Use a bandsaw or jig saw to cut them to shape then fair the edges of the legs. You may have to use a chisel to adjust the dovetail tenon in order for each leg to seat perfectly in the dovetail slot.



Add some character

Before you glue the legs to the column, cut the column to length. Now you have the opportunity to do something interesting on the top of the column, and even down lower, if you like. Some carving, a routed detail or even some inlay is a great addition. The sky is the limit, really. On the other hand, you can cut a 45° chamfer on each of the four sides of the column with your mitre saw to simplify things, maintaining a small, flat section on the very end of the column. To keep the chamfers aligned set up a stop on your chop saw and butt the bottom of the column up to it, rotating it 90° after each cut. While you're working on the top of the column, position your hooks one at a time, mark the hole locations and drill pilot holes. Placing the hooks at different heights makes it easier to use the coat tree and it also gives it a touch of style. If you have kids, you can also add a couple hooks down low. That is, if you want them to put their jackets away. Another word about the hooks ... a nice, classy hook will go a long way to dressing up this otherwise fairly simple project.

In order to keep the coat tree from rocking, I installed an adjustable foot from Lee Valley in the underside of each leg, near its end (item # 00F15.01 and the mating 3-Prong T-Nut). Whatever you do, don't drill through the top of the leg this far into the game. After sanding the legs and column surfaces, apply glue to the dovetail tenon and slot and one-by-one attach the legs.

Although this is a good time to try a new finish, I don't blame you for using the same old finish that's got you this far. It all depends on how much time and energy you have. A few coats are usually enough to offer a bit of protection and add a bit of sheen. Attach the hooks, adjust the feet and hang your work hat up. You're done for the day.

Easy Angled Dovetail Tenons – Drawing the shape of the legs onto the blanks makes it easier to visualize what's what. Machine the blanks to contain at least two legs so you have a more substantial piece to work with. Cut the angle on its end then rout the dovetail tenon on the end of it, fine tuning with precision. Once again, feed the work-piece from right to left.

Add Some Character

– By adding inlay, a routed detail or some notches you create some visual interest. Practice on a piece of scrap before committing to the final design.

Starting this issue we'll be including an article on a simple, fun project that can usually be completed in a weekend with a moderate amount of equipment.



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“Painting with Wood”

Knife Cutting Marquetry Basics

There's no better way to add style and originality to a piece of furniture than with marquetry. This craft has been around for thousands of years, so maybe it's about time for you to give it a try.

BY ROB BROWN

The use of marquetry to adorn furniture began in Asia Minor, but was given a new life in Europe during the 15th century. It was a thing of royalty and the church, as they were the only ones who could afford it. It impressed guests and family of political and religious leaders then, and there's no reason why you can't use some of these techniques to impress your friends and family today. Though it can be tricky at first, with a little practice it's not beyond most woodworker's skill level. Take it slow and start simple; you'll be surprised how much marquetry can add to your next project.

Marquetry is the cutting and assembling of different pieces of veneer into a sheet that can be pressed onto a core. There are generally two ways to produce marquetry – with a knife or with a fret saw. I will focus only on the knife here. Although there are different ways of producing marquetry with a knife, I'm going to stick to the specific technique I use for most of my marquetry work. I find it's fairly simple, doesn't require any fancy tools and can give surprising results, quickly. A

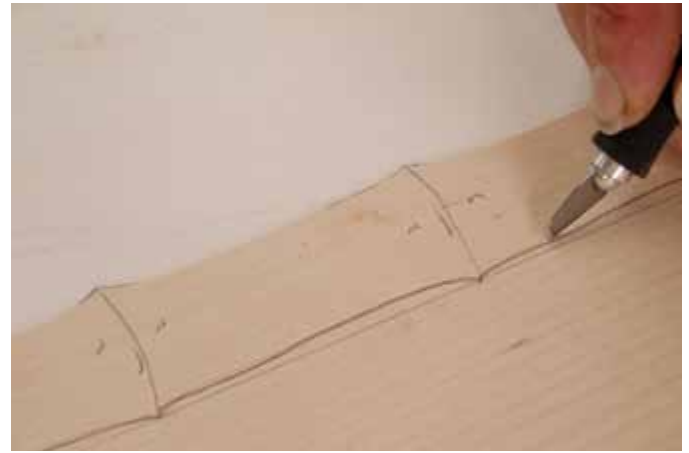
knife works best for regular or thin veneers as well as straight-grained woods. It's also great for cutting straight lines. One of the most important reasons to use a knife is because it's easier to control than a fret saw. And besides, you probably already have a knife around the shop you can experiment with. Just make sure it's sharp.

I always start by making a full-size drawing of the design I want. The drawing can be on any material, as I just want to have a design to work towards. It also helps me understand proportion and placement of the pieces I'm going to cut. This is especially important in the early stages, when there's nothing but a blank sheet of veneer to guide you.

The Most Important Tool – The Knife

You can use whatever knife you find comfortable, as long as it's sharp and you can control it easily. Most people, including myself, use an X-Acto knife handle with a #11 blade. I even spent the extra few dollars and picked up the upscale model that fit my hand nicely. I modify my blade slightly to give me a bit less flex at the tip. It's also easier to sharpen – something

Photos by Rob Brown



Knives are Important – Whatever knife you choose, keep it sharp. I take a standard #11 X-Acto knife blade (right) and modify it to have a more blunt end.

I do regularly while working. A sharp knife is important. People's knife preference is largely personal, so experiment with a number of different knives and methods of sharpening. And don't be afraid to spend a few dollars on a new knife. It might make a big difference.

Cut with the knife blade perpendicular to the veneer and cutting surface. In theory, the beveled blade produces pieces with a slightly angled edge, but at the end of the day I find it's not a big deal. Maybe when you're an expert in the field of marquetry you can concern yourself with these tiny details. If the largest gap in my marquetry work was $\frac{1}{128}$ ", I would have been more than happy when I was just learning. Heck, even now I would take those results! A grip very similar to holding a pen or pencil should be employed, as it's comfortable over the long term, and you have a lot of control over the knife. When cutting always orient the grain of the veneer so you're cutting 'downhill'. There will be much less tendency for splits to occur in the piece you're keeping. Cut on top of a piece of Masonite or Melamine-covered particle board. When it gets too damaged, just cut a new piece.

Draw Right on the Veneer – To make things easy, mark light lines on the veneer then cut them out. When making multiple parts, I number them to make sure they go back in order.

Layout and Cutting

With the full-size drawing in front of me, I start to draw some of the larger, background pieces out on the veneer. It may be handy to use tracing paper to transfer the design to the veneer. Don't leave a heavy, dark pencil line when you draw on the veneer because it may return just as you apply the first coat of finish. I think a fine mechanical pencil is a must for almost every woodworking application, but especially here. It's accurate and always sharp. While drawing these cutting lines on the veneer, keep grain direction in mind for two reasons. The most important reason is that the grain direction will go a long way to tricking everyone who sees the finished piece into thinking it looks even more alive

Tools

- Knife and blades
- Cutting Board (Masonite or Melamine)
- White Paper or sheet stock big enough to draw full-sized design on
- Steel Ruler
- PVA Glue
- Clear (Scotch) Tape
- Veneer Tape
- Carbon Paper
- Mechanical Pencil
- Sand, Pot and Hotplate
- Tweezers
- Core Material
- Backer Material
- A Method to Press the Sheet to the Core



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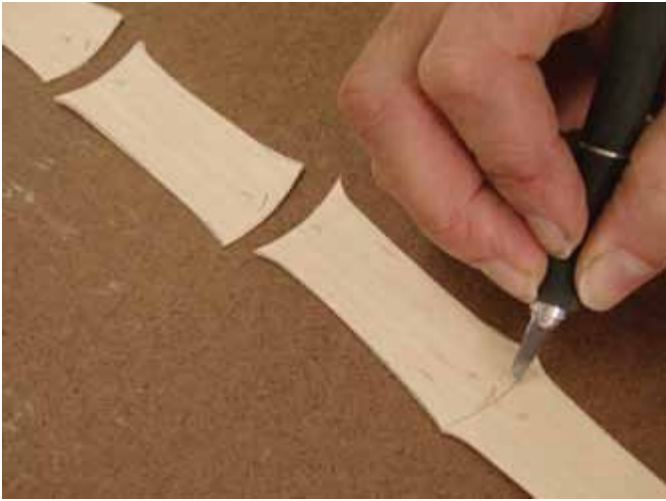
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Cross Grain Cuts are Tricky – Sometimes you will need to score the grain first then make an additional one or two passes to sever all the fibres.

and life-like. A secondary reason to consider grain direction is because you have to eventually cut these pieces out. Pieces with short grain will be more difficult to keep intact, but it might be worth it for the overall look of the piece. If you can orient the pattern in such a way as to keep the short grain to a minimum, especially for your first project, you will thank yourself. If the piece has some short grain, you can apply veneer tape or Scotch tape to the area before you make a cut. It will help hold those fibres together until the piece is pressed to the core.

When cutting across the grain, you may have to make two or three passes in order to cleanly sever the grain. Don't force it with one pass or you'll likely ruin the piece you're cutting.

Sand Shading

Shading individual pieces adds an incredible sense of depth to your work, and with a bit of practice is fairly easy to do. Put some clean, dry sand in a pot. Place the pot on a hot plate (or a stove element) and allow the sand to heat up. Determining the correct temperature requires some experimentation. With

scraps of the same species of veneer as in your project, test each piece by dipping it into the sand. The deeper you go, the hotter the sand is, and therefore the darker the shading will appear. If the sand is too hot, the piece will tend to shrivel and crack. The correct temperature will allow you to dunk the piece in the sand for a few seconds while manipulating its position. This movement gives a shade line that fades away, giving a better 3-D effect. It will take a while for you to dial in the right temperature, and get comfortable with this technique, but it's nothing but practice at this stage. As you're sand-shading, do your best to have consistency. If one tree trunk is shaded on its left side and the tree beside it is shaded on its right side, the image will be much less believable. It's a simple, but important thing to keep in mind.

When a piece of veneer is put in hot sand, most of the moisture is removed from it, causing it to shrink. Sometimes I will shade a piece first, then cut the mating sections, to ensure the fit is tight. You can also cut the piece slightly oversize, shade it, then cut it to final size.

I use tweezers to hold the piece of veneer, as even touching the sand for a split second is painful. Hold the piece away from the area to be shaded, as the metal tweezers will suck away heat from the piece of veneer, causing blotching where it was being held.

Sand shading should be done over the duration of the project on a "need-to" basis, so it's good to have a hot plate on at all times. Otherwise, you forget what piece goes where and these little pieces start playing tricks on your mind. One final word of caution – don't go overboard. You don't want too much of a good thing.

Tips for Successful Cutting

- Stick to straight-grained woods
- Try to avoid wavy, twisted, dry or fragile veneers
- Use a sharp, comfortable knife
- Experiment with different methods of sharpening a blade
- Make sure you have lots of light
- Experiment with scrap first
- Don't get frustrated ... keep it simple at first, then get fancy later
- Cut on a flat, clean surface that you can replace from time to time
- Applying a piece of veneer tape will help keep a fragile or thin piece of wood from splitting
- If a specific method works for you use it and enjoy the process



Sand Shading – This is the perfect way to add depth and shadows to your work. Practice with scraps first to get the right temperature and technique down.



Sticky Stuff – Veneer tape will hold all the pieces together as you work your way along. A bit of moisture on the underside of the tape is all that's needed.



A Helping Hand – With low-tack tape to hold the bamboo in place, I cut the mating mahogany edge. There are times when having a couple of relatively heavy (block plane) or long and straight (ruler) objects around is a good idea. They can act as another set of hands, keeping the sheet flat.



Start to Assemble the Pieces

Once you have a number of pieces ready to go, you can start to assemble them with veneer tape. Some people use a tiny dab of glue on the mating edge of the two pieces to help keep the edges aligned after taping them together, but I have never had the need to try it. I find proper veneer tape is strong enough to hold the pieces securely, allowing me to pass on the glue at this stage. Feel free to use low-tack painter's tape to temporarily hold pieces in place so you can cut or assemble different sections. This tape acts as a third hand. It should be removed before pressing, so don't apply veneer tape over it.

I tear off a bunch of small pieces of tape so they are ready and waiting. With a damp sponge or paper towel by my side to moisten the tape and activate its glue I start assembling the pieces, keeping them as tightly together as possible. Before pressing the sheet to the core I like to make sure all the seams are covered with one layer of veneer tape. This stops glue from squeezing out, and helps keep the work together during pressing.

Depending on the design you may have to assemble a number of pieces then cut out the cavity where those pieces will go. That was the case with the bamboo marquetry I turned into a headboard. I cut, shaded and assembled all the maple

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The Foreground is Usually Last – To keep perspective as realistic as possible you will need to let in the “closest” pieces last so they will overlap the rest of the image. I also leave small items that only mate with the background, like this bamboo leaf, until the end. I prefer cutting the piece then cutting the cavity, but it can also be done the other way around.

bamboo sections, then let them into the mahogany background. It was far easier to work with the pieces of bamboo taped together, as opposed to each piece individually. Each situation will call for a slightly different approach. At this stage, just continue cutting, shading and assembling the pieces similar to a jig-saw puzzle. Sometimes when the sheet you’re working on gets a bit large it may tend to curl. I use heavier objects to keep the veneer surface flat, so the sheet will press flat when complete. I also use long, straight strips of plywood or a straightedge to help hold an area down while I’m cutting or assembling pieces.

I usually leave smaller, foreground pieces that I can let into the surface until last. This allows me great precision when placing them, as sometimes the best location for them can be slightly different than in the initial drawing. You can even use what’s called the ‘window method’ to cut these, and many other pieces. To do this, you first cut out the cavity. Then place the piece of veneer you want to let into the cavity underneath it. Shift the upper piece to see what grain orientation will look the best, then mark or cut out the piece through the opening.

It’s easy to say, but try not to get frustrated. If you find you can’t for the life of you keep the gaps to a minimum, don’t be too hard on yourself. Once the piece is pressed to the core the glue has a way of working into the seams, helping to fill gaps and level the surface. It will not fill $\frac{1}{8}$ " gaps, but it will improve everything just that little bit. And even more importantly, with a bit of practice you’ll see an improvement.

Finishing up The Piece

Some people feel marquetry should only be used to ornament furniture. Although that’s what I usually do, there’s nothing wrong with ‘painting in wood’ with the end goal a piece of wall art. Whichever way you choose to use your marquetry you will have to mount it to a core. I like MDF for its flat and stable properties. If you’re going to use this panel in a piece of furniture keep in mind it doesn’t accept and hold hardware very well. Baltic birch is a bit less stable, as it likes to twist, but it does have a fairly even surface and holds hardware much better. Particle core is an okay choice.

There’s not enough room here to go into all the pressing methods, but I will give you some guidelines. Although it’s somewhat expensive, I use a vacuum bag for virtually all my pressing needs. It’s fast and easy, and opened a number of doors to me when I purchased it. The basics of pressing – no matter what method you use – are to apply even pressure across the face veneer, core and back veneer and to finish the edges, if they will be seen. A back veneer must always be used to keep the panel balanced and flat. There are many ways to do all these things, but for starters, keep it simple. Clamps and slightly curved cauls are the way to go. A dry run is mandatory, as you will be potentially juggling dozens of clamps, numerous cauls and freshly glued veneer that wants to curl. At least a couple platens sized slightly larger than the core are crucial to distribute pressure. The surface of these platens needs to be even, so no imperfections are transferred to the finished piece. To stop the finished piece from adhering to the platen use a thick sheet of paper between the face and back veneers and the platens. I use a large roll of craft paper, which I cut to size, but newsprint can be used. The only downside of newsprint is ink may be transferred to your piece of marquetry, causing staining. This is especially true if you use too much glue.

I almost always use PVA glue to press panels and have had no problems whatsoever. Apply an even coat that you can barely see the core through. Keep the veneer glue-free until it comes in contact with the core, otherwise the veneer will curl dramatically. Too much glue and the veneer will buckle, even underneath all that pressure. You will also get a lot of squeeze-out onto the finished surface.

Once the piece is dry scrape the veneer tape off the surface. When the vast majority of tape has been removed you can use a sander to level and finish the veneer. Sad to say, but many great works have been ruined at this stage. If you sand too far you will expose the core, and ruin all your hard work. Sand with care, especially close to the edges.



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Hand-saw Showdown – East vs West

BY TOM FIDGEN & JASON KLAGER

With a number of differences between Western and Japanese saws, it can be confusing when it comes to making a purchase. Learn why two woodworkers reach for the saw they do.



Western-Style Hand-Saws

I believe woodworkers should be encouraged to use whatever tool feels better in hand and will perform the tasks we ask them to. Working with the same tools over a period of time brings a sense of comfort, control and most importantly, confidence.

Why do I tend to use Western-style hand-saws (WSHS) in my wood shop? The truth be told, it starts with simple geography. I'm from Nova Scotia and guess what? We didn't have any Japanese saws where I grew up. Like many woodworkers, I eventually purchased a few Japanese-style saws (JSS) through the years due to my own curiosity and as an inexpensive option when starting out in woodworking, but the truth is

I barely touch them anymore. Why? Probably because I was so used to using Western saws I seemed to naturally gravitate back to them; remember – comfort, control and confidence. This is important while you're working wood.

My earliest hand-saw memories start with panel saws and from there onto back saws and a mitre box would soon follow. These were the saws used in the wood shops I grew up in and these are the saws I got used to using over the course of my life working wood. Today we have many choices and it's up to us to get comfortable with a style and try to master it.

What I find the most appealing about WSHS is basic comfort and form in hand. I can work much longer using a 'pistol

Photos by Dan Russell; lead photo by Rob Brown

grip' handle and once in hand, the motion seems to allow my arm to 'track' much better while sawing. This is especially true while performing rip cuts.

Sawing on the push stroke over a decent saw-bench makes sense to my body type and the style and methods of work that I do. Working with only hand tools, the first stages of material preparation is usually a cross cut followed with a ripping cut. If you've ever tried to rip a strip off an 8' plank of 2" White Oak with a JSS, I'd be curious to hear how it went.

I work with mostly domestic hard woods and buy my stock from a mill either rough or pre-dimensioned. Either way, I'm ripping large panels and this is where a Western-style panel saw makes the most sense for me. The longer saw plate allows for a longer, more fluid stroke with much less of a back and forth motion. My body weight and gravitational force, when combined with a properly set-up panel saw takes much of the strain or effort out of the process.

Having a thicker saw plate, as most WSHS do, makes for stronger saw teeth and less chance of breaking them in hard-working applications.

While Japanese saws seem to be easier to start for the beginner, with their finely set tooth pattern they seem to cut faster on first impression. The truth is they require many more strokes to get the job done and eventually that leads to more effort from the sawyer. A quality WSHS is no more difficult to start once you get used to the process and in my own experience, will win the race for speed of sawing every time.

Once lumber is dimensioned, joinery is soon to follow and from delicate dovetails to deep tenon cuts there is a Western-style saw designed and suited for each stage of the process.

Where to begin?

I think a safe place to start is with two panel saws; one filed rip in the 5 to 8 ppi (points per inch) range and the other a cross cut in the neighborhood of 8 to 12 ppi. You can add more to your nest but those two alone will cover most of your dimensional sawing needs. When we discuss points per inch, a good rule of thumb is: the thicker the wood, the less teeth you want on your saw. For heavy ripping cuts in thick material, a lower ppi is generally preferred, with the opposite for working thin stock. Material less than $\frac{3}{4}$ " in thickness will be better suited to a finer-tooth saw with a higher tooth count, somewhere in the range of 10 to 12 ppi. These are general guidelines and you should experiment with your own personal preferences. From the panel saw, we'll need a few decent back saws; again a cross-cut and a rip tooth are desirable.

Most wood workers will want a dedicated dovetail saw. Filed with a rip tooth, the dovetail saw may meet some of your ripping needs in joinery applications but I'd recommend a larger back saw for more joinery options. Most dovetail saws are made in the 8" to 10" range but again in my own work I prefer a larger saw plate between 10" to 12" in length. This translates to less strokes and I find it's easier to guide and sight the longer saw blade.

A second, slightly larger back saw specific for cross cutting stock at the work bench is the next to consider and these four or five saws mentioned will take care of most of your sawing



Pistol Grip – Some woodworkers prefer this type of grip because it feels more familiar and therefore more comfortable.



Consider this Point Carefully – When purchasing a saw, make sure you take 'points per inch' into consideration. A saw with fewer points per inch will cut better in thick material, and vice versa.



A Good Selection – It's nice to have a number of saws that are better suited for the task they are asked to accomplish. Working with the right saw will be easier and the results will be better.



Helping Hand – A saw bench and bench hook will make working with hand saws much nicer.

needs. A saw bench and bench/mitre hook will also make life easier for you when using a back saw at the work bench.

Keep Those Teeth Sharp

The final point I'll make for the case of Western-style hand-saws is sharpening. I sharpen my handsaws on almost a monthly basis depending on my workload and would encourage woodworkers to learn the skills of filing and setting their own saws. I've met and spoke with hundreds of woodworkers over the past few years and have yet to meet someone capable or confident enough to try to sharpen their own Japanese-style handsaws. Sharpening a Western saw, on the other hand, is



Stay Sharp – A Western-style saw can be sharpened and used for a long time, unlike most Japanese saws. (Photo by Carolyn Fidgen)

something that every woodworker can learn and with a little practice can achieve some fine results.

I encourage you to challenge your own methods and discover for yourself what works best for you. There isn't any one right answer and whether you decide on Western-style or Japanese-style, the important thing is to get into the work shop and start working wood! Enjoy the process.

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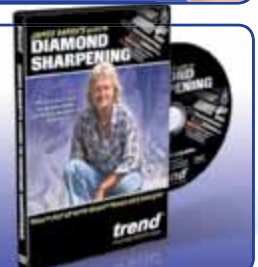
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AD/11/1

Japanese Style Hand-Saws

Japan inspires me. From its high-speed bullet trains to the quiet lantern-lit cobble-stone alleys of Old Kyoto, I have always been drawn to this intriguing country. As a woodworker, my attention is drawn to their well-constructed architecture and iron-plated tansu. The hand-cut joinery of Japan's accomplished carpenters motivated me to incorporate the use of hand tools into my own woodworking. So when I purchased my first hand-saw, a Japanese saw was the obvious choice. Since that day, over 10 years ago, I have enjoyed using Japanese saws and have come to understand and appreciate their benefits.

The straightforward design of Japanese woodworking tools can give the perception that they are little more than a novelty. However, omitting a tool's ornate trimmings and keeping it in its simplest form can assist and increase that tool's effectiveness. The Japanese saw is one of those tools; its lightweight, straight handle and thin blade are what make this tool extremely reliable. The intelligent design of the handle is what I find separates the Japanese saw from others. The handle's lightweight material, wrapped in rattan and bearing an oval-shaped profile make it comfortable to hold. The straight handle increases the saw's versatility, allowing me to be flexible with the position of my hand(s) when adjusting for the thickness of the material I'm working with or the type of cut I'm performing. With larger saws, this straight handle allows two hands to work together: one balancing the saw, positioned near the neck, and the other hand at the end providing the pull force. The Japanese saw's distinct trait is that the handle is positioned in line with the blade. With one-handed saws, like a dozuki, I hold the portion of the handle closest to the neck, resting the remainder of the handle under my wrist and forearm. I can then place my index finger on the back of the blade for additional control. The saw becomes an unmindful extension of my arm directing my attention to the accuracy of the cut. The saw held this way brings the material closer and allows me to feel the cut so I can make timely adjustments to maintain the blade's course and govern the speed at which it cuts.

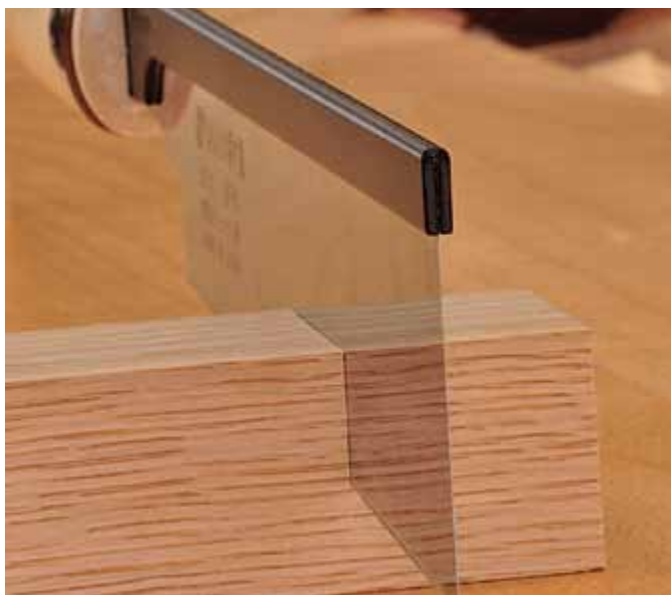
I value the handle's versatility, but just as important to the tool's overall composition is the performance of its blade. Japanese saws cut on the pull stroke, which allows a thin blade to be used. These thin blades



Simple Grip – Most Japanese saws have an oval handle, which is wrapped in rattan. This allows many options when sawing.



An Extension of the Arm – There are a number of ways to hold a Japanese saw. Klager grips the saw close to the neck and maintains contact of the handle with his wrist and forearm.



Very Thin Kerf – Because the blade is so narrow the resulting kerf is surprisingly thin compared with Western saws. This means each stroke requires less force.

will remove a very small amount of material, producing an exceptionally narrow kerf and powder-like sawdust. For fine work, this splinter-free narrow kerf allows me to see the line I'm following, and when cutting down to a line, the thin blade gives me a clear indicator to know when to stop. I find



Tiny Teeth – More teeth mean each cut is easier to start, and the resulting surface is much smoother, when compared to Western saws.



Quick Change – Though a Japanese saw blade tends to last a long time it usually can't be sharpened. Disposable blades are easily changed and leave you with a super-sharp set of teeth.

the thin blade makes starting a cut effortless and reduces the amount of energy needed to continue sawing. The teeth on these blades can be multi-faceted, reaching a tpi (teeth per inch) of 36. Although these teeth are next to impossible to sharpen, they will leave a flawless surface, even when I'm working with softer woods. A finer-tooth pattern also means a slower cut, but this allows me to more accurately follow my intended line and make the necessary corrections.

Handmade forged saws are made by blacksmiths whose methods have been handed down by generations of experienced individuals before them. In the right hands, these saws perform beautifully. These forged saws come with a high price, so I bought a production saw for my first one. Unlike the handmade forged saws that require professional sharpening, production saws have disposable blades, which can be an affordable and convenient alternative. Instead of discarding a dull or damaged blade, I like to modify them into card scrapers.

For lighter work, production saws are affordable, precise and very forgiving, making it the perfect choice for the beginner. For the collector and experienced sawyer, the amount of saws available is endless and pride can be taken when purchasing these hand forged saws. Inspired by the carpenters who use them, Japanese saws have found a permanent home in my hand tool collection. Incorporating the use of these saws into my own woodworking has convinced me that when it comes to the composition of a hand tool, less is more.



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Woodturning Tools for a New Turner

Turning requires a completely different set of tools and can be confusing to the beginner. Cut through all the confusion to learn what's really needed.

BY ALLAN CUSWORTH

There are two basic forms of woodturning. The first is spindle turning, where a piece of wood is mounted between a drive center in the headstock and a live center in the tailstock. The second is bowl or faceplate turning, where a piece of wood is fastened to a faceplate with screws and the tailstock is only used to support the wood where possible. The tools suggested here can also be used when the piece of wood is held in a four-jaw chuck, which is another common way to mount a turning blank.

Selecting the tools to buy when you first start woodturning should depend on which of these types of woodturning you want to do. Generally, the pieces turned between the centers on the lathe require different tools than pieces turned on a faceplate. Some, but not all tools can be used for both. That said, I suggest that a new turner start by turning between centers because the techniques for doing that are the foundation for all cuts used in woodturning. Turning between centers can also be slightly less daunting for a beginner. This article suggests tools for starting both of these types of turning, describes the basic features and gives some ideas on how each tool is used.

In my opinion, it is very important to buy the best tools you can afford. I have gone the route of buying cheap tools and most of them are now relegated to a back shelf somewhere. Cheap tools are usually made of lower quality steel that will not hold a sharp edge for very long, which can be discouraging. They're often not well balanced, which makes clean cuts harder to achieve. As with any other craft, good quality tools are easier to use; they produce good quality cuts and good quality results.

Most tools are not sharp when they come from the store and will require sharpening before use. Also, the cutting edges of some tools will require

reshaping to create a more useful tip profile. I will not discuss tool sharpening, bevel angles and tool tip configurations as it is beyond the scope of this article. A lot of published information is available on those subjects.

I also recommend that beginners resist the temptation to buy a beginner's set of tools. Most of these sets contain tools that will probably never be used. I feel that it's much better to spend the same amount of money and get fewer, better quality tools. Additional tools can be bought later when skills are developed and the type of pieces to be made is decided.

Safety First

The first tool that a new turner should buy is a full-face shield. When you start to learn to turn, things can happen very fast; face protection is imperative. I prefer to use a face shield rather than a set of goggles because I want to protect my complete face, not just my eyes. Also, it's a good idea to get some dust masks or a respirator, which should be worn at the very least when sanding.

Spindle Roughing Gouge (SRG)

A spindle roughing gouge is used for roughing out a blank that is held between a drive center in the headstock and a live center in the tailstock from its original square shape to a rounded cylinder. It can also be used for cutting shallow coves in the spindle's surface. The side cutting edge of a sharp SRG where those parts of the tool are ground flat can be used almost like a skew to create a smooth surface on the cylinder.



Spindle Gouge

A spindle gouge, sometimes called a shallow fluted gouge, is used to cut the detail features like concave curves or coves, convex curves or beads, and variations of these cuts. A spindle gouge is usually ground into a shape that looks like a "lady's fingernail", where the sides of the tip area are ground back. This makes the tool more versatile. Various bevel angles are often ground on them but I suggest using a 35° angle to start.

A detail gouge is a variation of a spindle gouge where the main differences are a shallower flute with longer fingernail grind with a 30° or finer bevel angle to make the tool more versatile for cutting crisp details. The flute has a heavier cross section to allow a longer extension over the tool rest while cutting. Many turners feel that these two gouges are interchangeable.



Starter Set of Tools for Spindle Turning

My suggestion is this five-tool starter set for spindle turning:

- (a) Spindle roughing gouge – 1 ¼" wide (32 mm)
- (b) Spindle gouge – ½" shaft size (13 mm)
- (c) Diamond-shaped parting tool – ¾" (19 mm) wide by ⅜" (5 mm) thick at the tip.
- (d) Narrow parting tool – 1 ¼" (32 mm) wide by ⅛" (2 mm) thick
- (e) Skew – ¾" (19 mm) wide by ¼" (6 mm) thick

There are many other woodturning tools that can be added to the tool kit later. Many tool manufacturers make and sell specialty tools for specific purposes. However, I recommend new turners to concentrate on learning how to use a few tools well, rather than buying a lot of other tools, until a specific need is determined.

Diamond-Shaped Parting Tool

A diamond-shaped parting tool is used to cut off waste wood and separate parts of a turning. It is also used with outside calipers to establish diameter dimensions on a spindle. It can be used to cut small flat areas. The narrow side of the tool is placed on the tool rest and the cutting edge is presented above the centerline of the piece and is levered upward to start the cut.

It has a diamond-shaped cross section, which reduces the tendency of the tool to bind when cutting. It's usually about $\frac{3}{4}$ " (19 mm) wide and $\frac{1}{8}$ " (3 mm) to $\frac{3}{16}$ " (5 mm) thick.



Narrow Parting Tool

A narrow parting tool is very useful for cutting apart sections of a turned piece box when trying to match grain since the lines will be closer to their original configuration. It is limited to parting off small turnings because of its short blade length. This tool is usually $\frac{1}{16}$ " (2 mm) thick and $1\frac{1}{4}$ " (32 mm) wide and is shaped with a 45° angle. Care must be taken to prevent binding on the sides as a cut is being made.



Skew

The surface of the cylinder will be smoother when a skew is used to make the cuts rather than a spindle gouge. However, there are specific cutting techniques that must be learned in order to use a skew successfully. A skew has two bevels and is available in various configurations. I prefer a $\frac{3}{4}$ " (19 mm) wide by $\frac{1}{4}$ " (6 mm) thick skew with a slightly curved cutting edge. I feel this type of skew is less aggressive and cuts shallow coves on spindles a little easier. Skews are available with a straight cutting edge if preferred. I feel that it is a good idea to either buy a skew with the side edges round or grind the sharp corners off to reduce the tool's tendency to bind on the surface of the tool rest. Some skews have an oval cross-section that can be useful for cutting curves but can cause difficulty when trying to get an even surface on the cylinder. The cutting edge is usually ground at a 45° angle to the side of the tool.



Starter Set of Tools for Bowl/Faceplate Turning

A spindle roughing gouge must never be used for faceplate turning. Using a SRG to rough out a bowl blank may result in a serious catch that could break the handle tang of the tool off when the square corners of the gouges cutting edge catch on the blank. The result could be a serious injury to the turner. It can also break off large splinters of wood that can become dangerous spears as they fly away from the spinning workpiece.

There are basically four tools that can be added to the starter set for a new turner who is planning on doing bowl/faceplate turning as well as spindle turning.

These tools are:

- (a) Bowl gouge – ½" (13 mm) shaft size
- (b) Round-nose scraper – ¾" (19 mm) wide by ¼" (6 mm) thick
- (c) Square-end scraper – ¾" (19 mm) wide by ¼" (6 mm) thick
- (d) Side-radius scraper – 1" (25 mm) wide by ⅜" (10 mm) thick

Scrapers

At first it will be difficult for a new turner to prevent leaving tool marks and rings on the bowl surfaces. Scrapers are generally used to remove these tool marks.

I grind the bevel angle on my scrapers to about 60°. Since all scrapers cut with a burr that is created on the cutting edge when they are sharpened, they must be kept sharp. The burr only lasts a very short time. Scrapers are presented to the wood surface at just below the centerline of the blank, with the handle held higher than the tool tip. This creates a "reverse rake," which produces a scraping action rather than a cutting action. By holding the cutting edge at about a 30° angle from the tool rest surface, slice-like shavings are created rather than dust. This results in a very smooth cut. This technique will take a little practice to perfect, but it is worth the effort.

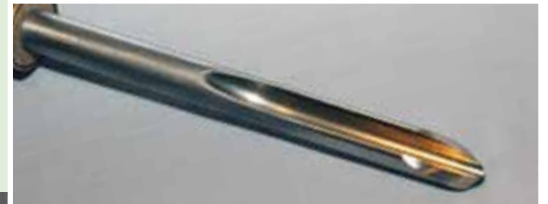
Scrapers need to be quite sturdy as they will extend farther beyond the tool rest as they are being used. I suggest they be at least ¾" (19 mm) wide by ¼" (6 mm) thick. The tip should have a bevel angle of about 60°.

Bowl Gouge

A bowl gouge is generally used to form both the inside and the outside surfaces of a bowl or platter. It can be used to cut deeper coves when turning spindles. The base side of the bowl blank is fastened to a faceplate with screws and the bowl surfaces are shaped with a bowl gouge. It is important to leave enough thickness at the base to allow the removal of the wood where the screw holes were made. After the inside of the bowl is completed and finished, it is removed from the faceplate and a scrap piece of wood is mounted to make a jam chuck onto which the bowl is reverse-mounted with a tight fit. The bowl gouge is then used to complete the bottom and refine the base.

I suggest a ½" (13 mm) bowl gouge for this work. It has a sufficiently rigid shaft that will reduce vibration as it reaches over the tool rest into the bottom of the bowl. I prefer a "fingernail" grind on my bowl gouge with a bevel angle of about 60°. If the nose of the gouge is ground much shallower than that, it will be hard to shape the bottom of the bowl without having a catch. A lot of turners have a second bowl gouge with the tip ground somewhat straighter across with a steeper grind to allow easier access to turn the bottom of a bowl. The decision to buy a second bowl gouge can be made later.

The bowl gouge is probably the most used tool in a turner's tool kit. It is also the tool that has the most variations in the shape and grind configuration of all woodturning tools.



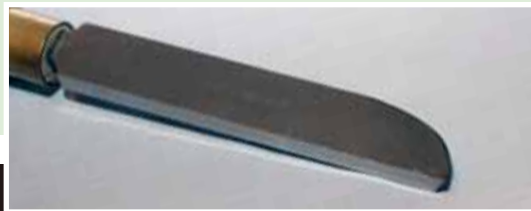
Round-Nose Scraper

The round-nose scraper is used to remove the tool marks on the inside surface of the bowl. This scraper can also be used to remove the little nub that often appears right at the center point of the inside of the bowl.



Side Radius Scraper

One of the most useful tools in the bowl/faceplate turning tool kit is a side-radius scraper. It can be very helpful for creating a smooth flowing curve on the inside surface of the bowl from the center of the bottom to the inside edge of the rim. This tool has to be very robust; I suggest it be at least 1" (25 mm) wide by 3/8" (10 mm) thick. This scraper has a rounded tip that extends back along one side to allow a longer cutting surface that yields a more even and continuous scraping cut from the center to the rim on the inside of the bowl.



Square-End Scraper

The square-end scraper is used to remove the tool marks from the outside surface of the bowl by using the reverse rake technique and scraping the wood directly at a 90° angle. The handle of the scraper will have to be continuously moved or a flat spot will appear on the surface.



A new turner can find the selection of a starter set of tools very confusing. A new turner who starts with the basic spindle and bowl/faceplate turning tools will be well on their way to having the tools to become a proficient woodturner.

A valuable resource to help a new turner learn correct techniques for using any of the tools I have mentioned is to see someone using it either in person or on a video. There are countless videos on YouTube that will assist a new turner. Also, the American Association of Woodturners has many woodturning guilds all over North America where members are more than willing to explain various woodturning techniques. A quick Internet search will locate a local chapter.

As turning skills increase, the results from using these tools will be more satisfying and the new turner will have a better understanding of what other specialty tools to buy.

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Japanese Hand-Saws

Just because they look, cut and feel different than you're used to doesn't mean you should write Japanese Saws off. Give them a chance ... you may switch allegiances for good.

BY JASON KLAGER

Precise and versatile are two words that describe Japanese saws. Instrumental in constructing some of the earliest wooden buildings and furniture, Japanese saws are a deserving addition to anyone's hand-tool collection. In the West, the most popular Japanese saw is the dozuki. A spline located on the back of the blade holds the blade rigid, enabling the dozuki to follow a line perfectly while leaving a finished surface. In Japan, this accurate joinery saw is used for cutting the shoulders of tenons, whereas in the West, it's primarily used for cutting dovetails. In some regions of Japan, you will find devoted blacksmiths who embrace the traditional methods of tool making, a reverent art form that can be traced back to the days of the samurai. These skilled blacksmiths commit their lives to making prized hand-forged dozuki, and in the right hands, these valued and expensive saws perform beautifully. Unfortunately, their expense, maintenance and the skill required to use them do, at times, deter today's woodworker from purchasing them. For this reason, as well as advancements in technology, the manufactured dozuki has gained wider acceptance.

A manufactured dozuki is affordable, easy to maintain and resilient. These saws have disposable blades that can be conveniently replaced when the teeth start to find the path of least resistance or become damaged. The softer steel that disposable blades are typically made of keeps both the blade body and base of the teeth flexible, preventing the user from cracking the blade or removing teeth when in use. Originally designed for working



Through-Cuts – A beading saw can start a cut inside the outer edge of a panel. This option may be useful from time to time, but generally isn't the deciding factor when choosing a saw.

Photos by Jason Klager, lead photo and product photos by Rob Brown

with softwoods, impulse-hardened teeth on most modern dozuki have extended the saw's durability and accommodate our love of hardwoods. The dozuki has evolved from a simple joinery saw to one that is also useful for other applications. For instance, a folding dozuki is perfect for the job site as it can be easily stored and transported. A super-fine-cut dozuki is designed specifically for intricate joinery or detail work found in model, furniture or instrument making. A beading saw is a dozuki that can start a cut inside the outer edge, performing a similar job to the azebiki – a Japanese saw popular for boat building. Found on this saw and some other dozuki is a spline that doesn't travel the full length of the blade, making it also usable for cutting thin plywood or veneers. Wood isn't the only thing today's dozuki are made to cut; some blades work on a variety of household materials, including plastics. These masterful saws have come a long way from their origins, performing a variety of tasks, but they can also provide a safe and timely alternative to working with a machine.



12 Saws Put to the Test – Klager put all 12 saws to the test, making rip and crosscuts in yellow cedar, Honduras mahogany and white oak. The saws all have their strengths and weaknesses. The challenge is deciding what saws are best for the work you do.

I had the opportunity to compare 12 dozuki, testing each saw on yellow cedar, Honduras mahogany and white oak. With the dozuki that were made to do so, I cut a full tenon to observe the saws crosscut and ripping capabilities. I also wanted to see if any rip-tooth dozuki would stand out from the rest by

testing them on $\frac{3}{4}$ " and 2" stock. As well, when the situation arose, I tried out the saws for daily shop tasks. Each saw in this article is slightly different from the next, giving you the opportunity to find a dozuki that best fits your method of woodworking.



9 1/2" Wide Blade Dovetail Razor-saw

item #: 19.371.0, japanwoodworker.com, US\$57.00

This wide-bladed dozuki features a nickel-plated blade that will prevent possible corrosion and ensure a friction-free cutting stroke. As with most crosscut saws, this saw had a slow rip cut but still left an acceptable sawn surface. When cutting the shoulders of the tenons, this saw demonstrated great speed and accuracy, always leaving the sawn surface both flat and smooth. It has impulse-hardened teeth that are short and wide, better suited for cutting hardwoods, yet it still demonstrated a very impressive crosscut on both the Honduras mahogany and yellow cedar. All Gyokucho dozuki tested proved to be very dependable saws.



Japanese Rip-Tooth Dozuki

item #: 60T04.04, leevalley.com, \$97.50

This saw was the "Ripping King", cutting through all three sizes of stock by far the quickest. Its ripping speed didn't affect the quality of cut; even on yellow cedar, this saw left a polished and accurate sawn surface. Just as impressive was its crosscutting abilities, cutting 3" stock faster and more accurately than a crosscut tooth dozuki. Even though it is 24" long, I would still feel very comfortable using this saw for intricate joinery. Well balanced and user-friendly, this exceptional saw is perfect for both ripping and crosscutting any size of stock. This is my choice for best overall.



Small Rip Dozuki

item #: 60T06.10, leevalley.com, \$29.50

This is a small and solid rip-tooth dozuki with an unconventional Bubinga handle. Its size makes it perfect for accomplishing smaller shop tasks and accommodates easy storage. The secondary bevel on top of the rip teeth enables the saw to crosscut. The saw started off roughly and continued this action throughout the cut, and the sawn surface was only satisfactory in both the rip and crosscut. This is a saw that would stand up to years of use, perfect for small shop tasks, but not one I would use for fine joinery.



Saw Dozuki "Z"

item #: 12F27, woodcraft.com, US\$54.99

This saw is said to be the top-selling dozuki in Japan, and for good reason. The 26 tpi crosscut tooth blade had little effect against its ripping abilities, performing the rip cut with speed and accuracy. In both the crosscut and rip test, this saw always left a sawn surface that was consistently flat and smooth. The spline is solidly attached to the handle and by lightly tapping on the back side of the spline, the blade can easily be removed. This is a reliable and well-built saw, and was extremely capable of performing consistently and accurately on all three woods tested.



Gyokucho Brand Razor-saw Back Rip #303

item #: D-GC-#303, hidatool.com, US\$32.20

The shorter spline and impulse-hardened teeth are what make this dozuki able to cut wood, plastics and thin sheet goods. Angling the saw slightly off the surface, I was able to rip easily through 1/4" and even 3/4" Baltic birch plywood. When testing it on the three woods, the saw's speed made the sawn surface rough and would leave the corners broken. This saw cut quickly through plastic, lumber and plywood always accurately following the intended line. Versatile and user-friendly, this saw is perfect for cutting any size of joinery where speed and accuracy are more important than a flawless surface.



Nakaya D-210C

bigbeartools.com, \$49.95

The 36 teeth/30mm and the 0.2mm Swedish steel blade made this dozuki very user-friendly. When ripping stock over an inch thick, the thin blade bent slightly leaving a surface that wasn't completely flat; this was most noticeable on white oak. However, this saw crosscut like a dream, leaving a flat and smooth surface that was splinter-free even on the smallest of pieces. Perfectly balanced and quality made, this dozuki would be excellent for detail work and intricate joinery found in model, furniture and instrument making.



Silk Woodboy 240 (x-fine teeth)

item #: 384-24, bigbeartools.com, \$57.99

It's all in the details when it comes to this solid and well constructed folding joinery saw. The fine blade moved smoothly when locking it into one of two positions. A comfortable rubberized handle protects the teeth when storing the saw or transporting it to a job site. The saw left a mirror finish on all three woods in both the rip and crosscut test. Fine teeth and a tapered blade made starting a cut effortless, maintaining smooth action throughout while holding the line perfectly. It looks like a saw made for the tool box but performed better than most conventional dozuki. This is my choice for best value.



Professional Dozuki-Ikeda tooth

item #: 60T03.15, leevalley.com, \$59.50

This saw has an Ikeda tooth pattern that uses a middle “raker” tooth to achieve better control and speed by relieving pressure on the outer teeth. In comparison to most crosscut tooth pattern dozuki tested, this saw did rip slightly quicker, but was comparable to others when cross-cutting. It had a smooth sawing action that required less focus and control to maintain your line. I felt that the brass spline, added to reduce required sawing pressure, made no noticeable difference. The saw left a good surface on all three woods in both the rip and crosscut test.



7" Dovetail Saw - Gyokucho

item #: 19.295.0, japanwoodworker.com, US\$30.00

This compact and lightweight dozuki is designed to quickly and accurately rip through wood, plastics and thin sheet goods. The combination of tooth set, and the large and fewer teeth per inch increased this saw's cutting speed and accommodated possible correction of a wandering blade. However, the sawn surface remaining on all three woods was only satisfactory. This saw cut effortlessly through PEX, PVC and other plastics. This small user-friendly dozuki is ideal for smaller shop tasks but one I wouldn't recommend it for fine joinery.



Nakaya D-240W

bigbeartools.com, \$56.99

This wide-bladed dozuki can perform rip cuts but is better suited as a crosscut saw. The standard 0.3mm blade seemed slightly more pliable than others tested, and this became an issue when cutting the shoulders on the white oak. However, when cutting yellow cedar, this dozuki demonstrated a sawn surface that was both accurate and smooth. On this saw and the Nakaya D-210C, the spline is fixed to the handle and a retaining bolt passes through the handle and the blade to tie it together. Although extra time is spent changing the blade, I preferred this reliable feature instead of your conventional hand-threaded screw.



Mitsukawa Brand Shirogane Hardwood Dozuki Rip Saw

item#: D-MK-143-210, hidatool.com, \$82.60

This saw is machine-made in Mitsukawa's workshop, with final assembly and adjustments completed by him personally. The blade is made with a slightly harder steel and is not disposable. The large rip teeth made it more difficult to start a cut, and when sawing you had to maintain a parallel or downward sawing motion, with light pressure, to prevent the teeth from catching. On white oak and even on 3" East Indian rosewood, this saw left a perfectly flat and polished surface. Overall, this is an impressive saw that would be ideal for ripping any size of hardwood stock, but it is not a saw I would recommend for the beginner.



Hishika Dozuki (Dovetail) Saw

item #: HI-180DR, thebestthings.com, US\$94.95

The blade on this Hishika saw is hardened by hand, remaining flexible but with the correct hardness to maintain a durable edge. The blade is also slightly tapered towards the back, which gave it an effortless friction-free stroke. This is one of the three saws in this list that left a flawless surface, performing equally well when ripping and crosscutting in both hard and soft woods. Although it handled larger stock perfectly, the size of its blade made it more appropriate for cutting smaller joinery. From its incredible cutting capabilities to its hand-hammered blade, this traditionally made dozuki is a beautiful saw to use and well worth its price.



Two Options – The Woodboy 240 has a pivoting blade with two options for usage. It can also be fully retracted for safe travel. Klager selected this saw as "Best Value". (Photo by Rob Brown)

I'm a firm believer that you get what you pay for, but that's not to say you have to spend a lot of money to find something decent. Saws that were priced between \$50 and \$60 were easy to start, performed nicely when sawing and left a surface which would satisfy most of us. The saws priced around the \$100 mark handled larger stock better and always left a flawless surface; these saws required a little more skill to use, and didn't always come with a disposable blade. In the end, you have to decide on your own if they are worth the extra cost. The one



What Size do you Need? – There's a large difference in blade size between some of these saws. If you plan on cutting deep tenons the larger blade is for you. For dovetails and intricate cuts, a smaller blade is more appropriate. (Photo by Rob Brown)

saw that broke this mould was the Woodboy 240, my choice for best value. A great deal of thought went into designing this saw. Although leaving a slightly larger kerf compared to the other dozuki tested, the surface of the cut remained flawless.

The blade is not your standard production blade; the taper-ground, chrome-plated blade with wide no-set teeth pattern greatly increased the saws handling, performance and quality. The mechanics that pivoted the blade into the handle were solid and I believe would stand up to years of use. This saw is well worth its price and is one I would be comfortable using for fine joinery. My choice for best overall was the Japanese Rip-Tooth Dozuki, followed closely by the Hishika Dozuki saw and the Z-Saw. This saw demonstrated the precision typical of a professional saw but had the functionality normally found in a beginner saw.

With the amount of dozuki available to us, choosing a saw can be overwhelming. It is best to first determine what you intend to use the saw for and what extras may be important to you (folding blade, shorter spline, the option to cut deep shoulders, etc.). If you are planning on using your dozuki just for cutting dovetails, then invest in a good rip-tooth pattern saw, which will ensure the speed, accuracy and finished surface you are looking for. A wide-blade crosscut-pattern dozuki would do the job, but it is much slower and you would have an unnecessarily large blade to contend with. In my shop, instead of expecting one saw to perform many things, I find it best to have a few of these precise and versatile saws on hand for different applications.



JASON KLAGER
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Get a Grip – Although most dozuki saws come with an oval, rattan-wrapped handle, there are others available. As comfort and performance will be affected, it's best if you can handle a saw before committing to it.

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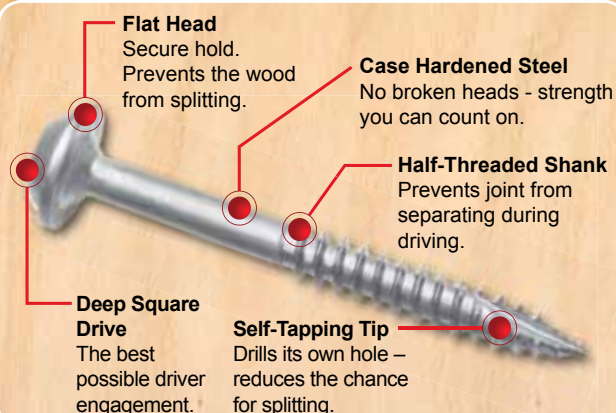
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Woodworking Women

BY DON WILKINSON

I recently received a letter from one of my many fans. No, it wasn't from my wife or my Mom ... this time. It was from a brand new fan and she was complaining about something I had written, or rather, not written in my column. Luckily, this was the first letter I have ever received that actually complained about Woodchuckle. Truth be told, it's the first letter I have ever received ... period.

Her complaint was that I either never wrote about women in the woodworking field or if I did, it was a simple peripheral reference to either my wife, my daughter or my emergency-backup-daughter, never about actual women who do woodworking. There's a very valid (well I think it's valid) reason for that, I replied. I don't know any! But it turns out I was wrong (again); according to my wife (and daughter, and emergency-back-up daughter), I do know some woodworking women. In fact, over the years I have either taught or attempted to teach several women various aspects of woodworking. Some with disastrous results, some with hilarious results and some with exceptional results. Just like with men!

For those who aren't regular readers of Woodchuckle, my shop in Whitehorse was geared for the do-it-yourselfer. Real people, men and women, would, for a nominal fee, use my shop, my expertise and my equipment build to varying degrees of success, whatever they wanted.

On several weekends, I held a course specifically for women called, appropriately enough: "Woodworking For Women." I thought this was rather a clever title. I thought of it myself.

In the very first course was a woman I'll call Wendy, because that's her name and her husband is used to calling her

that. Wendy wanted to build something, who knows what, and she was very keen to learn how. Like most people who take courses, Wendy didn't know much about woodworking but she was enthusiastic. Her problem was that she was deathly afraid of the sliding compound saw.

The table-saw, a tool specifically designed to turn people into giant shish-kebabs, didn't faze her in the slightest. She'd fire that puppy up and blithely and with great aplomb, rip, dado and rabbet a piece of maple or oak without a worry or care. The eight-inch jointer was operated by her with no more concern than plugging in the kettle and the shaper, a tool that still scares the bejeebers out of me, churned out raised panel doors as if its sole goal was to please her. But the chop saw – that was a different kettle of fish altogether. Wendy would very carefully place her board on the saw bed, very carefully align the blade to her carefully measured and carefully (Wendy was a little pedantic) drawn pencil mark, take a deep (and careful) breath and slowly squeeze the trigger. The saw, like all chop saws, has a very high torque on start-up and the saw would kick a little in her hand. Wendy would squeak out a high-pitched yelp and jump halfway across the shop in horror. Every! Single! Time! Once the saw wound to a halt,

she would slowly advance on it and go through the entire process again. With the exact same results. After watching this a few times I'd take pity and do the cut for her. I always gave her the option but not once did she ever manage to make a cut with the chop saw. Twelve years later and she's still in therapy, I understand.

On the other end of the scale, I had another woman using the shop who came in with zero woodworking skills but wanted to build a four-poster-bed. And did! The problem I had with her is that she built it almost as fast as I could have. (Not as good though.) Roshean was a natural. I'd only have to demo a tool or technique once and she'd shove and kick her skinny little self to the front of the line to be the first to try it. And she'd perform flawlessly, first time. It got really irritating! A student isn't supposed to equal the master first time. She was either very good or I was an incredible teacher. And we all know the answer to that!

I know this article was intended to be a tribute and apology to woodworking women, but it doesn't seem to have worked out that way. But at least I mentioned you.

DON WILKINSON
YukonWilk@gmail.com



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