Issue 9 January 2016

Woodworking CRAFTS

HAND, POWER & GREEN WOODWORKING • TURNING • RESTORATION • DIY

Tool tote

The perfect tool organiser

A history of artisan Paris

TECHNIQUES

Tablesaw tips

Dining chair restoration

PROJECTS

Pedestal table

Shed makeover

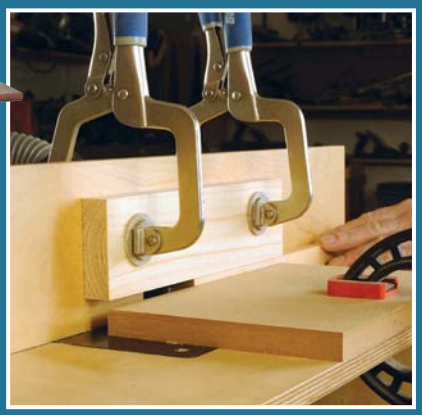
Turned spinning top box

Green wood drinking goblet

CHOPPING WOOD

BLANKET BENCH

ROUTER TABLES



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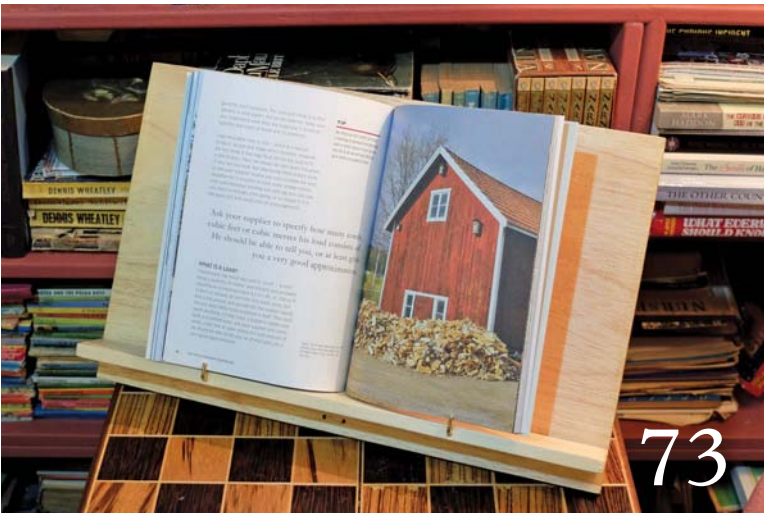


Welcome

to the January issue
of *Woodworking Crafts*

Happy New Year

Hello Everyone and welcome to the January issue of *Woodworking Crafts*. Now the spirit of Christmas has past, we can look forward to another New Year and all that may hold for us. Often the weather can be pretty miserable so trips out to the workshop or shed are still not yet on the cards, but that doesn't stop us planning. I generally have an outline of DIY jobs that will crop up during the year, but other more urgent tasks rear their ugly head too. If you want to try some pure woodworking projects to plan on doing, then we always have plenty in the magazine and they often feature a lot of technique, which is a crucial part of learning the craft.

Speaking of which, I had the opportunity to bring Stuart King into the magazine, I jumped at the chance because he is something of a legend when it comes to green woodworking and also woodturning, not to mention dolls' house furniture and his active interest in archaeology. So we have a drinking goblet project from him; in this issue you have a choice of wet or dry turnings, whichever takes your fancy!

Anthony Bailey, Editor
Email: anthonyb@thegmcgroup.com

PHOTOGRAPHS BY MARK EDMUNDSON UNLESS OTHERWISE STATED

PHOTOGRAPH BY DAVID MARX PHOTOGRAPHY

Pocket Hole Joinery
ISBN: 9781621136743
Price: £16.99
Web: www.thegmcgroup.com

BLANKET BENCH

In this extract from *Pocket Hole Joinery*, Mark Edmundson makes a blanket bench with a handy shelf

The tops of benches always seem to accumulate stuff, so adding a shelf below this blanket bench should help to alleviate that problem. Adding the shelf also hides some pocket holes, so it's a win-win as far as furniture details go. The benchtop planks are the biggest pieces required at 5¾in wide and 38in long, but the rest of the pieces are either narrow or short. The machining is basic, and it's possible to build this bench with just a tablesaw, jigsaw, and pocket screw jig. A chopsaw or sliding crosscut sled to cut multiple parts to the same length would be helpful to ensure tight joints but is not essential. Overall, this is a very simple project for the beginning woodworker that illustrates how versatile pocket hole joinery can be.

Stock preparation

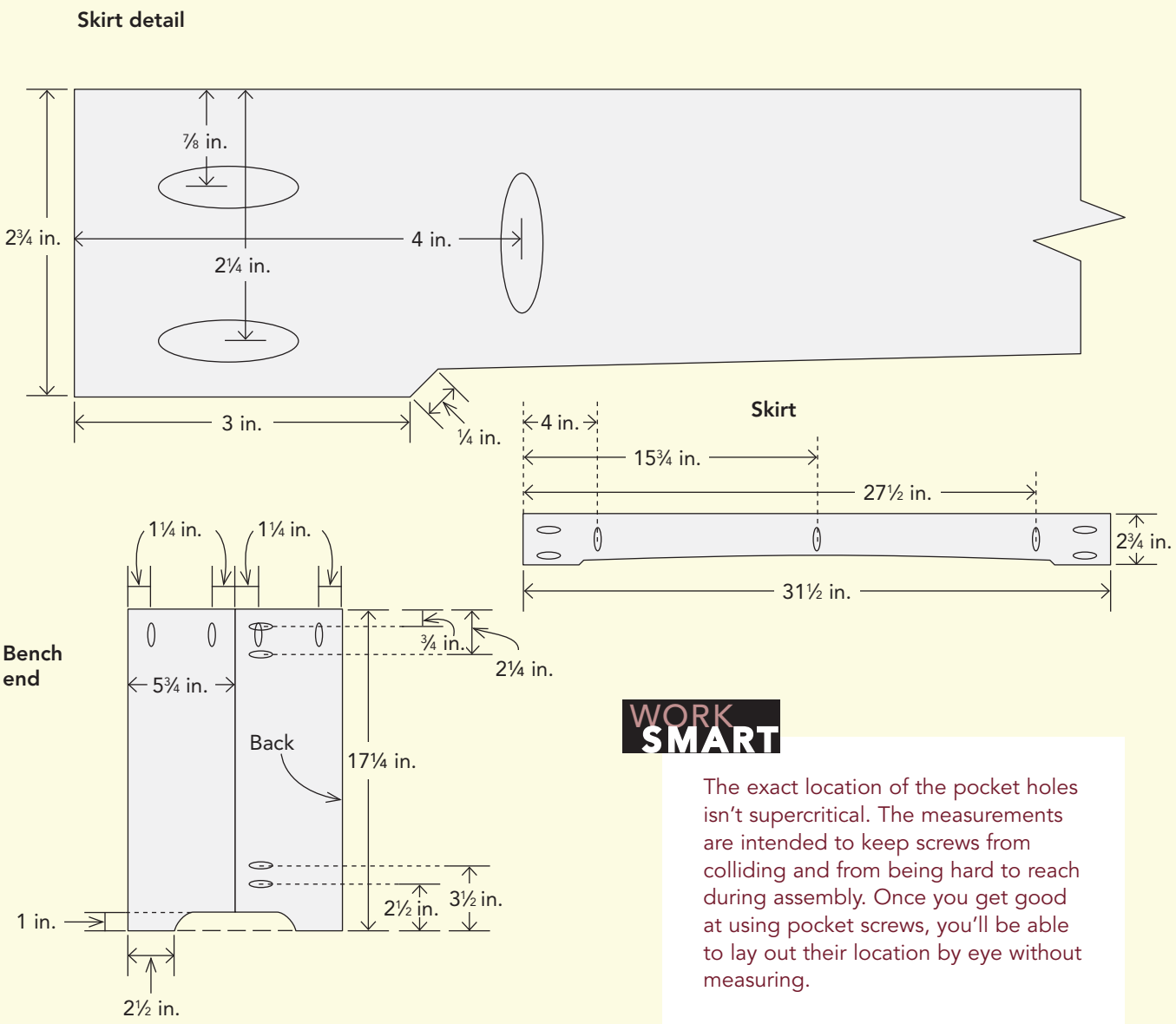
All the material on the bench is ¾in thick. You can mill your own boards, of course, but it's easier to purchase S4S – surfaced four sides – planks from the lumberyard and avoid joining and planing. The wide widths are all 5¾in, the skirt and lower slats are 2¾in, and the narrow strips on the top are 1½in wide. This project requires no glue, biscuits, or dowels – just pocket screws. To further simplify construction, I used only the right-angle jig, two face clamps, and a couple of small bar clamps for assembly.

There are several ways to spice up this bench. I used contrasting wood for the skirt and lower shelf; other combinations might be matching wood for the top and shelf and a different wood for the ends and skirts. Cut all the parts to length, but note that the lower shelf stock and skirts will initially be cut at 32in and then later trimmed to 31½in. Label which faces will be out, front, back, right and left on all the parts, and then sand away the machine marks on the surfaces that will be visible. To make edge-joining the ends, lower shelf, and benchtop easier, bevel the corners at the edge joints with a block plane or sanding pad first, which negates the need to sand the joint flush after pocket screwing. ➤

Materials

Quantity	Part	Actual Size	Construction notes
4	Bench ends	¾ x 5¾ x 17¼in	Black walnut
2	Benchtop	¾ x 5¾ x 38in	Black walnut
2	Benchtop center strips	¾ x 1½ x 16¾in	Black walnut
4	Shelf slats	¾ x 2¾ x 32in	Alder
2	Skirts	¾ x 2¾ x 32in	Alder

BENCH AND SKIRT DETAIL



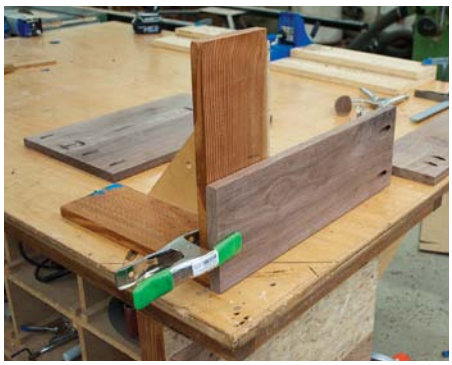
WORK SMART

The exact location of the pocket holes isn't supercritical. The measurements are intended to keep screws from colliding and from being hard to reach during assembly. Once you get good at using pocket screws, you'll be able to lay out their location by eye without measuring.

Assembling the bench ends

The bench ends, which are made up of two 5¾in by 17¼in pieces, get two sets of pocket holes. The first group of four holes joins the two end boards together. On the back 5¾in boards, measure down from the top along the inside edge ¾in and 2¼in, and mark for the top pocket screws – see the drawing above. From the bottom, measure up 2½in and 3½in, and mark for the bottom set of pocket screws. The next group of holes attaches the bench ends to the benchtop and is located along the top inside edge. Measure over 1¼in in from both edges on the inside face on all four boards,

Drill the holes in the four bench-end pieces. Building a sled for your pocket hole jig helps support the stock and allows the jig to be clamped to your work surface



Clamp the right-angle jig to the end piece to help hold it upright during assembly

and mark for the pocket hole. Drill the pocket holes in the end stock.

Use the right-angle jig to hold the front 5¾in end piece with the center edge up and the inside facing out. Place the back end piece on top, flush up the top edge, and hold with the face clamp. Drive two pocket screws into the top pair of holes. Then move the right-angle jig to the top edge and repeat for the bottom pair of holes. Assemble the opposite end in the same manner.

Curves cut into the bottom edge of each bench end are a subtle design touch – and echo the curves cut in the skirt. Measure in 2½in from each side and make a mark on the bottom edge. Using a try square, draw a line 1in up from the bottom edge between the 2½in marks. Use a roll of tape or similar rounded object to trace the curve between the 2½in mark and the 1in line. Cut out the curves and clean up the edges with a file or sander.

Assembling the lower shelf

Three of the four 2¾in lower shelf slats receive pocket holes for assembly – the front slat does not get drilled for assembly, but it will get drilled at either end after the shelf is cut to length. Make marks on the underside of the no.2, no.3, and no.4 slats at 2½in, 9in, 16in, 23in, and 29½in – see the drawing on page 8. Drill pocket holes at the marks. Next, take the front slat – the one without any pocket holes – and clamp it to the right-angle jig so that the bottom faces out. Place the no.2 slat on top of the front slat, flush up the end, and hold tight with the face clamp at the opposite end of the right-angle jig. The ends don't need to be perfect since the shelf will be cut to 31½in after it is assembled. Starting at the end, drive a pocket screw and then move the clamp to the next hole and repeat. Do not drive the last pocket screw located in front of the right-angle jig yet. Set the no.3 slat on top and repeat the drilling procedure, then set the no.4 slat on top and repeat. Move the right-angle jig to the middle, and drive the pocket holes that were skipped at the end.

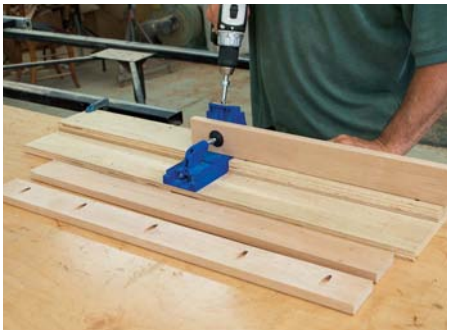
Assembling the benchtop

The benchtop is composed of two 5¾in by 38in planks and two 1½in by 16¾in center strips, all of which are ¾in thick. The space between the center strips not only provides a handhold for carrying the bench but also allows ➤

Center a face clamp over the seam between the end pieces as you drive the pocket screws

Use a roll of tape to help draw the curve in the bottom edge of the bench end

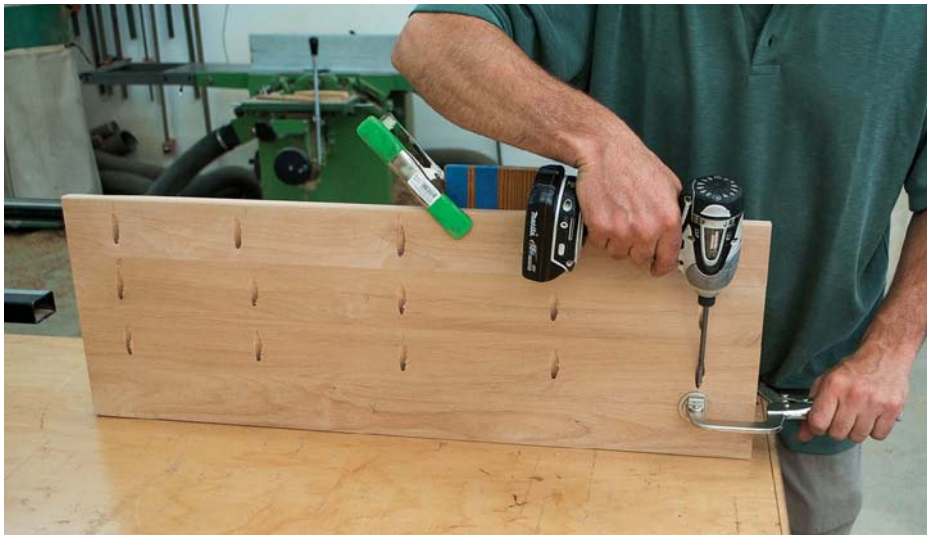
Mark the no.2, no.3, and no.4 shelf slats for pocket holes, using a straightedge to mark across all three slats at the same time



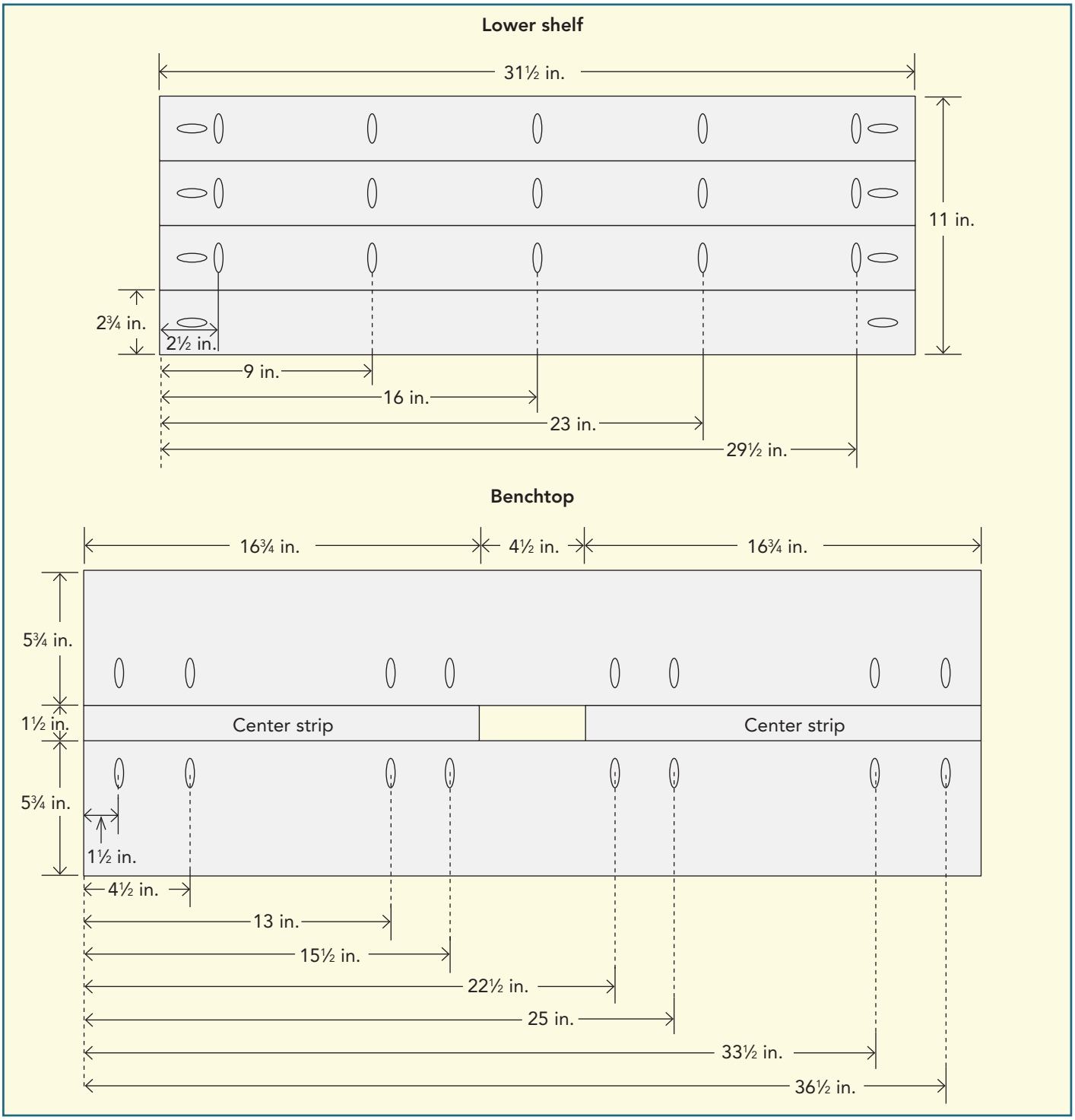
Use the marks on the slats to align them on the jig for drilling

Starting at the opposite end from the right-angle jig, clamp the slats and drive the first screw

Continue adding the shelf slats until all four are in place



Wait until all of the slats have been assembled, then move the right-angle jig to the center and drive the last screw on each slat



you to slip the face clamp in between the slats to hold it tight when driving the center pocket screws. The pocket holes, located on the two 38in planks, must be within reach of the face clamps so the holes can be secured during assembly and not interfere with the pocket screws on the ends that attach the top. On the underside of the 38in boards, mark for pocket holes on the inside edge at 1½in, 4½in, 13in, 15½in, 22 ½in, 25in, 33½in, and 36½in. Drill out all the pocket holes.

Clamp the back 5¾in board to the right-angle jig at one end. To reach the

Clamp the back benchtop board to the right-angle jig, and set one of the center strips on top. Hold firm with the face clamp while you drill the second pocket screw from the end

Place the front board on top of the center strips, set the face clamp over the first hole, and drive a pocket screw

holes with the drill, the surface must be close to the edge of the workbench; otherwise, the edge of the bench will get in the way of the drill. Place the 1½in center strip on top of the 5¾in board, flushing up the end. Set the face clamp over the second, 4½in pocket hole and drive a screw. Continue down the edge, securing the first strip. Then attach the second strip, again flushing up the end. There should be a 4½in gap between the two strips. Attach the second strip with pocket screws, using the face clamp to hold it secure. Next, place the front 5¾in board on top of the strips. At the opposite end of the right-angle jig, hold tight with the face clamp and drive the first pair of screws. Slip the face clamp in between the gap between the strips and drive screws into the next pair of holes. Reposition the clamp onto the other strip and drive the screws. Remove the face clamp and slide the right-angle jig to the opposite end. Clamp and drive the screws that were located in front of the right-angle jig.

Prepping the shelf and skirt

The lower shelf and skirt material need to be cut to 31½in to ensure that the ends of the shelf meet squarely with the bench ends. Set a stop block to cut the shelf at 31¾in. After this first cut, set the stop block to cut the shelf at 31½in and trim the other end of the shelf. Cut the skirt material at the same time to 31½in.

On the underneath side of the shelf are four pocket holes on either end located in the center of each 2¾in shelf slat; drill these now. On the inside face of the skirts, drill pocket holes at both ends. Measure down from the top edge ⅞in and 2¼in and mark for pocket holes. Along the top inside edge of the skirts are three pocket holes to attach the skirt to the top. Measure over 4in, 15¾in, and 27½in, and mark for the pocket holes.

The skirts have a gentle curve on the bottom edge that needs to be laid out and cut. Starting with one of the skirts, measure over 3in on both ends, and draw a 45-degree mark at least ½in long. With a square, mark the point at which the 45-degree mark is ¼in above the bottom edge. At the center of the skirt, make a mark ½in up from the bottom edge. Clamp a small scrap of wood at that ½in mark. Take a strip of knot-free wood, ⅛in thick or so, and place it on top of the skirt behind the small piece of wood. Since the narrow

Drill one pocket hole at each end of each slat to attach the shelf to the bench ends

Use a square to mark the 45° start of the curve on the lower edge of the skirt

Gently draw the curve created by the batten onto the skirt

Square up the scrap spacer with the front edge of the bench

Mark the center of the benchtop in front of the spacer to help align the bench ends

Mark the edge of the bench end, which should be ¾in from the front edge of the top

strip would be hard to clamp, hold it in place with a tape measure or similar weighted object, and force one end of the strip over the ¼in and 45-degree intersections. Do the same thing at the opposite end. Lightly trace the curve, being careful not to push the batten strip out of fair. Cut the curve and round over the edges with a file and sanding block on both stretchers. Repeat for the second skirt.

Assembling the bench

Set the benchtop face down on the work surface. The benchtop overhangs the base ends by 2½in on either side. To help locate the bench end, clamp a 2½in-wide scrap of wood to the end of the top so that the edges are flush. Check with a square, and shift the scrap so that it is square with the front edge. With a tape measure, mark the center of the bench in front of the 2½in spacer. Place the end piece so that the center joint is directly above the center mark on the bench. Mark the front edge of the bench end where it meets the benchtop – ¾in in from the front edge of the top.

Clamp the right-angle jig to the inside of the bench end and then to the benchtop. Drive the first pocket screw in the end and then remove the right-angle jig and drive the remaining ➤

screws into the benchtop. The end should be tight against the 2½in spacer when driving the screws. Remove the 2½in spacer.

The skirt steps in from the front edge of the top 1in. To help locate the skirt, rip a 1in strip of wood on the tablesaw and then clamp it flush with the front edge of the top. Slide the skirt into place and clamp it to the bench. Set both screws into the bench end, driving the pocket hole closest to the benchtop first. Then drive the end screw from the skirt into the benchtop. Move the 1in spacer in front of the center pocket hole in the skirt and drive the screw into the benchtop, then move the spacer down again to drive the last pocket screw. Repeat this procedure for attaching the opposite skirt to the bench end.

Now you can attach the other end. Measure and mark the benchtop to center the bench end in the same manner as before. Place the end against the skirts and clamp the 2½in spacer tight behind it to keep the end from being pushed out when driving the pocket screws. Carefully drive the lower pocket screw from the skirt into the end on both sides. Drive the upper pocket screws from the skirt into the end, and finish by driving the pocket screws from the end into the benchtop.

Installing the lower shelf

I used 2¾in offcuts from the shelf strips plus pieces of 9in by 9¾in plywood to make a spacer jig to install the lower shelf. The jig needs to be in two parts so that the shelf does not get scratched when you remove the spacers. Place the plywood pieces with the 9¾in length going up and down against the bench ends. Set the 2¾in strips on top of the plywood pieces. Center the shelf on the ends by lining up the middle seam on the shelf with the middle seam on the ends. Since this seam will be hidden by the right-angle jig, make a mark on the underside of the shelf and the bench end to record the location of the shelf at the front edge.

Attach the right-angle jig to the end and the shelf with face clamps so that the first pocket hole is visible. Make sure that the shelf didn't shift by checking the marks at the front. Drive the first pocket screw, then remove the jig and drive the remaining screws. Repeat this procedure at the other end. To finish my bench, I applied four coats of Daly's® ProFin™ satin oil with a rag. ■

Secure the right angle jig to the bench end with a face clamp, being careful not to cover up the first pocket hole. Then face-clamp the jig to the benchtop

Drive the first screw into the end, remove the right-angle jig, and finish screwing off the end to the top

Clamp a 1in spacer to the benchtop, then butt the skirt to the spacer and clamp in place

Drive the screws through the skirt into the bench end, starting with the bottom screw, which is backed up by the 1in spacer

To install the shelf, make a pair of spacer jigs to support it

Mark the location of the shelf at the front edge so that you can verify that the shelf did not shift when clamping the right-angle jig in place

Clamp the right-angle jig to the shelf and bench end so that the first pocket hole is uncovered

Hold the upper spacer in place as you slide out the lower spacer to keep from scratching the top of the shelf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Insight

Hand Skills

Peter Sefton's students find their skills tested by having to produce really neat looking through tenons

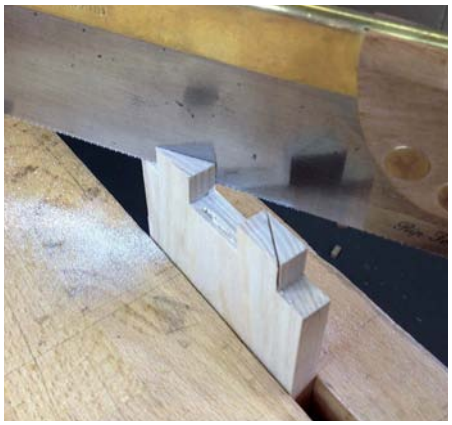
Continuing on from last month's article on the dovetail housing joint used on our students' tool racks, some of the guys also practised their hand skills cutting through mortice and tenons wedged, both for aesthetics and strength. As part of the exercise they needed to decide on the configuration of tenons – would it be two or three? The wedges also led to a few design decisions, like how many wedges and then their placement; vertical, horizontal or diagonal – most opted for diagonal.

Checking the through tenons are a perfect fit before fitting wedges

The cutting of these mortices could be done purely with mortice chisels, but I demonstrated both drilling out and routing the waste. Both techniques ultimately requiring some careful chisel work, but the routing method was a favourite, using the same router housing jig that was talked about in last month's article. This left just a millimetre around the cutter for final chisel clean up.

One of the most important things to remember when making decorative show joints like these is that they must be good and clean. Most mortices are hidden by the shoulders of tenons, but these are on show. The starting point for clean joints is good marking out and I used my Veritas dual marking gauge for the mortice and tenon. The Veritas gauge's cutting discs are set so the bevel edge of the chisel is cutting into the waste side of the mortice, leaving a very clean square line around the mortice. The tenons were cut by hand, using tenon saws and the shoulders were cleaned up with a sharp bevel edge chisel. The wedges were made from timbers that contrasted the pale ash (*Fraxinus excelsior*) rack, such as African blackwood (*Dalbergia melanoxylon*), American black walnut (*Juglans nigra*) and lignum (*Guaiacum officinale*), which were chosen to give the best effect. Remember, for those wedges set diagonally across the tenons, the wedges needed to be cut with angled ends to match the edges of the mortice. Now the tool racks are completed and full of tools, the guys are moving onto bigger and more complex projects using their newfound experience. ■

Trimming an African blackwood wedge for a perfect fit



The saw kerf must go exactly corner to corner

Peter Sefton

Peter Sefton is a well-known furniture maker who runs courses in fine woodworking, teaching and mentoring students at the Peter Sefton Furniture School. He also owns Wood Workers Workshop and he is a Liveryman of the Worshipful Company of Furniture Makers.
Web: www.peterseftonfurnitureschool.com

NEWS & EVENTS

All the latest events and news from the world of woodworking...

Networking event Discover Axminster is well attended

Above: Robert Ingham drew the crowds at the networking event

Wally Wilson of Lee Valley explains the finer points of a Veritas plane

Billed as the first education expo of its kind from Axminster Tools & Machinery, the company's Business Services Team recently organised its first Discover Axminster networking event at Bridgwater College.

The event, aimed at lecturers, technicians, students and business contacts, attracted representatives from a number of colleges including Exeter, Bath & City, Axe Valley, Plymouth, South Gloucester & Stroud, Weston and Bridgwater plus apprentices from Pendennis Shipyard in Falmouth.

Steve Hopper, Programme Manager for Furniture at Bridgwater College, said: "We have a great range of demonstrators here using the usual high quality kit that Axminster supply. The level of detail of information from the exhibitors is excellent and we are particularly pleased to welcome Robert Ingham who is such a well respected figure in the furniture making world."

The day unfolded with a series of talks and demonstrations from well known names such as Bosch, Festool, 3M, Numatic and Wally Wilson from Canadian company Lee Valley who focused on the Veritas brand. Visitors were able to get hands-on with many of the tools and equipment being demonstrated. Robert Ingham, revered designer and maker of furniture and boxes, drew quite a crowd throughout the day with students and apprentices gathering round as Robert showed samples of his craftsmanship and explained certain techniques.

One lecture of particular interest to the industry came from Matt Lear of the Design & Technology Association. Matt talked about how D&T is currently facing many challenges in both primary and secondary school education. Among the difficulties are teacher recruitment, decreasing curriculum time, decreasing GCSE entries and access to professional development. The concern is that unless these issues are addressed now, D&T will be marginalised. Matt encouraged anyone wishing to support the campaign for the preservation of and more funding for D&T in schools to sign a petition which will be presented to the Secretary of State for Education, Nicky Morgan. More information about this can be found on the D&T website.

Contact: Axminster Tools & Machinery
Tel: 03332 406406
Email: abst@axminster.co.uk

Record Power Show at Westcountry Machinery 4 wood

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Where: Beacon Kilns, High Street Village, St Austell, Cornwall, PL26 7SR,
Web: www.machinery4wood.co.uk

Museum at Christmas

Traditionally decorated houses reflect the spirit of Christmas throughout the ages – from Medieval to Edwardian times. Period music, historical demonstrations, traditional food and drink, plus crackling open log fires will bring history to life so visitors can discover how our rural ancestors celebrated Christmas.

When: 26-28 December, 2015
Where: Weald & Downland Open Air Museum, Singleton, Chichester, West Sussex, PO18 0EU
Web: www.wealddown.co.uk

New exhibitors tuck in at the January Furniture Show

A trio of bed brands have confirmed their attendance at the 2016 January Furniture Show.

Family-owned business Bodyease and Sareer Furniture, Dewsbury-based Highgate Beds and one of the leading suppliers of upholstered bedsteads and chairs to the UK contract and retail sector, Kaydian, are the latest names to confirm their attendance at one of the furniture industry's biggest shows of the year. All three companies will be based in the expanded Hall 5 in 2016.

Laraine Janes, co-director of the January Furniture Show, says: "We're delighted to have three more big bed brands sign up for the show. They are a great addition to Hall 5, which will also be supported by a National Bed Federation-themed cafe area."

PHOTOS COURTESY OF JANUARY FURNITURE SHOW

New exhibitors have been confirmed for the show

The four-day show, which attracts some 450 retailers, interior designers, contract buyers, architects and developers, will feature British and international furniture brands. 2016's show will also feature an all-new Fabric Pavilion and Flooring Showcase. Other big names at the show will include Vogue Beds, Rauch, Sherborne, Baker Furniture, Alstons, Whitemeadow, Alfrank Designs, Buoyant, Skovby, Collins & Hayes, Furnico, Duresta and Ercol.

Contact: January Furniture Show
Web: www.januaryfurnitureshow.com

Reader letter

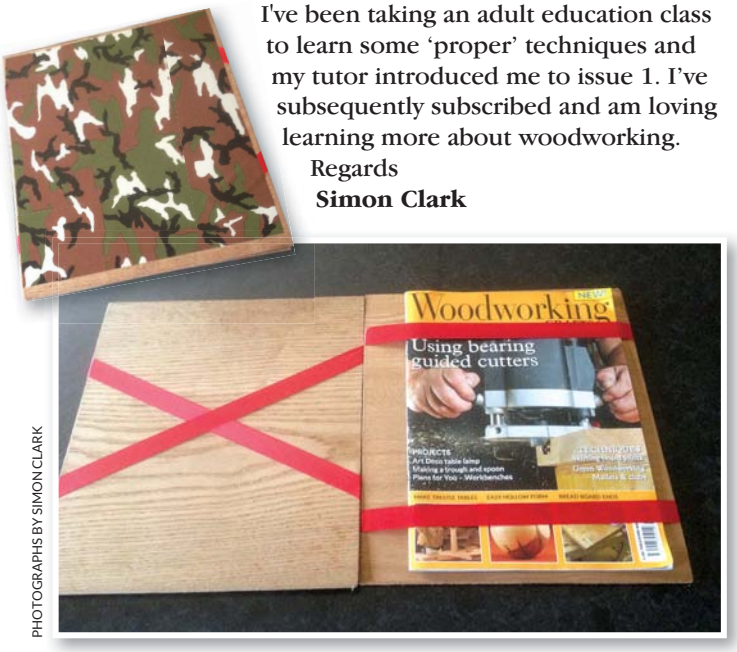
Hi,

I wanted to share my budget version of the magic wallet featured in the October issue of *Woodworking Crafts*. I was reminded of the mechanism as my Grandma used to have a purse like that. I needed something to stop papers getting bent when making resources at home to use with my class at school. I've used recycled plywood from an old drawer that I then stained and used low-tech sticky back plastic to hide the ribbon on the outside so the folder wasn't too thick.

I've always made things out of wood, but since January I've been taking an adult education class to learn some 'proper' techniques and my tutor introduced me to issue 1. I've subsequently subscribed and am loving learning more about woodworking.

Regards

Simon Clark



PHOTOGRAPHS BY SIMON CLARK

Woodworking Shows 2016

Spring Fair
When: 7–11 February
Where: NEC Birmingham, UK
Web: www.springfair.com

Ten Turners Turning
When: 11–12 March
Where: Bermuda Trade Park, Nuneaton, Warwickshire, UK
Web: www.axminster.co.uk

The Midlands Woodworking and Power Tool Show
When: 18–19 March
Where: Newark Showground, Nottingham, UK
Web: www.nelton.co.uk

Yandles Woodworking Show
When: 8–9 April
Where: Hurst Works, Hurst, Martock, Somerset, UK
Web: www.yandles.co.uk

West's Woodfair
When: 25–26 June
Where: East Dean, Nr. Chichester, West Sussex, UK
Web: www.westswoodfair.co.uk

The London Design Festival
When: 17–25 September
Where: London, UK
Web: www.londondesignfestival.com

100% Design
When: 21–24 September
Where: Olympia London
Web: www.100percentdesign.co.uk

W16 Joinery & Furniture Manufacturing Show
When: 2–5 October
Where: NEC Birmingham UK
Web: www.wexhibition.co.uk

Wizardry in Wood
When: 12–15 October
Where: Carpenters' Hall Throgmorton Avenue London, UK
Web: www.turnersco.com

Exciting new leather design competition for students

At our annual Young Furniture Makers exhibition last week Colin Wade, Managing Director of leather manufacturer Andrew Muirhead & Son, launched the Muirhead Leather Design Competition for students.

The winning student will be given the unique opportunity to gain valuable experience within real furniture businesses, receiving a three-week work placement at Muirhead in Glasgow; an additional work placement at a furniture company; plus a £1,000 cash prize. There will be up to two runner-up prizes of £500.

Part of the Scottish Leather Group, a privately owned company with five specialist subsidiaries aiming to achieve the highest standards of quality and innovation, Andrew Muirhead & Son has been at the forefront of leather manufacturing since 1840. Over the last 175 years, Muirhead has supplied leather for many high profile projects including the Houses of Parliament, Burj Al Arab and the Boeing 307 Stratoliner.

Today it is the UK's only upholstery leather manufacturer and the market leader in the global aviation industry. Its high performance, low carbon leather is supplied to airline, coach, rail, marine, automotive aftermarket and furniture industries across 60 countries.

Muirhead has developed the ground-breaking capability to print high resolution digital images onto leather and is inviting UK furnishing students to submit designs for an upholstered piece of furniture using this technology while also being sympathetic to the quality and appeal of leather.

Colin Wade said: "There is such a wealth of young talent out there in our colleges and universities. We're excited about seeing which students can create the most innovative and potentially iconic use of printed design on leather.

"We're keen to see them push the boundaries of what this exciting new technology – and leather – can do."

Applications are accepted from students who are over 18 and in full time education at any college or university that is registered for the competition. The competition is open until 31 January 2016. Entries will be judged early in 2016 by industry experts including

David Dewing, Master of The Furniture Makers' Company Colin Wade, Managing Director of Muirhead Leather Charles Vernon, Chairman of the Training & Education Committee Rupert Senior, Chairman of the Guild Mark Committee Senior Design Academic Trevor Keeble. The winner will be announced during Clerkenwell Design Week in London, in May 2016.

Contact: Andrew Muirhead & Son
Web: www.muirhead.co.uk

Muirhead®
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Young Furniture Makers
furnishing the future

WOODWORKING IN THE NEWS

The Fishing Hut

Niall McLaughlin Architects won the Arnold Laver Gold Award and Private Winner 2015, at the Wood Awards 2015. Made from European Oak from France, and Douglas Fir from Southern England, the hut sits in Hampshire, England providing shelter for some of the best fly-fishing in the UK. The Architect's client wanted a place to store boats and fishing equipment that would be secure but also function as a meeting place for anglers. The structure can be fully opened up, maximising the views of the lake.

The building is supported on 18 pad foundations formed from precast concrete drainage rings placed on the lakebed at 1.8m centres and filled with concrete. Nine galvanized steel goalpost frames are fixed to the pad foundations supporting the timber floor structure and glulam oak superstructure. The roof is made of softwood rafters, clad internally with oak boards and externally with profiled aluminium sheeting on larch battens. The building's structure organises its plan into ten bays of 1.8m. A pair of bays at each end form open decks, partly covered by the overhanging pitched roof.

Niall McLaughlin Architects' The Fishing Hut

PHOTOGRAPH COURTESY OF THE WOOD AWARDS

Contact: The Wood Awards
Web: www.woodawards.com

BOOK REVIEWS

We review three books for you to enjoy

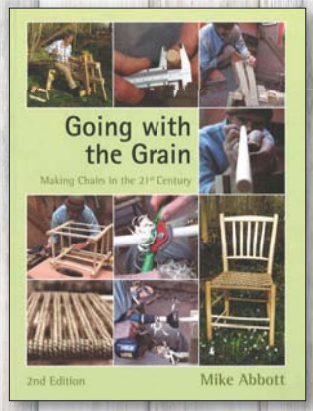
Big Book of Scroll Saw Puzzles
by Tony and June Burns

ISBN: 9781565238596
Price: £12.99
Web: www.gmcpubs.com

This colourful, picture-led book provides a slightly easier set of puzzles to solve, but it's no less fun for that. It will help the reader to scroll entertaining puzzles that will delight everyone who sees them. Inside are more than 75 ready-to-cut patterns for making entertaining, beautiful, original and lasting puzzles. Ordinary wood and a scroll saw are all you need to get started.

Each freestanding design features several interlocking cuts, and is made up of only a few pieces. Step-by-step instructions at the front of the book, together with expert tips on tools, materials, preparation, staining, and painting, promise to have you making puzzles like a professional in just a few hours. The book is then divided into projects, which are picture-led with diagrams and colours to copy. Designs include festive snowmen and santas, but there are also leprechauns and jack-o-lanterns as well as a fabulous Noah's Ark, grazing horses, soaring eagles and travelling elephants. The puzzles certainly reflect the woodworking and arts backgrounds of authors Tony and June Burns.

Going with the Grain: Making Chairs in the 21st Century
By Mike Abbott



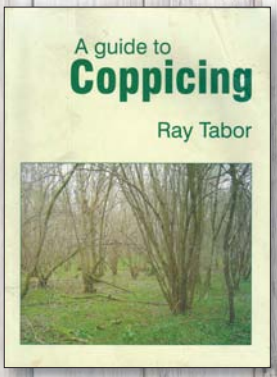
ISBN: 9780954234577
Price: £15
Web: www.living-wood.co.uk

Recently, green woodworking has been capturing people's imagination with a real upsurge of interest in bodging crafts, pole lathe turning, chair making and spoon carving. So I was keen to review a book that promises to teach me how to make a traditional chair. When I saw that it was by Mike Abbott I was even more keen! Mike is one of the UK's leading green woodworkers, with 30 years chair-making experience and was featured in the BBC's 2009 Mastercrafts series.

The blurb on the back of the book says that this is not a book for cabinet makers, although they are welcome to read it. This is true as the book is accessible to everyone who has the dream of making a chair, even without any prior experience.

Mike starts by clearly explaining green woodworking principles and tools. He then provides a very well illustrated step-by-step guide about how to build some essential green woodworking kit, the shave horse and chair makers bench. Both are quickly made with building grade timber, a cordless screwdriver, screws, bolts and a sash clamp.

A Guide to Coppicing
by Ray Tabor

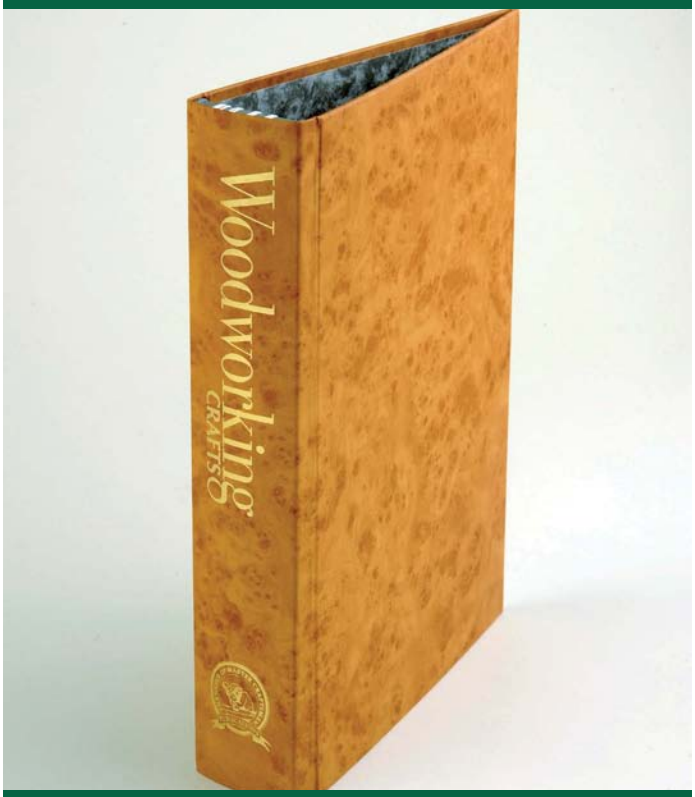


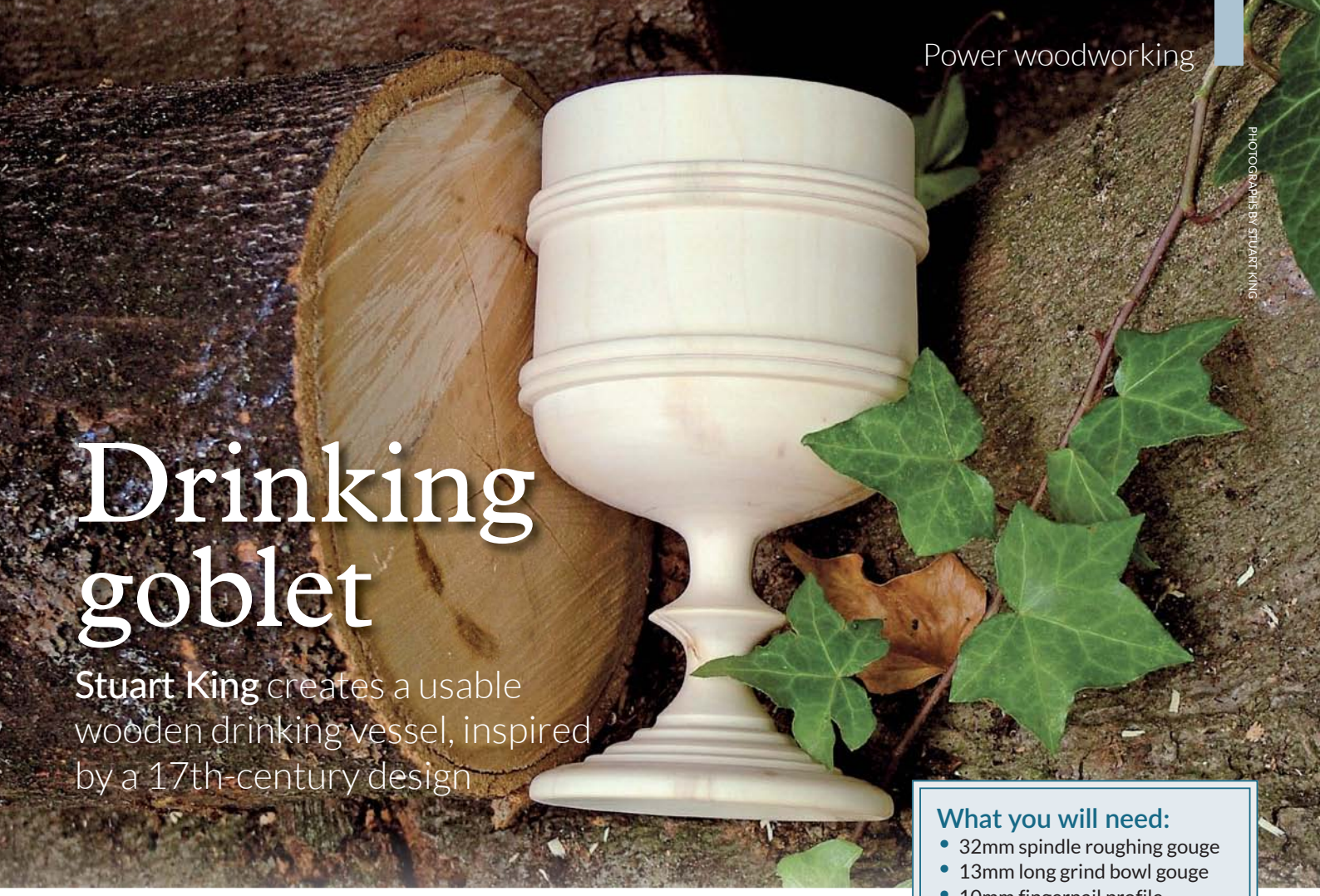
ISBN: 9781899233212
Price: £5
Web: www.eco-logicbooks.com

Ray Tabor approaches his coppicing guidance very much from a conservationist's perspective. Before settling in to how it's done he explains how he became interested and some history, sustainability and biodiversity detail involved with coppicing.

Sound advice about safety issues, particularly when coppicing with hand tools starts the ball rolling. I think a 'key points' list would have been very useful for those setting out as beginners. Adequate basic details are given for axes and the other hand tools involved.

The process of coppicing is explained simply but well. Stage-by-stage the process is laid out in what should be easy-to-follow steps. Explanations are clear and helpful. By following the stages laid out it should be possible to have a good result and have a clear understanding of the process. There are suggestions for those running a working party in true conservation style.





PHOTOGRAPHS BY STUART KING

Drinking goblet

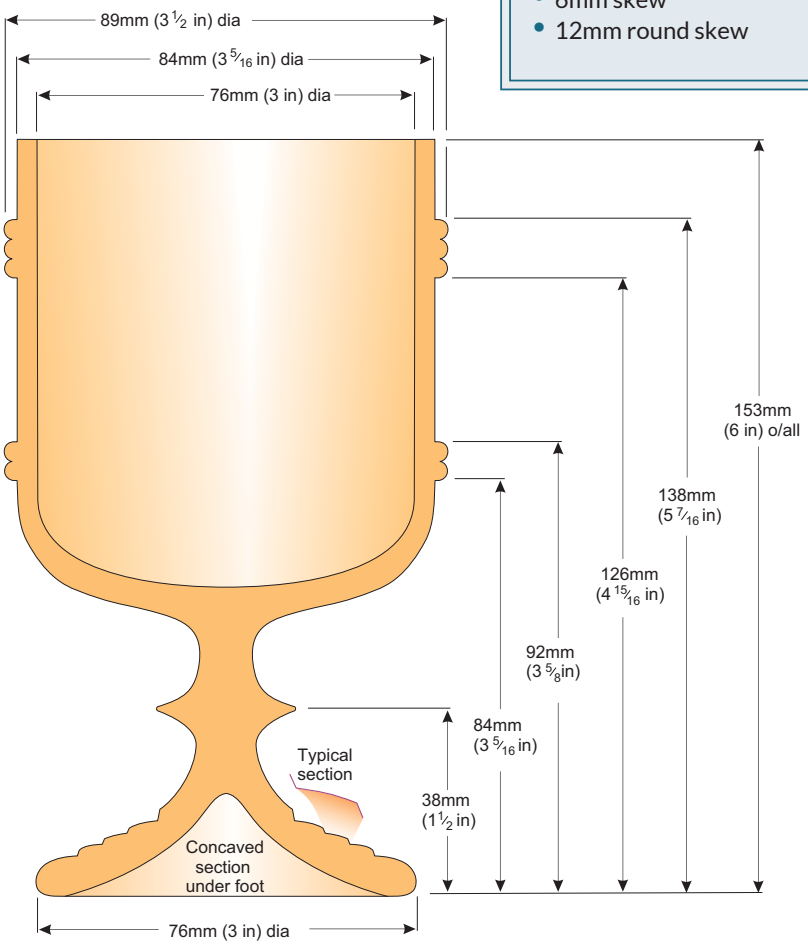
Stuart King creates a usable wooden drinking vessel, inspired by a 17th-century design

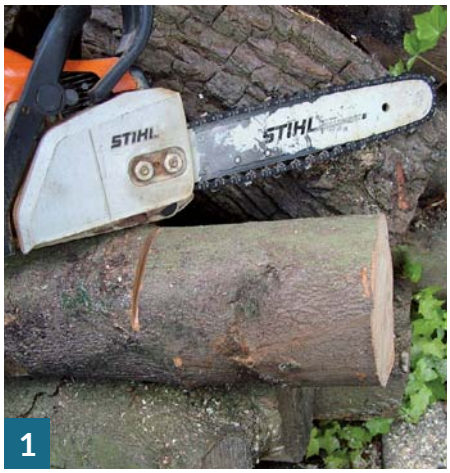
What you will need:

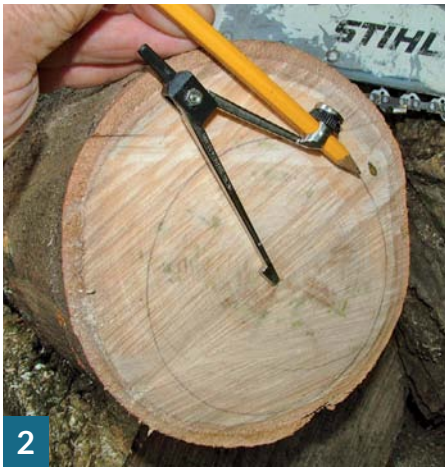
- 32mm spindle roughing gouge
- 13mm long grind bowl gouge
- 10mm fingernail profile
- 10mm spindle roughing gouge
- Round-nose scraper
- 6mm skew
- 12mm round skew

It might be silver, it may be ceramic and it could be cow horn or wood. Status and the state of technology, plus the availability of materials at any given historical period, have all influenced what we drink from. Later Saxons and the Vikings were happy to imbibe from turned wooden vessels. The use of wood remained commonplace for more than 1,000 years until it was superseded, first by pewter and then by ceramic and glass. There are no great difficulties in completing this project, and you gain the added bonus in that if you drop it, it will not break. I have turned a number of drinking vessels over the years, from wine goblets to wassail bowls, all to be used.

Close-grained field maple (*Acer campestre*) was a preferred choice in medieval times both for its appearance and liquid holding qualities. My choice for this goblet is based upon a 17th-century example and is turned from sycamore (*Acer pseudoplatanus*). This is inert, will not taint foodstuff and is easily obtainable. In fact it is a bit of a weed in some areas. Timbers to avoid if intended for domestic use would be those with high tannin content, such as oak (*Quercus robur*), sweet chestnut (*Castanea sativa*) and walnut (*Juglans regia*). ➤







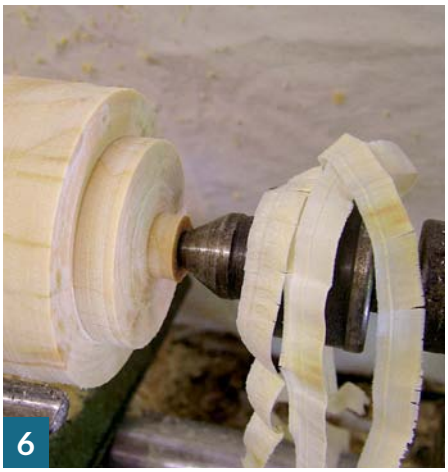
1 This sycamore log was in this woodpile for about three months, had evidence of slight spalting and was still green.

2 It is essential that the pith line travels through the centre of the vessel, if not the turning may develop a 'lean' during drying. The pith is off centre; this would mean that initially turning this log in the lathe would be slow and problematical. The waste wood needed to be removed before turning.

3 Remove loose bark with a chisel...

4 ... and the excess wood using a side axe.

5 With the wood mounted in the lathe use a 32mm roughing gouge to reduce the trimmed log to a cylinder. Note that the tool handle is held against the body for maximum control and stability. By the way, the sheeting behind the lathe is there to aid close-up photography; normally it would be removed to allow the dust extractor to function.



6 A spigot is required to enable the blank...

7 ... to be mounted in the Axminster 'gripper' jaws.

8 Support the other end with the tailstock.

9 With the gouge held at a slight angle to the left or the right a reasonably clean skew cut can be achieved if the tool is ground with a longish bevel.


10


11

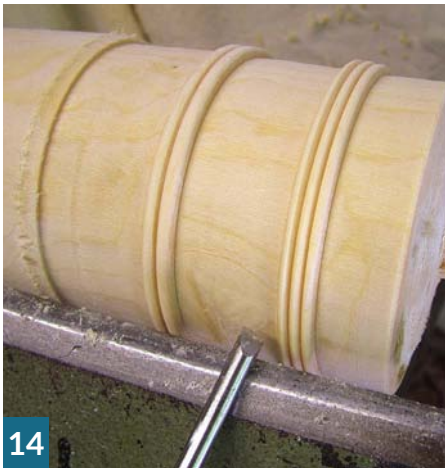

12

10 Using a pencil, the position of the two beads and the length of the goblet bowl are marked.

11 The long point of a 12mm skew incises a cut at the pencil marks.

12 A 10mm spindle roughing gouge removes waste wood between the proposed decoration.


13


14

13 A 6mm skew is ideal for getting into the corners that other tools cannot reach.

14 Beads can be 'rolled-over' with the same tool.


15


16

15 With the tailstock support removed, hollowing out is initially started using a 10mm spindle gouge with a fingernail grind and held with the flute pointing between 9 and 10 o'clock for a pull cut, cutting from the inside towards the outside.

16 The 12mm long grind bowl gouge is used to complete the hollowing process, starting from the inside, going towards the outside with the flute facing the turner. A final finish is achieved using a Hamlet round-nosed scraper held at approximately 45° to achieve a clean shear cut. Apply sandpaper to complete the interior.


17


18

17 With a pencil, mark the depth of interior on the outside. This enables an appropriate amount of wood to be allowed for when shaping the underneath of the bowl. Using the 6mm skew, begin the under-cut.

18 A standard 6mm spindle roughing gouge is ideal for shaping the bottom of the goblet bowl... ➤

19 ... and for removing waste wood from the stem portion and defining the complete stem section.

20 Cut small hollows into the end grain base using the 6mm fingernail profile spindle gouge to give a fluted appearance to the foot.

21 Use the 6mm skew to part off. The base is under-cut and turned thin to reduce the chance of the foot splitting. Remove enough waste to ensure a good view of the proceedings and to avoid any chance of the tool jamming.

22 A parting of the ways; note how central the pith is.

23 It's possible, with care, to quick-dry the piece in a microwave, or hang the goblet up in the workshop to allow the air to circulate around. Two weeks should be enough in summer but allow longer in winter.

24 If liquid is poured into the dried vessel it will seep through the porous end grain fibres. Timbers such as boxwood (*Cornus florida*) and field maple (*Acer saccharum*) are dense enough not to need sealing. For this goblet I used a 100% natural product – beeswax.

25 Shave flakes of solid beeswax from a solid block and drop into the goblet. Melt the wax with a hair dryer or similar heat source so that it runs very thinly into the end grain. It is not essential to coat the side grain, although one can. After saturation, and while still runny, take a paper towel and wipe away the excess. You can put the goblet in with the normal washing up. Please note that red wine will stain.

26 Drinking from a turned wooden goblet can be very satisfying, particularly if you are the maker. ■


19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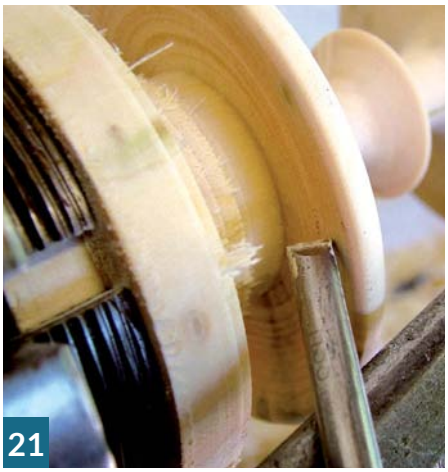
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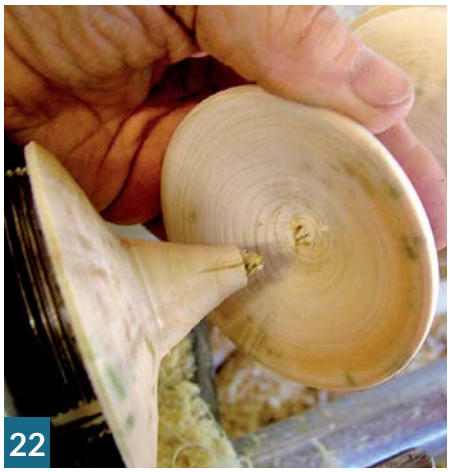
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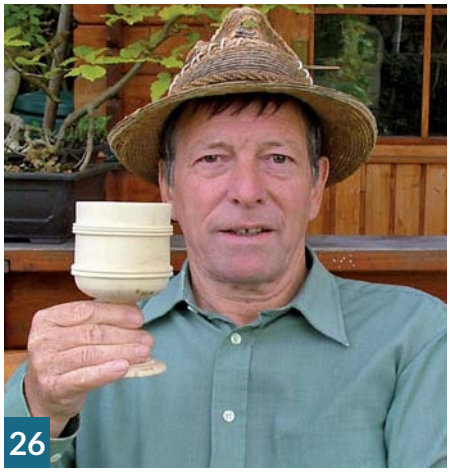
26

Stuart King

Stuart King has been a practitioner and researcher of traditional woodcrafts most of his life. He has lectured, exhibited and demonstrated internationally and has appeared in many TV programmes since the early 1970s.

Web: www.stuartking.co.uk

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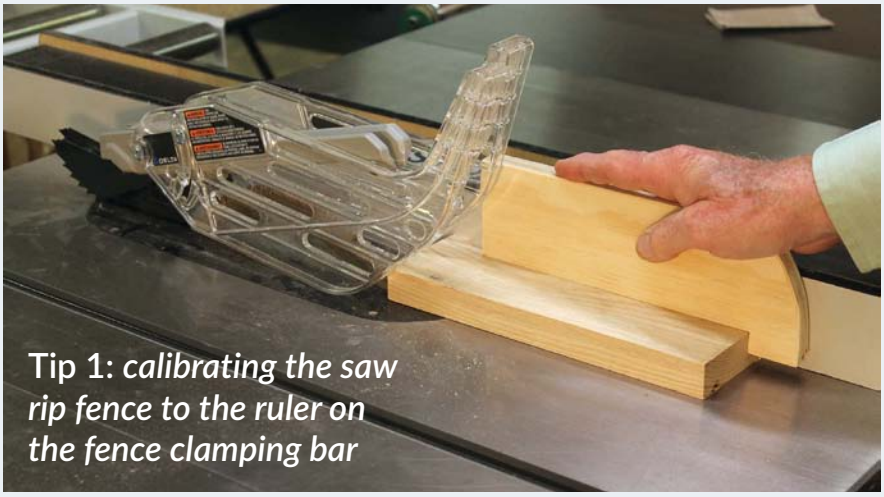
Tablesaw *magic*

Even the best tablesaws can be difficult to set for accurate and reliable cuts. **Jim Duxbury** gives us some handy workshop tricks to make the job easier

Recently I have become less dependent on making measurements and marking cut lines on boards. They are time-consuming, inaccurate and almost impossible to duplicate. The following three tips are easy to do and inexpensive to make. In fact, for the most part, scrap blocks of hardwood and a little thought yield fantastic results. Note: manufacturers make a variety of configurations of tablesaws so some adaptation may be required.

Health & safety

One of the most frequently used pieces of equipment in my workshop is the tablesaw. It gives me a smooth cut with accuracy, speed and repeatability. However, the tablesaw is also probably one of the most dangerous items in my workshop. Lightning fast accidents can occur. The tips shown here are designed to be used with a full blade guard and riving knife in place.

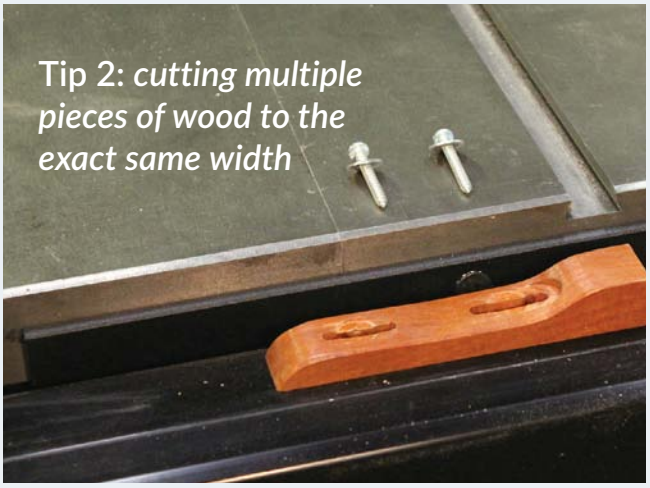


Tip 1: *calibrating the saw rip fence to the ruler on the fence clamping bar*

1. This is simple to do, dependable and yet is seldom done. Begin by setting the fence about 50mm from the blade and clamp it down firmly. Take a block of wood that has been jointed on one long side, put the jointed side against the fence and, with a pushstick, make the cut.

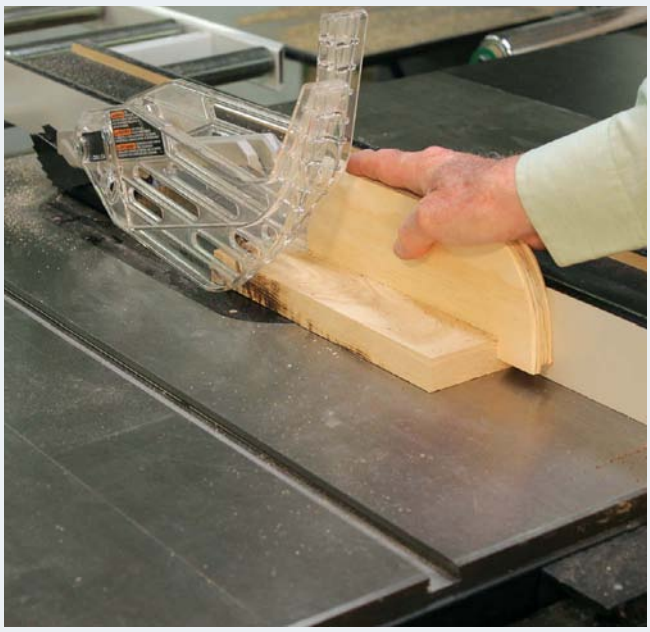
2. Now use callipers to measure the exact width of the piece just cut.

3. Then from this dimension adjust the rip fence gauge to read the same measurement on the clamping bar rule. Lock the fence gauge in place. With this small adjustment you have eliminated measuring from the tip of one tooth to the side of the rip fence and then having to make multiple test cuts to get it perfect. Speed and accuracy improve along with the ability to use other jigs, as you will see later on.



Tip 2: *cutting multiple pieces of wood to the exact same width*

1. Measuring, setting and sneaking up on this cut setting takes time and can be frustrating. A gauge makes this process simple and fast. To make this gauge, I have used a piece of hardwood about 180mm long x 25mm wide and 16mm thick. Be sure the thickness does not make this piece higher than the saw table top as it may be an obstruction in other operations. Now make two slots for the No.12 screws with washers shown lying on the table top. Slots can be made by drilling four end holes about 25mm on centre and sawing out the centres with a scroll or coping saw.



2. Next, take a piece of hardwood scrap jointed on one side and make a cut about 50mm wide. Do NOT move the rip fence. Take the cut piece and place it at the end of the rip fence clamp and hold the new gauge against it. Locate and drill two holes in the clamping bar for the metal screws.

3. Drill the clamping bar and mount the gauge with screws in the middle of the slots. Take the previously cut piece and hold it against the fence bar, bring up the gauge so that it is just snug and tighten the mounting screws. This gauge is now set.

4. To give it a try, move the rip fence away. Take a scrap piece of wood you would like to duplicate the width of, place it against the gauge and bring the ripsaw fence up to it. Lock the fence in place.

5. Take another piece of wood wider than the first and rip it.

6. Two pieces of the exact same width. It's magic! ➤

Tip 3: *accurate cross cutting on the tablesaw using the mitre gauge*

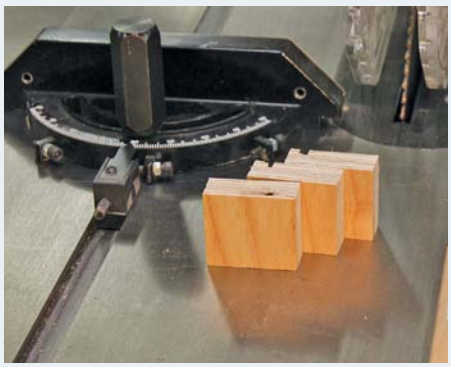
1. Multiple pieces can be cut with the use of this mitre gauge and the rip fence as an end stop, however this requires a space to be left between the end of the board being cut off and the rip fence. This is very important. Without that space the cut off piece can get trapped between the blade and the fence causing the piece to wedge and fly back.

2. To provide for this space, I am using a 100mm spacer. This spacer consists of a piece of hardwood, about 200mm long, cut exactly 100mm wide. Calliper this width to be sure it is exactly 100mm wide, then drill a 6mm hole in the end of the spacer and glue in a short length of dowel. This dowel fits down at the end of the saw table so that the gauge cannot travel towards the blade. The vertical piece and top piece that hooks over the rip fence is optional and has to be custom made to fit the fence configuration. You may just use the 100mm spacer piece and the vertical piece with a clamp securing the gauge to the rip fence. This works fine also but requires another step and a clamp. The important part is the 100mm dimension and the previously calibrated fence setting. When this spacer is completed, install it on the saw rip fence. Now, for example, if you want multiple pieces exactly 48mm long, set the rip fence to 148mm. 100mm + 48mm = 148mm.

3. Next, with the use of the crosscut gauge, make a small cut to square and clean up the end of the board.

4. Then bring the crosscut gauge back…

5. … extend the piece to the new gauge and make a cut. Repeat this to cut a second piece and then as many more as you like.



6. Lay the pieces on their sides and check the length. All exact – with no pencil lines or rulers!

Jim Duxbury

Jim Duxbury, woodturner and inventor, is the kind of guy who thinks and creates 'out of the box'. His turnings are unique and he seldom turns the same thing twice. With the help of his pet parrotlet, 'Bean', creativity abounds – a variety of fine turnings are made from small bottle stoppers to lattice-cut bowls, trays, furniture, kaleidoscopes, wooden hats, pens and even a working Foucault Pendulum.
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PHOTOGRAPHS BY LOUISE BIGGS

Victorian dining chairs

Louise Biggs is sitting comfortably after bringing back to life a pair of much-loved but worn-out chairs

Dating from the early part of the 19th century, these chairs were brought to me exhibiting ailments typical of chairs of a similar age. They were much loved by my client, however, who requested that they be restored before the damage became irreparable. They were well made with upholstered drop-in seats. ➤

Assessment

- Both chair frames have loose joints.
- On one chair, half the cross stretcher has insect damage where it joins the back leg.
- There is not sufficient solid timber to insert a peg to form the end of the stretcher.

Both chairs have loose joints

- A new back half of stretcher rail will be turned from old timber joining into the square central block and the back leg.
- The drop-in seats will probably not fit properly once the chairs' joints are all re-glued. The upholstery will be peeled back as required, the frames planed down and the upholstery reinstated.

Throughout the course of the restoration animal/hide glue will be used for re-gluing. Some knowledge of woodturning and upholstery is useful but if you are not acquainted with woodturning or upholstery – or lack the tools – there are professionals who will turn the spindle and adjust the upholstery.

There is evidence of insect damage on one of the chairs

What you will need

- Chisels – various widths
- Hammer
- Mallet
- Sash clamps
- G clamps
- Dovetail saw
- Drill and drill bit
- Rule
- Table saw
- Plane
- Spindle roughing gouge
- Beading/parting tool
- Skew chisel
- Ring centres
- Vernier calipers
- Pencil brush
- Small polish mop
- Polishing rubber
- 0000 wire wool
- Staple remover
- Upholstery regulator
- Staple gun or upholstery hammer
- Staples or upholstery tack


1


2


3


4


5


6


7

STAGES OF RESTORATION

1 Remove the corner blocks within each seat frame. In most cases a chisel lined up on the joint line and a swift tap with a mallet will free the blocks, mark each block and their positions on the chair.

2 With the glue blocks removed, the rails and legs of each chair were marked so that each section would go back in the same place to the same chair. Write on low-tac masking tape before placing it on the chairs as the pressure of the pen/pencil can mark the wood under the tape. Place the tape on the inside faces of the rails etc, where possible, so as not to disturb the polished surface.

3 The chair frames can now be knocked apart. I use a block of soft timber so as not to hammer directly on the chair parts themselves. Start by knocking out the side rails to separate the front and back frames; this also allows the cross stretchers to be safely removed.

4 The back and front frames can then be knocked apart. Once all the joints have been separated, clean up all the old glue. Most will chip away quite easily with a chisel but any stubborn parts can be helped by brushing hot water over the glue which should soften it enough to be removed without causing any further damage.

5 The front and back frames can then be re-glued using animal/hide glue. I used sash clamps with protective blocks. Once clamped, I checked the diagonals of the frames to make sure they are square.

Turning the new spindle

6 Next, the new spindle for the cross stretcher rail needs to be turned. Having separated the two halves of the cross stretcher the damaged part can be cut off of the square central block just on the back edge of the bead using a dovetail saw. Its adjacent rail will be used as the pattern.

7 A suitable piece of old timber was found, lighter in colour but with a very similar grain pattern. A square section, larger than the stretcher rail, was cut longer than required to allow for mounting in the lathe and turning a dowel on the bead end to

form the necessary joint. Mount on the lathe between ring centres and turn the section down to a round using a spindle roughing gouge, keeping the bevel rubbing at all times. I worked down to either end of the spindle from the centre until the diameter was slightly larger than the bead. Ring centres will give a bit more support without the risk of the spindle splitting.

8 On the spindle mark the length of stretcher rail from the bead, at the headstock end, to the end. Using a Vernier gauge or calipers, set the gauge to the diameter at the end of the stretcher rail where it joins the leg; this will be denoted by a line where the polishing finishes and the glued area starts. In preference keep this diameter slightly larger rather than small, it can always be eased down when it comes to be fitted. With the bevel rubbing use a beading/parting tool to turn the spindle down to the required diameter on the waste side of the line.

9 The diameter is checked frequently with the gauge until it is turned down to the required diameter. Stop the lathe each time to eliminate the risk of any injuries should the Vernier gauge catch.

10 At the beaded end of the spindle reduce the diameter slightly on the waste side of the line, using the beading/parting tool, to allow enough clearance to form the bead properly and mark the width of the bead. I'll come back to the bead at a later stage.

11 Set the Vernier gauge to the diameter directly behind the bead. Using the beading/parting tool, a narrow band – twice the width of the tool – is turned down to the correct size. Keep checking all the time against the gauge.

12 Once the diameters are set at these two points either end of the spindle, use the spindle roughing gouge to taper the spindle down. Start from the beaded end and work down to the leg end so that you are cutting downhill all the time. This will help to prevent tearing the grain.

13 Close to finishing the taper I changed to a skew chisel and made a planning cut. Adjust the tool-rest height to ensure you rub the bevel while staying within the bottom half of the cutting edge to prevent a catch, generally with the heel or short point down. This will help to finish the taper straight while reducing the final taper down to the reference points either end.


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14 To form the bead use the skew chisel with the heel, or short point, down. I marked the centre of the bead and with the tip of the cutting edge I rolled the skew chisel from the centre line down to the tapered section on the right-hand side and then repeated the moves rolling to the left to achieve an even shape to the bead.

15 Finish the spindle with abrasives, going through the grits. With each grit, sand the spindle going with the grain and with the lathe stationary. Finally, using the beading/parting tool I turned down the beaded end to form a dowel of a suitable size to match a drill bit to enable the spindle to be fitted to the central square block. ➤


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16 Find the centre of the square block and drill a hole to the size of the dowel. The spindle was glued into the block and twisted back and forth to create a rub joint. For extra security, until the glue has set, tape the two together with masking tape.

Back to the main restoration

17 Dry fit the two parts of the cross stretcher together and trial fit the remainder of the chair together. Using some waste timber create some clamping blocks to protect the front legs and support the clamps. Adjust the fit of the new spindle into the back leg until the chair pulls together correctly. The back and front frames can then be glued together with the side rails and cross stretchers and clamped with sash clamps.

18 The repairs were cleaned up using chisels and abrasives and the areas were then stained to match. Once dry the repairs were sealed with shellac and built up with a couple of coats of French polish. Where any additional colouring out is required I use a mix of red and black polish with earth pigments to adjust the basic colour mix. Applied with a fine pencil brush small areas of colour can be added to the overall tone of the wood.

19 With the replaced stretcher spindle, stain the new wood, allow to dry and then seal with shellac. If required the section can be grain filled and then polished up – for more instructions on polishing please refer to Louise Biggs' article in *Woodworking Crafts*, issue 4. Any additional colour can then be added as in the previous stage.

20 I continued to body up the polish until the new spindle matched the remainder of the stretchers and blended with the leg.

21 The drop-in seats were too tight a fit once all the joints had been re-glued. The layers of material and stuffing were carefully peeled back to reveal the seat frame. I covered the upholstery and planed the frame – check for old upholstery tacks and nails and remove in case you wreck your plane blade – before wrapping the upholstery back around the frame and checking the fit of the seat. The upholstery layers can then be replaced, using staples or upholstery tacks. Fold the corners using a regulator in order to follow the original creases within the materials.

22 With the drop-in seats fitting correctly the pressure the seat frame puts on the joints of the chair frame is removed. The chairs were ready to go home to be enjoyed and used for many more years. ■


22

Louise Biggs

Having completed her City and Guilds, Louise trained for a further four years at the London College of Furniture.
She joined a London firm working for the top antique dealers and interior designers in London, before starting her own business designing and making bespoke furniture and restoring furniture.
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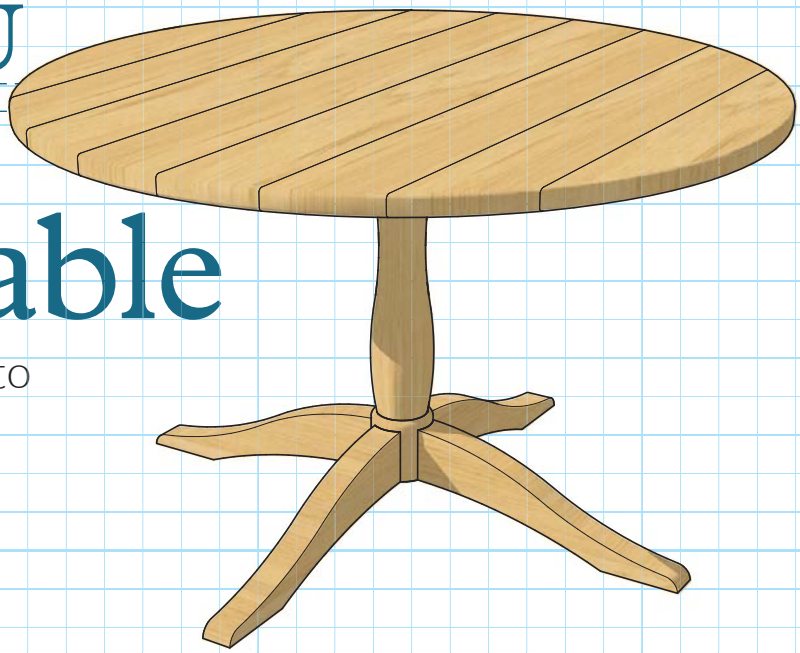
PLANS 4 YOU

Pedestal table

Simon Rodway shows you to how to make your very own pedestal table



CUTTING LIST

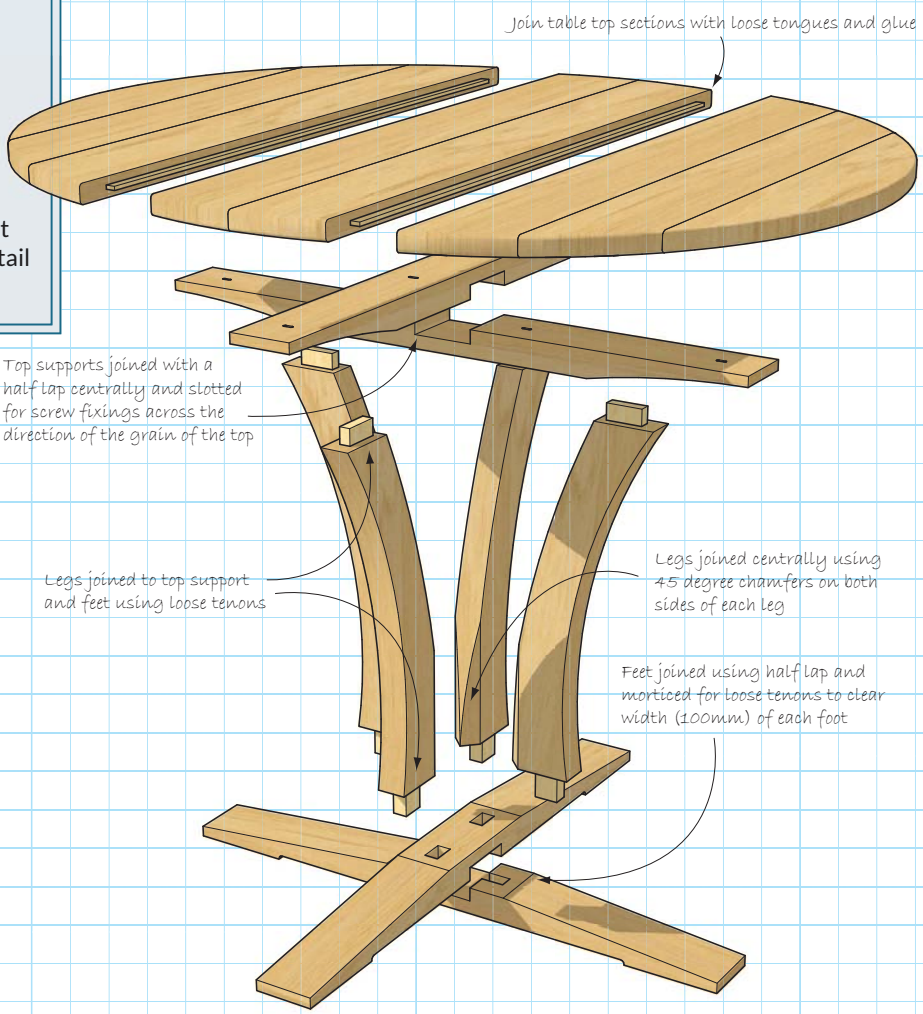
Shaped leg version

Top	1 @ 1,150 x 30
Top supports	2 @ 1,010 x 100 x 45
Legs	4 @ Ex 660 x 150 x 48
Feet	2 @ 1,010 x 100 x 55

Turned column version

Top	1 @ 1,150 x 30
Top supports	2 @ 1,010 x 100 x 45
Central column	1 @ 642 x 100
Feet	4 @ 480 x 160 x 48

The top is given as a single component. The feet on the turned version have 25mm sliding dovetail tenons allowed for. No loose tongues listed.



For this project I have designed two versions, one with a central and more traditional column for those readers who would like a chance to express their inner woodturner, and the other with shaped and angled legs but no turned components.

Joints

Although I have focused on the shaped leg variant in the exploded drawing, which has a slightly more complex construction, there is a joint I would like to highlight that you need to use to join the legs to the column in the turned version; namely, the sliding dovetail mortise and tenon. Kevin Ley recommends cutting this joint while the column is still on the lathe, which enables you to use the indexing to turn the piece through 90° exactly for each mortise. He actually made a jig for this purpose, incorporating a fixed stand attached to the lathe, supporting a sliding table to which the router is attached. You can either flatten the curve on either side of the mortice to take the shoulders of the legs, or alternatively create curved shoulders on either side of the dovetail tenon, which is the detail often shown in Shaker tables. I think I know which one I would prefer to work on! You can then use a dovetail router cutter to create the mortices and one final refinement is to angle the dovetail tenon at the top so that it locks into the column vertically as well. This is probably my favourite woodworking joint, because it is so deceptively simple but is doing so many things at once. The column is attached to the top supports or spreaders using a turned spigot 60mm in diameter.

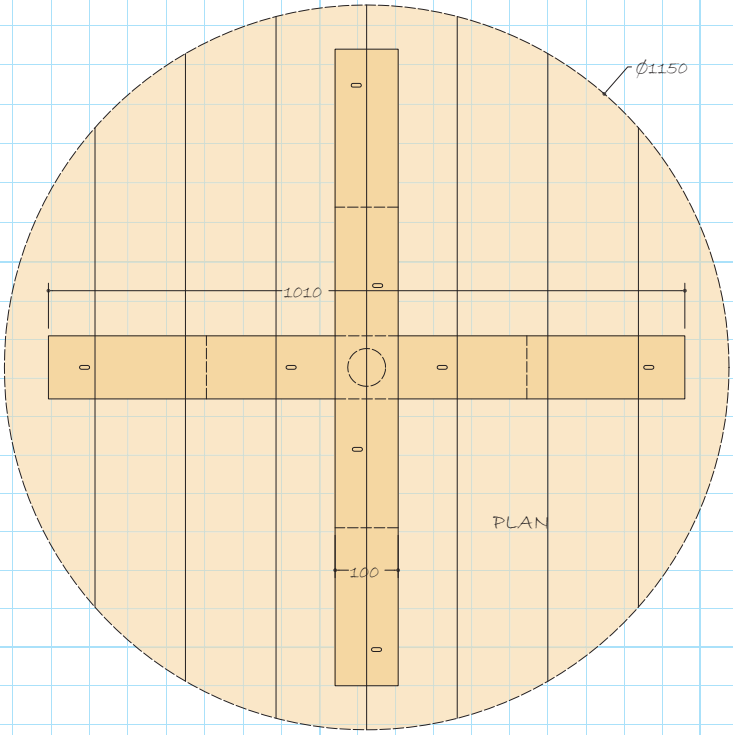
For the shaped leg version, rough

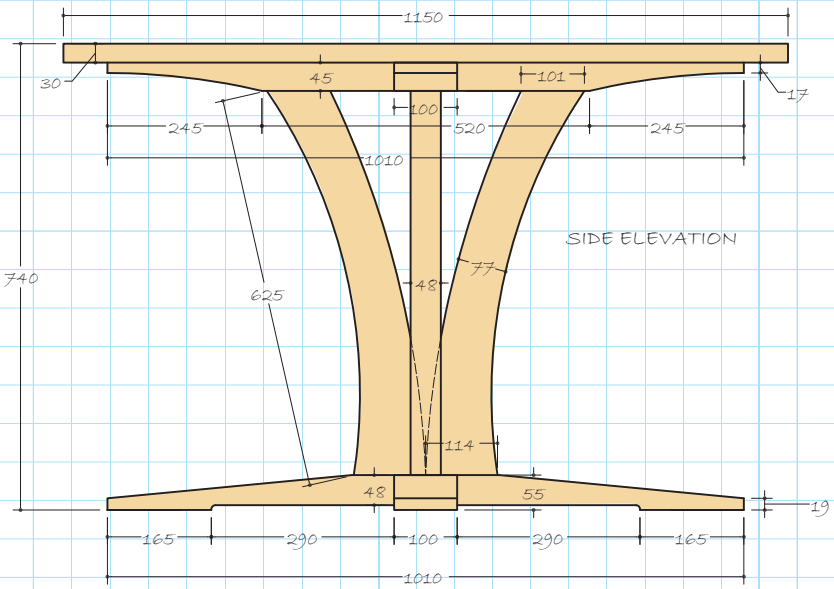
out the outline on the first leg and when you are happy with its appearance, cut out using a bandsaw if possible. You can then use this first leg as a template for the other three. It is actually easier in theory to cut the mortices in the ends of the legs prior to shaping. To give this table its organic or plant-like shape at the base, the legs have to meet using 45° chamfers along the back at the bottom. It is essential here to dry assemble the feet and legs with the loose tenons so that adjustments can be made. These loose tenons need to be robust, say 24mm thick, and you can take them through the feet to the underside and trim when the glue-up is finished. Smaller tenons can be used on the tops of the legs where they join the spreaders or top supports, and you could slightly elongate the mortises in the supports to enable adjustment laterally when it comes to fitting.

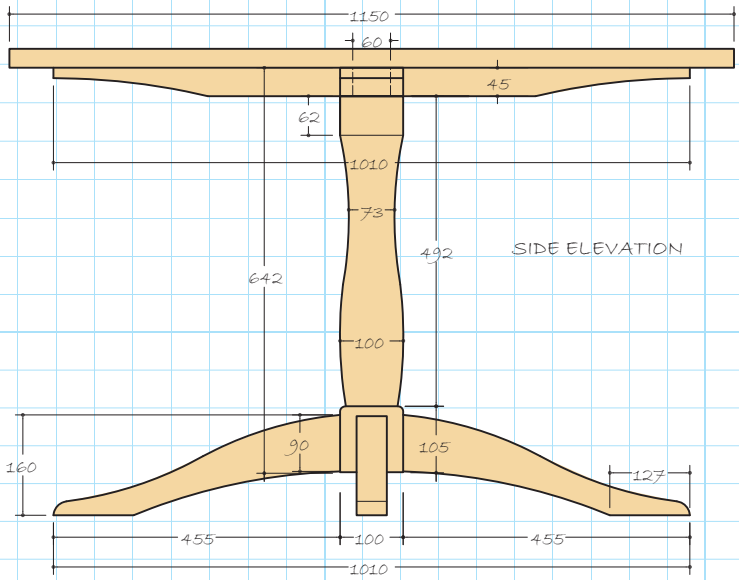
Top and feet

Both the top supports and the feet are joined using a half lap or cross-halving joint and have simple shaping applied, long chamfers on top and a small cut out beneath in the case of the feet, and a curved profile on the ends of the top supports, which reduces the depth at the ends, making them all but invisible except from a fairly low angle. These supports and the top are constructed identically for both table types. Slotted screw holes need to be cut in the top supports across the grain direction of the top to allow movement.

The top is constructed of 30mm sections joined along the edges with either biscuits or loose tongues – it's up to you – and then glued. The top and bottom edges are rounded over using a 6mm cutter, or smaller radius if you prefer. Use some felt pads on the feet if you are using the table on a stone or timber floor. ■







Simon Rodway

Simon Rodway also runs LineMine, a website with articles and online courses on drawing software. A new course, 'SketchUp for Woodworkers', is proving really popular. For details and to get discount coupons, see website details below.

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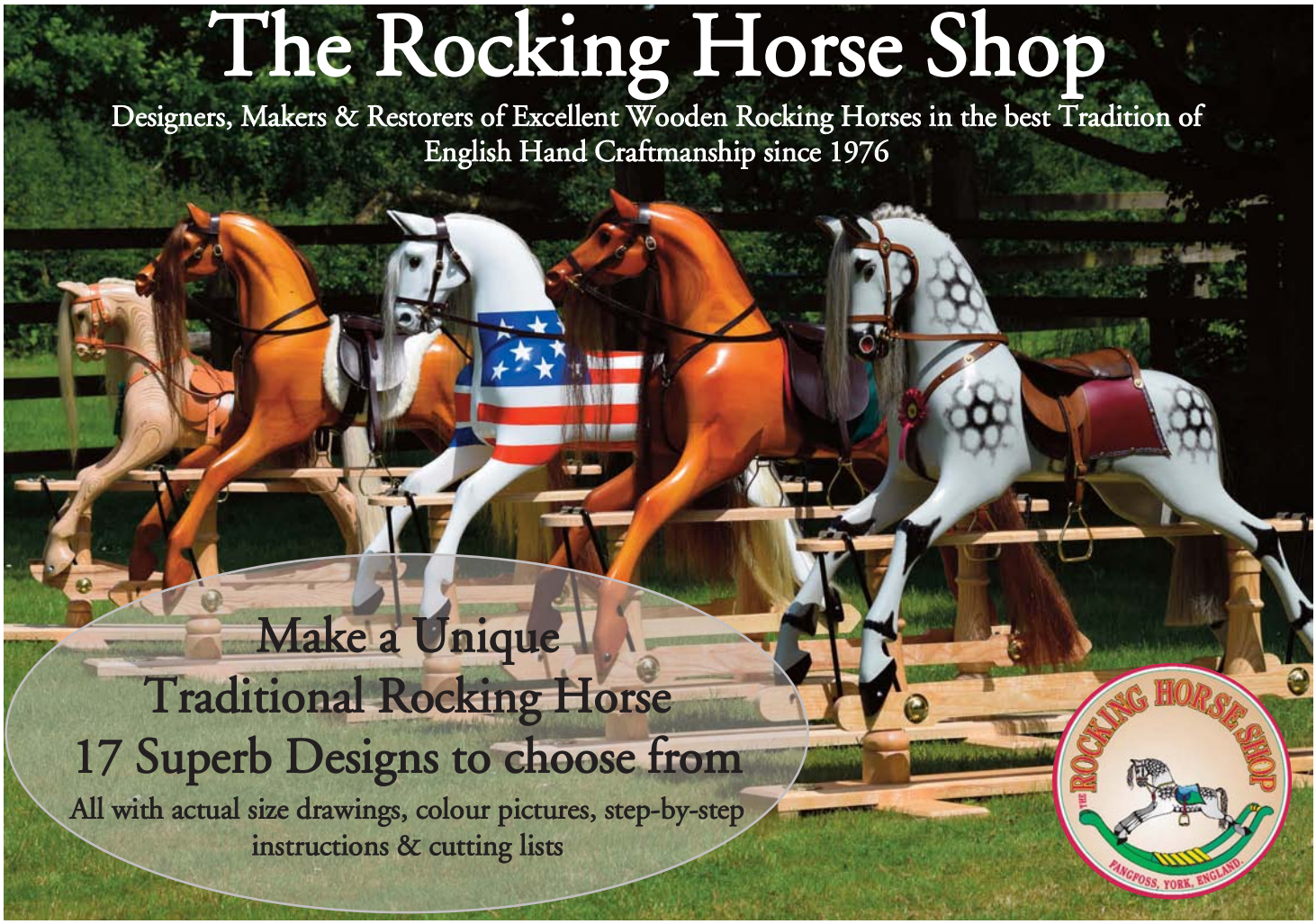

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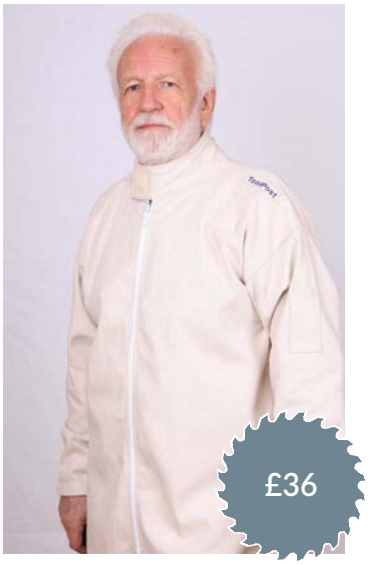

Contact: The ToolPost
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Precision Pro lathe

Although compact, the new Precision Pro lathe is made almost entirely from cast iron with weight and vibration absorbing qualities. The main feature for pen turning is the ER20 collet chuck fitted to the spindle nose. The lathe is supplied with a collet spanner, pen mandrel, 80 and 150mm toolrests and a centre knock-out bar. Accessories are available for purchase as extras and include a light pull drive, polishing mop arbor, ⅜in and ⅝in four prong drive centres, 1½in woodscrew chuck and 2in faceplate. Price valid until 31st December, 2015.

Contact: Axminster
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Makita's new HS7601J 190mm circular saw offers a new compact design, the use of aluminium for the base plate and a die-cast blade guard, which has a reduced weight of 4kg.

Powered by a 1,200w motor and available in 110v and 240v, the new Makita HS7601J will run up to 5,200rpm and has a maximum depth of cut of 66mm at 90° and 46mm at 45°. The compact design of motor housing includes a flat base which increases stability when the blade is being changed. The soft grip handle with trigger controls has the forward grip knob moulded as one for enhanced control and balance.

With low noise and vibration ratings the new HS7601J circular saw will become a tradesman's choice. It is delivered in a sturdy Type 4 MAKPAC case.

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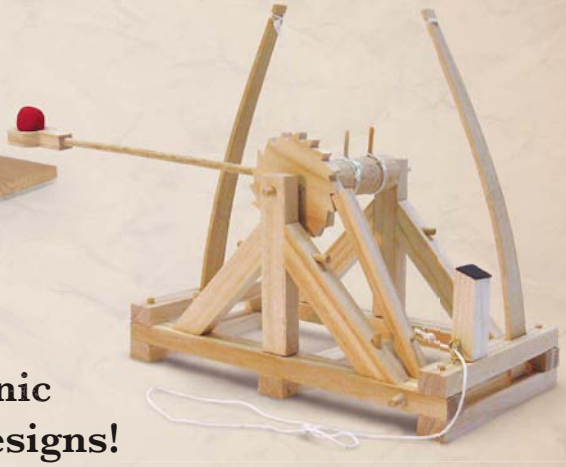

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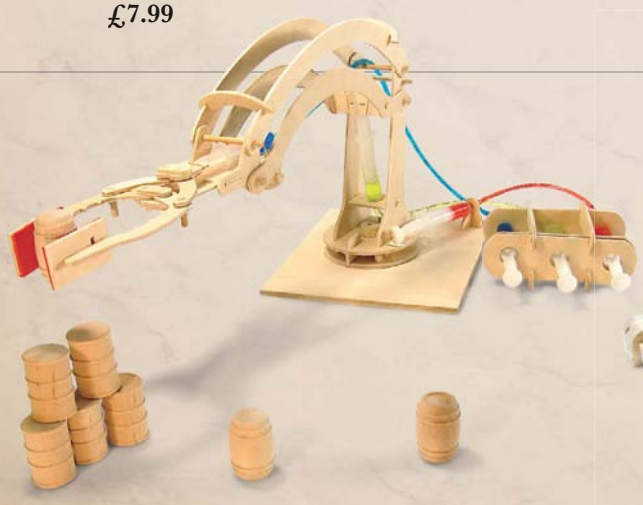

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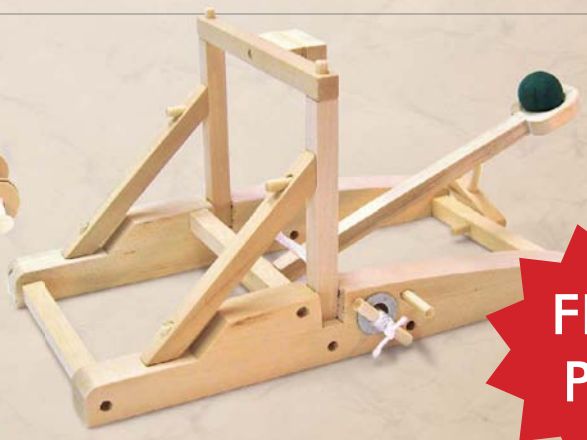

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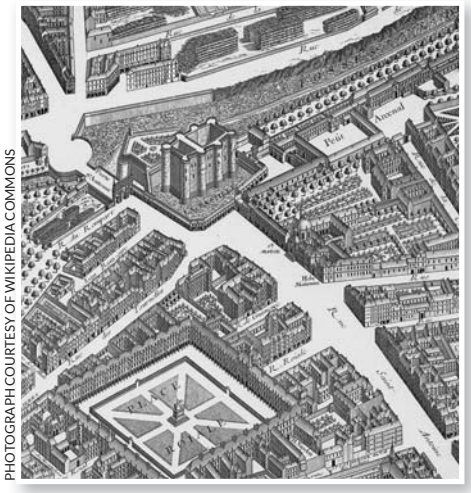
The history of *artisan Paris*

Now that **Amber Bailey** has her own 'pied à terre' in the heart of Paris she has decided to explore its furniture making revolution from the 18th to 21st centuries

As a marquetarian coming up through contemporary design education, more than a year ago I graduated from Buckinghamshire New University in High Wycombe, once the centre of Britain's furniture industry. I have now uprooted and moved across the Channel to France so that I may further my education at the prestigious École Boulle. It was really no surprise to discover that Paris's leading Decorative Arts School sits amongst a wealth of craft-related history.

LE FAUBOURG SAINT-ANTOINE

The renowned road connecting Place de la Nation and Place de la Bastille



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How Porte Saint-Antoine would have looked in 1739

Then

An area most recognisable for its links to the storming of the Bastille at the beginning of the French Revolution in 1789, situated between the 11th and 12th Arrondissements of Paris, Le Faubourg Saint-Antoine is commonly regarded as an important trade and craft district, and has been from as far back as the 12th century.

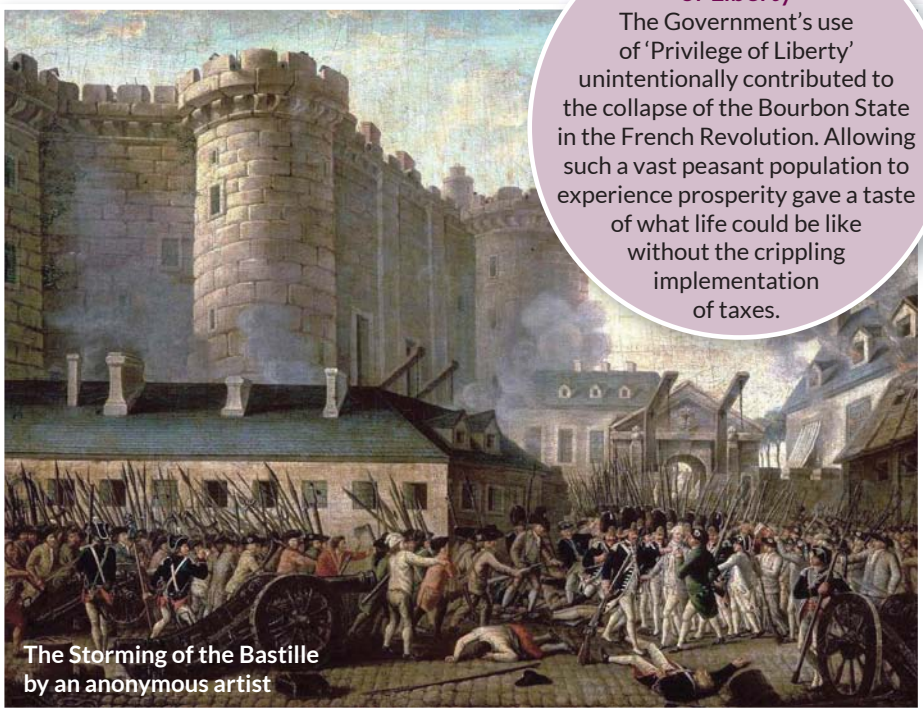
'Faubourg' quite simply means 'outside the wall' or a suburb as Saint-Antoine once was, and like all the other suburbs it was cut off from the inner city of Paris. Its close geographical proximity to the River Seine meant that not only was it a desirable route into the east of the city but it was also advantageous for transporting wood in and out of the suburb by boat.

The area was dominated by artisan craftsmen and the turn of the 18th century saw over 500 carpenters and 400 ébénistes establishing the district's reputation for great craftsmanship; with clientele including the Royal Court for the likes of cabinetmakers André Charles Boulle and Jean Henri Riesener.

Faubourg Saint-Antoine was an incredibly prosperous district for both its flourishing order rates and the decree for 'Privilege of Liberty'. This act meant workers were exempt from tax, in the interest of both welfare and for the freedom of trade. The 'Privilege of Liberty' was resorted to more and more by the State during the unrest of guilds in the 1770s. Guilds were temporarily abolished to build a bridge towards a more just system; this did not last however and by 1776 the guilds were reformed. ➤

The Privilege of Liberty

The Government's use of 'Privilege of Liberty' unintentionally contributed to the collapse of the Bourbon State in the French Revolution. Allowing such a vast peasant population to experience prosperity gave a taste of what life could be like without the crippling implementation of taxes.



The Storming of the Bastille by an anonymous artist

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Further along the River Seine is Paris' most famous landmark, the Eiffel Tower

PHOTOGRAPH COURTESY OF WIKIPEDIA COMMONS

Riesener's Bureau du Roi for King Louis XV

The reformation did not come about without change, guilds no longer had the same level of control of workshops and were finally in a position to amalgamate skills to be able to make and sell a wider range of products. By the end of the 19th century guilds may have dissolved, however the district remained united by the traditions and subsistence needs of the crafts.

The most interesting transformation that took place during the reform of the guilds were the rights given to women. After 1777, a widower could obtain permanent authorisation to maintain her husband's business.

The rights of women

Women were recognised as a powerful and important workforce and reformed membership allowed women to join. However, recognition as a gender in its entirety did not acknowledge rights to power or authority as individuals.

THE HISTORY OF CRAFT GUILDS

The craft guild system is a medieval concept that related to all trades and crafts. A guild was essentially a professional association that worked under a hierarchical order and in some respects guilds are regarded as a precursor to trade unions. Guild membership was compulsory to be able to work within a craft in most major towns and cities. Traditionally in France, guilds for joinery and cabinetmaking were termed as Corporation Des Menuisiers-Ébénistes.

There are a number of factors that saw the decline and eventual abolishment of guilds worldwide, much of which was to do with the demand for free trade laws. Guilds were essentially divided up between those with affluence and those with nothing, making trade incredibly

PHOTOGRAPH COURTESY OF WIKIPEDIA COMMONS

An 1880s joiner's workshop

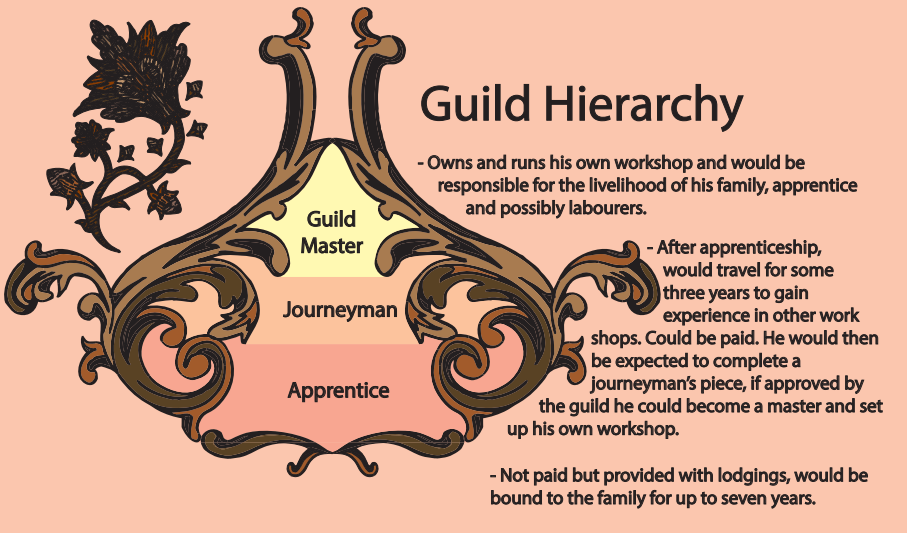
A relaxed scene for the camera in Faubourg Saint Antoine circa 1904

Now

During the 20th century, the number of ateliers began to plummet; small workshops could not compete or thrive, up against industrialisation and standardisation. 'Handmade' became less desirable and styles quickly went in and out of fashion. Although some artisans still remain, the high living costs of Paris make running a workshop fairly unviable. The landscape itself is quite unrecognisable as its former self; much of the area has been reconfigured and redeveloped.

I wonder what the traditional ébénistes would have thought about the furniture being produced today?

Now a tourist hotspot, Rue du Faubourg Saint-Antoine is a world away from how it would have once been



difficult for the common man. It was also argued that being bound to association traditions hindered technological innovation. The further craft moved into industrialisation, the more guilds lost their powers, particularly with patents emerging and often revealing trade secrets.

In some respects, guilds still exist today but not with the same level of control over trade; within most crafts there are non-compulsory professional associations with paid membership that act as a network and accreditors.

Ébénisterie

During its heyday, Faubourg Saint-Antoine was renowned for its production and trade of glass, brewed beer, furnishings and of course its pre-eminence in woodwork, with ébénistes leading the way.

Ébénistes, were named such for the use of rich materials such as ébène – ebony. Following guild regulations, these furniture makers specialised only in veneered case furniture and were generally regarded as the most skilled of all furniture makers. Ébéniste is a term still used in contemporary French workshops. Some of the finest ébénistes could be found at the officially titled Manufacture Royale des Meubles de la Couronne; the Gobelins Manufactory was the Royal Factory of Furniture to the Crown, or at the Louvre – now Musée du Louvre or Louvre Museum – during the late 1600s for Louis XIV.

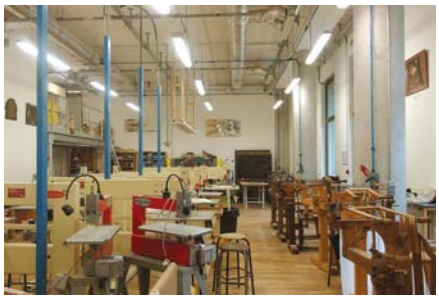
The Gobelins Manufactory is situated close to the craft district, being just one arrondissement away and is now open as a museum

The Louvre Museum is still home to a workshop used for the conservation of museum objects

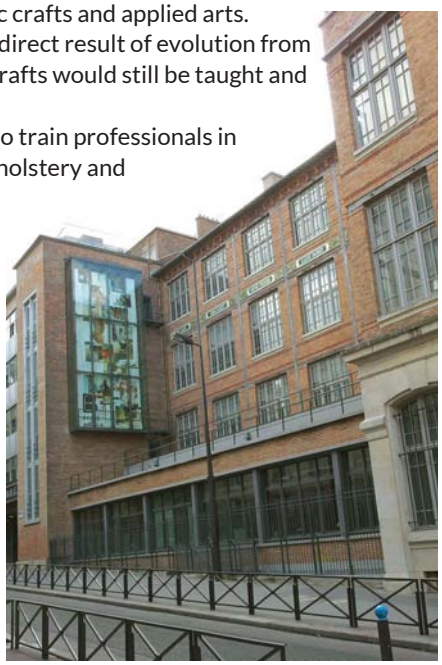
Passing on the Bâton

A stone's throw from Faubourg Saint-Antoine is the prestigious École Boulle, an advanced public school established in 1886. Named after the renowned cabinetmaker and marquetarian to King Louis XIV, André Charles Boulle, the school was set up for the study of artistic crafts and applied arts. Schools and universities such as this were a direct result of evolution from the guild days, an outlet so that traditional crafts would still be taught and passed through generations.

The École Boulle was originally intended to train professionals in furniture – cabinetmaking, chair making, upholstery and woodcarving. Additional courses were progressively added and further expansion took place after World War II when the school developed a series of spatial and interior design courses.



The ultra modern marquetry workshop, which mixes both contemporary and traditional tools



The exterior of the École Boulle as it is now

A contrast to English craft districts

Unlike Paris, which is divided up into suburbs that are notable for specific crafts, in England we tend to associate entire towns, cities or counties with particular industries, such as Stoke-on-Trent for pottery, Sheffield for steel and High Wycombe for furniture.

These location-based crafts came about due to environmental advantages. While Faubourg Saint-Antoine has access to the waterways for transporting wood, High Wycombe is surrounded by The Chilterns woodland. Chair bodgers would work amongst the trees to gather timber and turn components before assembly back in their workshops. It is recorded that between the late 18th to 20th centuries Wycombe played host to more than 1,000 furniture factories and workshops. ■

For further information visit:

www.metmuseum.org/toah/hd/ffurn/hd_ffurn.htm
www.visual-arts-cork.com/history-of-art/french-furniture.htm
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Michael T Collins constructs a useful tote for storing and transporting tools

What you will need:

- 38mm twist bit or adjustable bit
- Bow saw
- Compass or dividers
- Marking gauge
- Cutting gauge
- Chisel
- Crosscut saw
- Jack plane
- Spokeshave
- Coping saw
- Rasp

PREPARATION

Tool totes are traditionally made from pine (*Pinus spp.*), a relatively cheap wood with the added benefit of being easy to work, long lasting and, as a softwood, less likely to damage tools. The most stable wood is quartersawn, where the wood is sawn radially out from the centre of a log, with annular rings running perpendicular to the board's face. A good source for stable straight grain wood is especially flat 50

I have just completed a rather large project and, looking around my workshop, I have tools on every surface. When they are not in use, my hand tools are kept in a toolchest, or a tool tote if I'm working away from my shop. A tool tote is a practical way of keeping your most used tools together and secure, while avoiding the frustration of putting down a tool and turning around only to find it has mysteriously disappeared into a black hole with all the other misplaced tools. Over my previous articles, we have been accumulating numerous tools, and unless you have somewhere to keep them, they are going to pile up so a tool tote – or two – will make a great addition to your 'necessary tools'.

This is an easy project and requires adding a few optional new tools to the collection: a 38mm twist bit or adjustable bit, bow saw and compass or dividers. These are readily available on the second-hand tool market.

x 304mm construction timber. When picking your wood look for boards that are cut close to the centre of the log.

This tote will have one straight side and one sloping side and be made using 16mm boards for the ends and handle. The sides will be about 10mm and need to be long enough, around 660mm to hold your longest tool, in my case a 560mm Stanley No.7 jointing plane.

Rip sawing

First, rip the 304mm board into two pieces of approximately 125mm for the ends and handle and 180mm for the base and sides.

50 x 305mm has a finished dimension of 38mm so ripping these pieces will provide boards approximately 16mm thick. Select a face side and mark the centre with the marking gauge around the board – keep the fence of the marking gauge pushed firmly into the wood so that the spur does not track along the grain. Run a pencil down this line to aid visibility.

50 x 304mm construction lumber

Use your longest tool to determine the length of the tote

You're in for a ripping good time!

Rough plane the saw cuts off

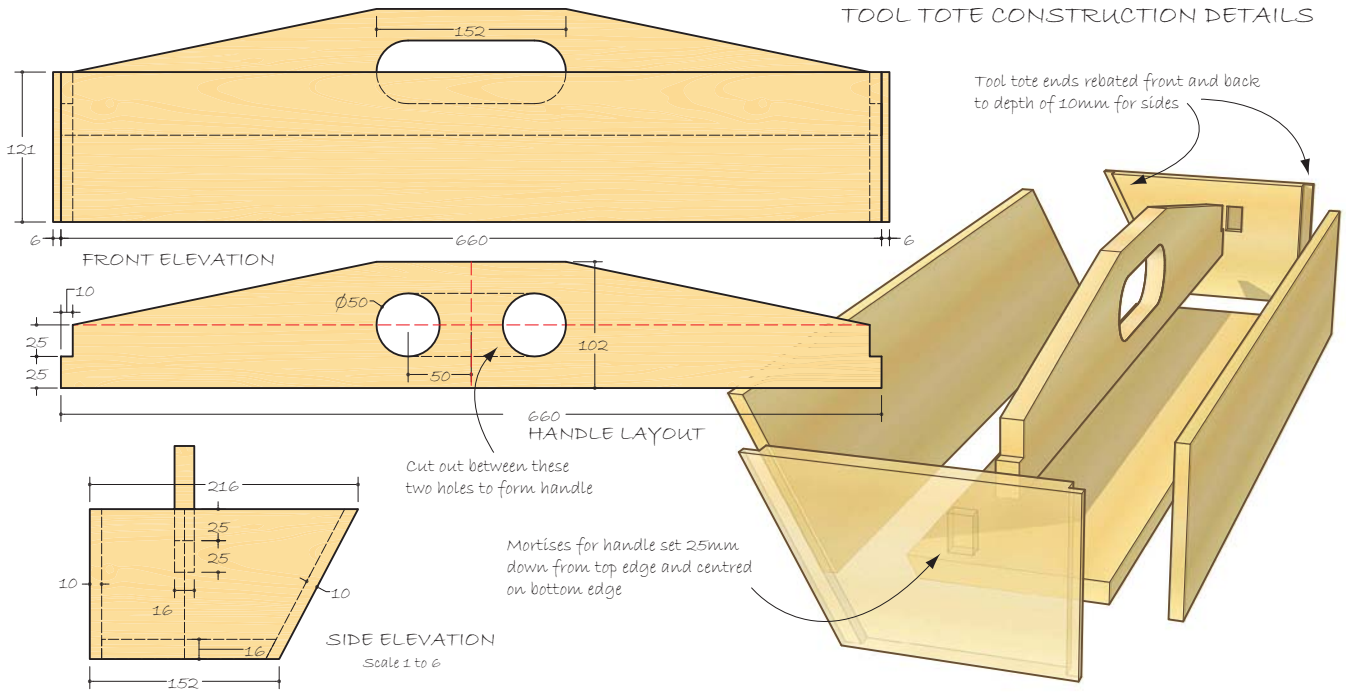
Saw technique

Now, rip the boards into two-pieces – try to split the pencil line. Placing the board in the vice at 45°, saw the two lines you can see; turn the wood over and again saw at 45°. Then, remove the triangle of wood in the kerf. If you find that the saw binds in the kerf, rub the sides of the saw with beeswax. Starting a rip cut in pine is very easy, but when ripping hard wood, cut a 'V' notch – this will give the saw a place to start and prevent the saw bouncing around.

After the first few cuts the kerf should keep the saw on track. However, pine is very soft and it is easy to get off track. If the saw begins to drift off course, slightly twist the saw in the direction of any drift. For example, if the saw is drifting to the left of the line, twist the handle to the left – anti-clockwise – to pivot the saw back on track. Take one of the 180mm boards and rip this in half to produce two boards approximately 10mm thick – these will form the sides. 10mm might seem thin, but it is perfectly adequate and makes for a much lighter tote.

Rough plane all the boards – there really is no need to remove all the saw marks – this tote will get a lot of 'abuse' over the coming years.

Cut all the pieces to final length following the diagram. The angle of the sloping side to the base is approx. 26° or a ratio 1:2. ➤



The joints

1 In previous articles we have seen the many ways there are to join corners, from dovetails to butt joints. For this simple tote a nailed rebate joint will be employed. This will provide a strong and traditional joint – glue is not necessary but can be used. Set the cutting gauge to the thickness of the side.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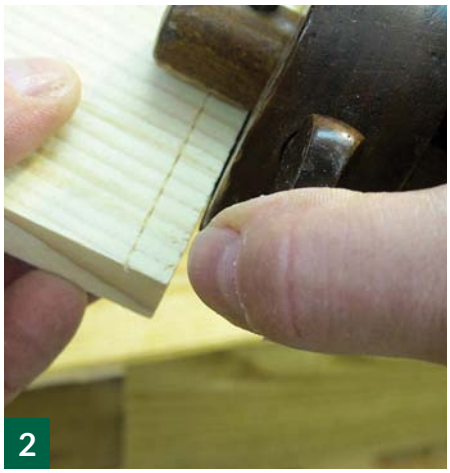
2 Mark the rebate's width on the inside of each end piece, making sure to sever the fibres.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3 Use a chisel to cut a 'V' notch on the waste side to give the saw a place to run.


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4 Mark the depth of the rebate at 10mm and then using a crosscut saw, saw down to the depth of the rebate.


4

5 It is good practice – unless you enjoy sharpening plane irons – to remove the bulk of the wood with the tool that's easiest to sharpen – in this case a chisel. Simply place the board vertically in the vice and position the chisel about 1.5mm from the marked line, on the waste side; hold the chisel close to the bevel for control and with a mallet sharply tap the chisel – the waste will break off.


5

6 Alternatively tap the waste with the handle of the chisel and the waste will break off cleanly. This technique will work best in straight grained wood.

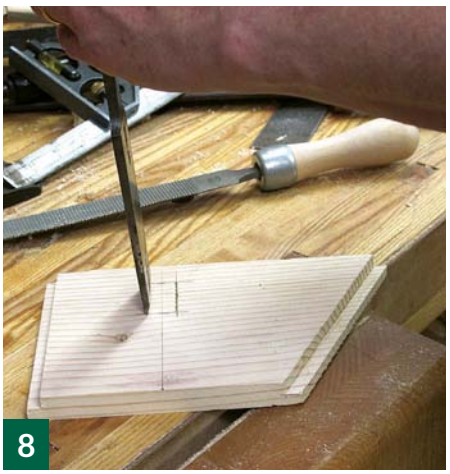

6

7 Keeping your hands well behind the cutting edge, pare away the remaining waste by placing the workpiece on the bench hook. You can also use a shoulder plane – but be careful not to split the wood as it exits the rebate. Repeat the process for the other rebates.


7

Mortise position

8 On the ends find the centre of the base and draw a vertical line. There are no hard and fast rules about how far up the mortise should be – but it needs to be positioned so that there is enough wood above the mortise to support a tote full of tools and at the same time allow for the tapered handle to be flush with the end's top. In this example the mortise is 25mm down from the top and is 16 x 25mm. As usual, chop the mortise out across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the grain using a 25mm chisel. Go easy with the chopping as the pine is soft and too much force may cause the chisel to break through to the other side. Also make sure that your chisel is razor-sharp to slice the soft fibres.

The handle

9 The handle is the same length as the sides and has a 10 x 16 x 25mm stub tenon on the end. The handle can be any shape that you care to design. This tote has a very simple sloped handle. Mark 75mm either side of the centre line, from this point draw the slope as per the diagram – so that it intersects the end of the handle at the halfway point. Saw away the waste and clean up with the jack plane.

10 Alternatively draw the curved handle's profile on paper using a compass and then transfer to the wood with a stippling technique – using a point to push through the design onto the wood. Use the bow saw or a coping saw to remove the waste and finish by using a spoke-shave to clean up the rough sawn edge. Finish by chamfering the edges with the spokeshave or plane.

The handhold in the handle

11 The handhold is positioned centrally on the handle both vertically and horizontally. On the face of the handle mark a centre line, then measure a point 50mm either side of this line, these will be the centre marks for the ends of the handle opening.

Drill two 25mm radii holes at these centre points. To do this smoothly, drill halfway through and then drill from the other side, thus avoiding any tear-out.

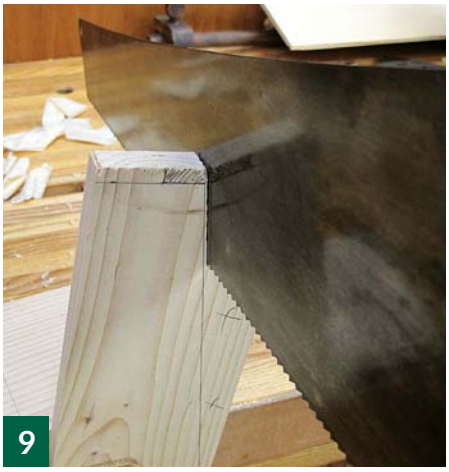
12 Then draw a tangent line from the top and bottom of the holes and saw out using a coping saw.

13 Clean up the edges using a rasp.

14 Alternatively, draw the outline of the handhold and drill a small hole. Then, using a coping saw, remove the waste. Finally, cut off the waste on the handle to create the stub tenon and check the fit.

The base

15 The base is not rebated but simply sits inside the tote flush with the bottom. To find the angle, ➤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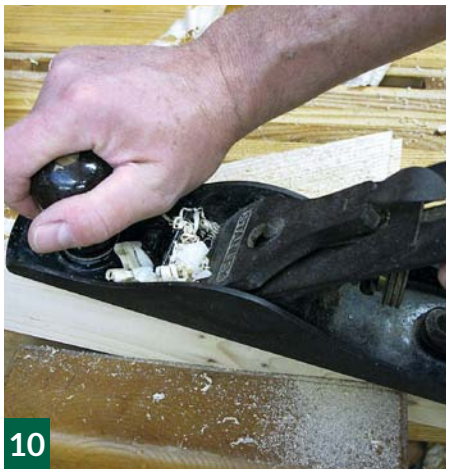
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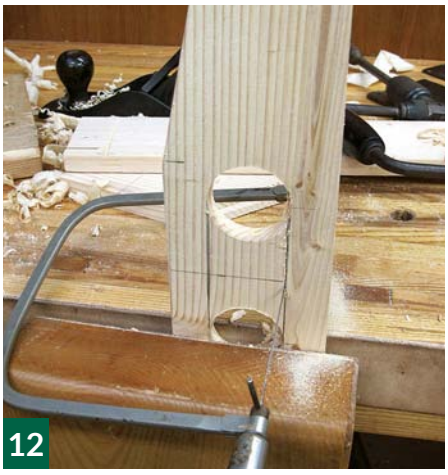
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join one end and the vertical side together using nails driven in at slight angle – toe-nailed. A good tip when nailing close to end grain is to blunt the nail tips – this will cause the nails to break the fibres as they are driven home rather than split the wood.

16 Place the base snugly into the corner you have just created and mark the angle on the base's end grain. Remember to mark the angle inside the rebate. Carry the mark along the face of the wood.

17 Plane down to the lines. This is a test of your hand planing skills.

Assembling the tote

18 Now for the fun part – putting it all together. The easiest way is by toe-nailing the remaining end in place. Also nail from the ends into the sides in the same way. Then position the handle in the mortises.

19 Nail the sloping side in place using the same toe-nailing technique. The base should be able to slide in under the handle and be nailed in place from the side – there is no need to angle these nails.

20 Lastly, chamfer all the edges. This will not only look good but will be much more comfortable to hold.

21 If you wish, give the tote a coat of boiled linseed oil and beeswax. See Issue 1 of *Woodworking Crafts* for my bench finishing recipe. Now that your tools are all in one place, you are ready to carry them to your next project. Every self-respecting cabinetmaker needs a decent tool tote and this one is the perfect answer. ■


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Michael T Collins

British-born Michael has been working with wood off and on for 40 years. He moved to New York in 1996 and over the years, has made bespoke furniture, including clocks, inlay work, Adams fireplaces, book cases and reproduction furniture.

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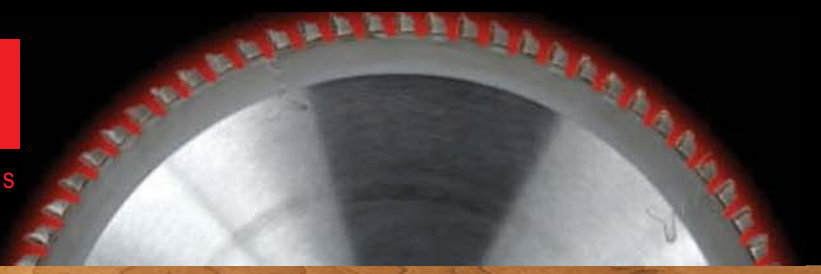

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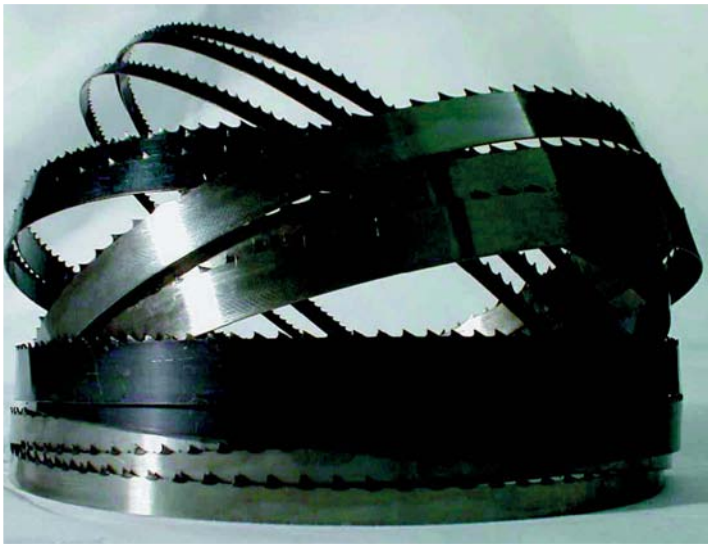

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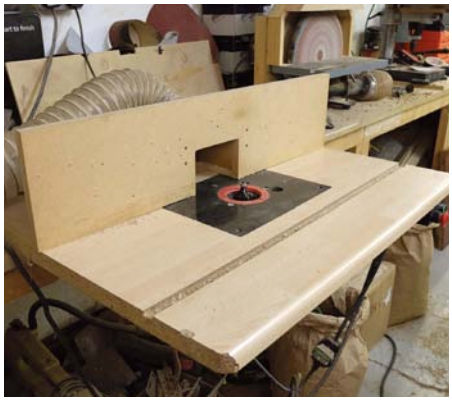
ROUTER TABLES

This month we turned the tables on poor old Ed, so he took 'a fence' but it didn't stop him giving us the lowdown on router tables, which was a bit of a 'break-through' really...

Anyone who owns a router invariably seems to want a router table to go with it. There are various considerations, though, when you want to upgrade by fitting a router in a table. Here are some things to look out for when taking this important step to improving your routing technique. Table routing brings a level of accuracy and control. which is difficult to achieve by working freehand. But, there are various tips and tricks which can help to make it even more successful.

There are various manufactured router tables on the market but be careful to check whether they have all the necessary features you will need. They also cost a lot of money so you need to make the right choice.

It is perfectly possible to make your own router table, from the very simple to quite advanced. There are various fittings you can buy, which can be used to make it work properly.

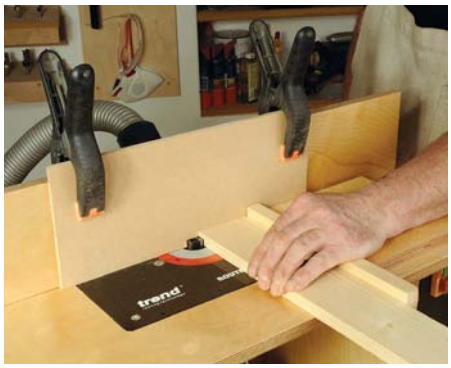


The table needs to be really flat and smooth so the workpieces will move easily across the surface and machine up with consistent accuracy. Melamine faced board, post-form kitchen worktop, varnished birch (*Betula pendula*) ply and cast iron are typical materials for this application.

PHOTOGRAPHS BY GMC/ANTHONY BAILEY

The router needs to be fixed to an insert plate or a thinner area in the middle of the table so the amount of cutter projection doesn't reduce much. There is some skill in accurately cutting out a recess for an insert plate, but it will be strong and reliable and you can lift it out with the router attached for access to controls.

Better quality routers have fixing holes in the baseplate to mount them in a table. Cheap routers may not and this will present a real problem. If you have a homemade table you can at least make some clamps to hold the fence rods or the base securely in place.



The straight fence, which is used for many operations, is often rather low and has square-ended sliding sub-faces on a manufactured table. It needs to be capable of accepting an MDF 'breakthrough' fence which will give more height and work support around the cutter for a cleaner cut. The fence must have a dust extraction port, although is less effective with a sub fence in place.

A major issue is whether the router is capable of fine height adjustment. Some routers have this inbuilt, while others aren't intended for table inversion and are difficult to raise and lower smoothly and safely. There are some third-party devices which can be fitted to approved router models to make fine height adjustment possible.

You must have an NVR switch fitted to the table. This is used instead of the router's own switch, which is set at the 'ON' position. It means your fingers don't go anywhere near the router hidden under the table and if the power is cut, the router cannot accidentally restart.

If you need the cutters to protrude more so you can utilise the full cutter height, there are special extenders you can buy which allow you to do this safely.

If you are machining curved components the insert plate will need a 'lead-in' pin or firmly clamp a wooden 'finger' on the table, so you can safely start the cut when working with bearing guided cutters.

In the next issue we will look at various add-on devices that make table routing more precise and predictable. ■

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PHOTOGRAPHS BY STEVE BISCO

SHED *makeover*

Steve Bisco shows how to spruce up a dull shed with some fancy woodwork

Every woodworker needs a good shed – and the bigger the better – but what if your shed is a bit plain, or even worse… plain ugly! A shed tends to dominate a garden and if it is one of the standard 'brown jobs' that come from most suppliers, it will not enhance the view. A paint job will obviously help, but to really make a difference you can add a few 'period features' to give it the look of a Victorian bothy, a beach hut, or even Hansel & Gretel's cottage if you so choose. Here is an example of how you can turn a dull brown box into something prettier by giving it Victorian-style barge boards, fascias, finials and glazing bars.

1 If you have bought a standard flat-pack shed, or inherited one when you moved house, it will probably look something like this – brown and dull with a thin-edged felt roof. It is functional, but how can you make it a bit easier on the eye?

2 The first place to start is with a paint job. There are some very good paints available now for sheds and fences in a wide range of colours. I used 'Country Cream' from the Cuprinol Garden Shades range, with 'Seagrass' as the contrast colour on the fancy woodwork. You will need two or three coats to cover the 'shed brown' properly. ➤


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Making the barge boards

3 Barge boards are the pieces of wood that decorate the 'gable ends' of a roof. In the traditional Victorian-style, barge boards are a significant feature with decorative curly edges. Use planed timber about 150mm wide, 18mm thick and as long as you need for each barge board. First, measure the 'pitch' of the roof. A school protractor will help, but it is best to make up a card template showing the vertical centreline in relation to the roof edge. This is crucial, so double-check it against the roof line. Mark the cut for your centre join and the outer end of the board.

4 Draw a line along the board 100mm down from the top edge to mark the upper limit of the curves. Divide the board lengthways into a number of sections, each around 500mm long, according to the length of your board. Mark each section with four divisions around 125mm, giving you the tops and bottoms of the curves and the position of the part-circle that divides each section. The circle should be 50mm in diameter and be centred about 114mm from the top edge. Use these points to draw the flow of the curves.

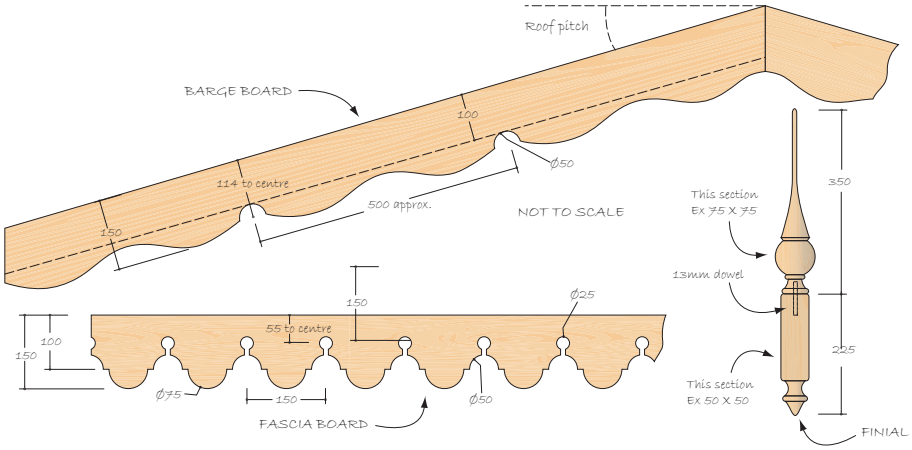
5 Clamp the board so it overhangs the edge of the bench and use a jigsaw to cut along the line, with a narrow blade to cut the circles. Use the board as a template to mark up its partner on the other side of the roof.

6 With a felt roof, the barge boards will need to be fixed to the end of the felt. Fix extra supporting strips below the roof to hold them straight. Paint the board before you fix it.

Making the fascia boards

The fascia boards run along the sides of the shed just below the roof edge. I have drawn up a 150mm repeating pattern, also made from planed timber 150 x 18mm.

7 Make up a card template of the repeating pattern. Mark out the centres for the 25mm diameter circles that separate each section at 150mm intervals, 55mm from the top edge. The lower edge is made up of a concave semi-circle 50mm diameter and a convex semi-circle 75mm diameter, joined by a horizontal line 100mm from the top edge.

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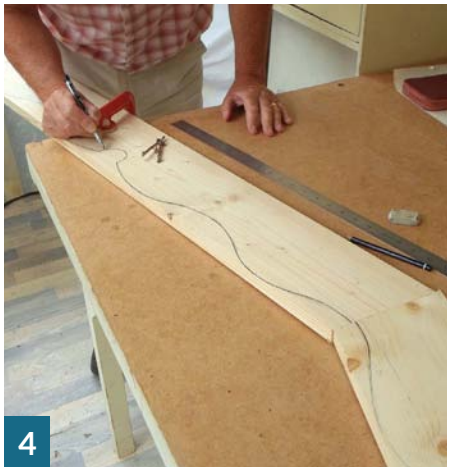
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8 Drill out 25mm circles along the board, then cut round the edges with the jigsaw. Note the cuts going right up into the small circles.

9 You will probably need to fit supporting timbers behind the fascia board to bring it out nearer the roof edge, especially if you intend to fit guttering. You may need to adjust the pattern on the ends to bring them neatly up to the barge board.

Glazing bars and trellis

10 Ordinary shed windows tend to be plain sheets of glass, but you can give these more of a Victorian look by adding false glazing bars to create smaller panes. Plane a chamfer along two edges of 32 x 12mm planed batten and cut it to divide the panes into quarters. By using an exterior 'wood to glass' grab adhesive you can glue the glazing bars directly onto the glass.

11 To liven up the windowless sides of the shed, make up a section of trellis to match the window pattern, adding two small trellis windows at the ends. It is easy to make sections from 32 x 12mm planed battens.

And finally... the finials

12 The top section, with a ball, a spike and a small neck, can be turned out of a piece of wood 75 x 75 x 350mm. Make the stem, which is fixed to the barge board, out of a piece of wood 50 x 50 x 225mm long. Turn this to a point at the bottom. Join the two pieces with 13mm dowel inserted into 13mm holes drilled in the joining ends.

13 If you don't have access to a lathe, make a finial to a similar pattern but with a square profile. Use a bandsaw to make the job quicker if you have one, if not use hand saws and shaping tools to form the spike, the 'ball', the neck and the stem in square section.

14 When fixing the finial to the barge board, make sure it is vertical – if it is wonky it will always annoy you. Use 100mm coach screws to give finials a firm fixing against strong winds.

15 With its paint job and all the fancy woodwork completed, the dull brown box should be transformed into something that would be quite at home in a Victorian kitchen-garden. ■


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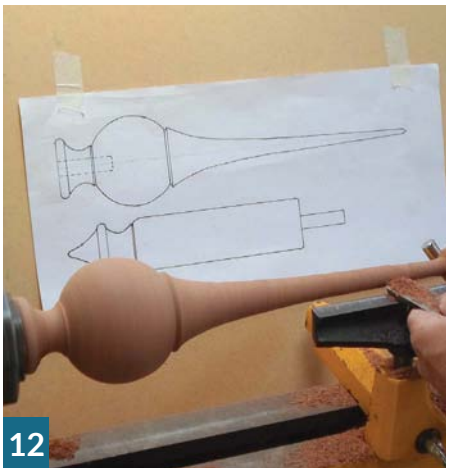
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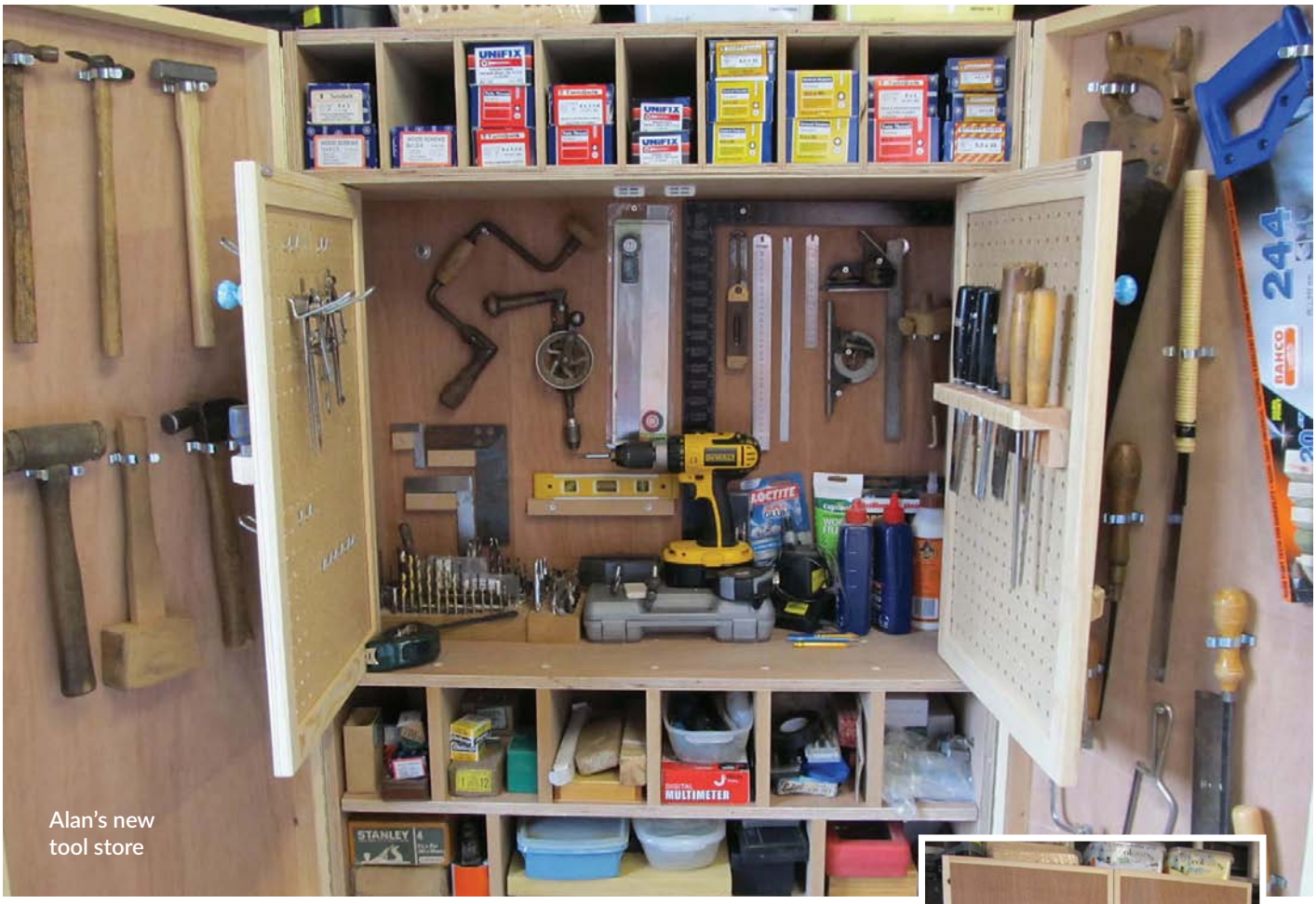
Steve Bisco

Steve Bisco is a regular contributor to our sister magazine, ***Woodcarving***. He has been carving as a hobby for 30 years, specialising in decorative carving in period styles, both in wood and stone. He is inspired by a love of historic buildings.



Alan's new tool store

PHOTOGRAPHS BY ALAN COATES

Reader email Toolstore

Reader Alan Coates finally gets around to making a tool store, designed by woodworker Alan Holtham

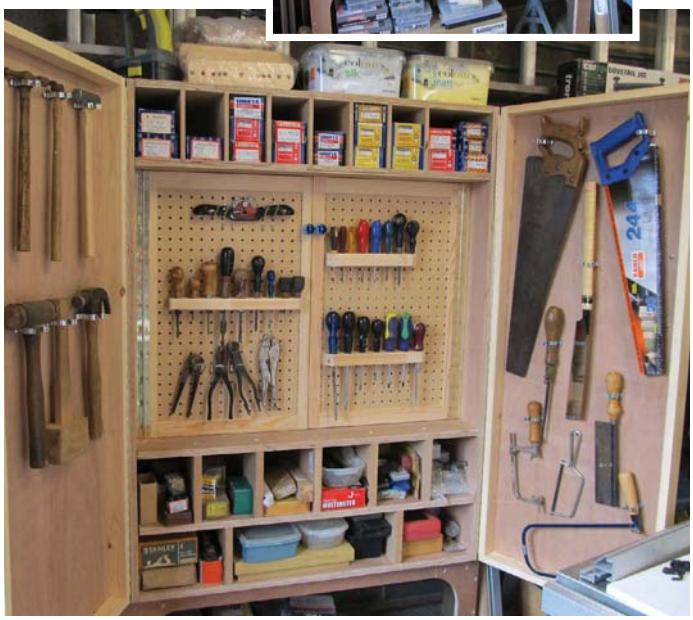
A while ago Alan Coates got in touch and showed us his version of Alan Holtham's tool cabinet. Everyone needs a proper cabinet to keep everything stored safely and dust-free. So we thought it would be a good idea to reprint Alan's design for your benefit!

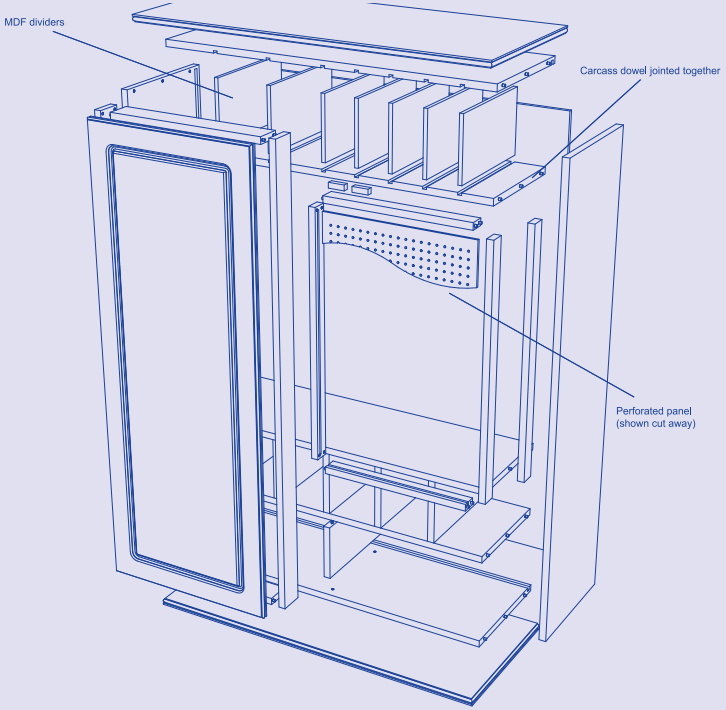
Hi Anthony,

I finally got around to building myself the tool store designed by Alan Holtham, plans and article in issue 45 of *Woodworking Plans and Projects* – the predecessor to *Woodworking Crafts*. Materials used differ from those used by Alan to suit lower price and availability, but the design is essentially the same. I couldn't find a door latch that I liked and so I made a simple sliding bolt arrangement.

It is amazing just how much stuff you can shoehorn into such a small footprint and it's great having all your kit readily to hand in one place. As there is so much weight in the cabinet as well as bolting it to the wall I made a simple stand to add support.

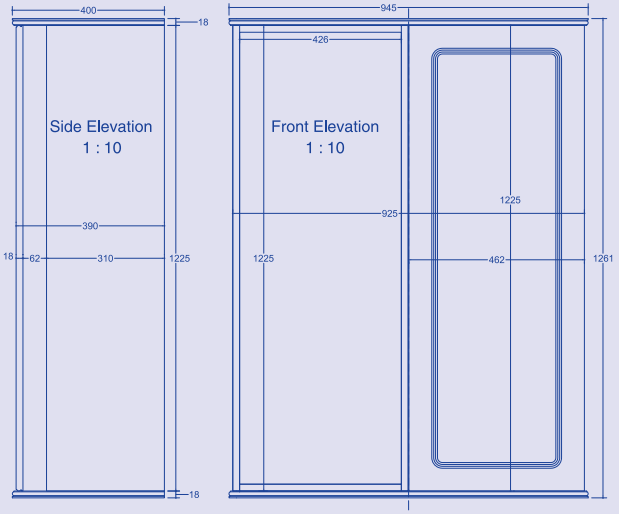
Regards, Alan Coates

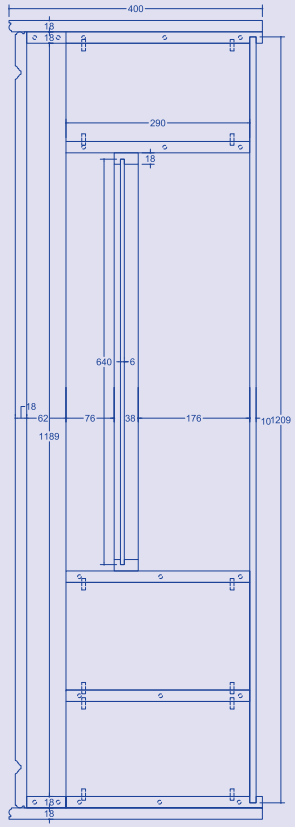




Cutting List

TOP/BASE	2 @ 945 x 400 x 18
DOOR FRONTS	2 @ 1225 x 462 x 18
DOOR SIDES	4 @ 1225 x 62 x 18
DOOR TOPS/BOTTOMS	4 @ 426 x 62 x 18
CARCASS SIDES	2 @ 1225 x 310 x 18
TOP/BOTTOM	2 @ 889 x 310 x 18
BACK	1 @ 1209 x 909 x 18
SHELVES	3 @ 889 x 290 x 18
TOP DIVIDERS	7 @ 167 x 290 x 10
BOTTOM DIVIDERS	5 @ 170 x 290 x 18
BOTTOM DIVIDER	1 @ 150 x 290 x 18
INNER DOORS	
HINGE SUPPORTS	2 @ 660 x 38 x 18
STILES	4 @ 660 x 38 x 18
RAILS	4 @ 390 x 38 x 18
PANELS	2 @ 640 x 406 x 6





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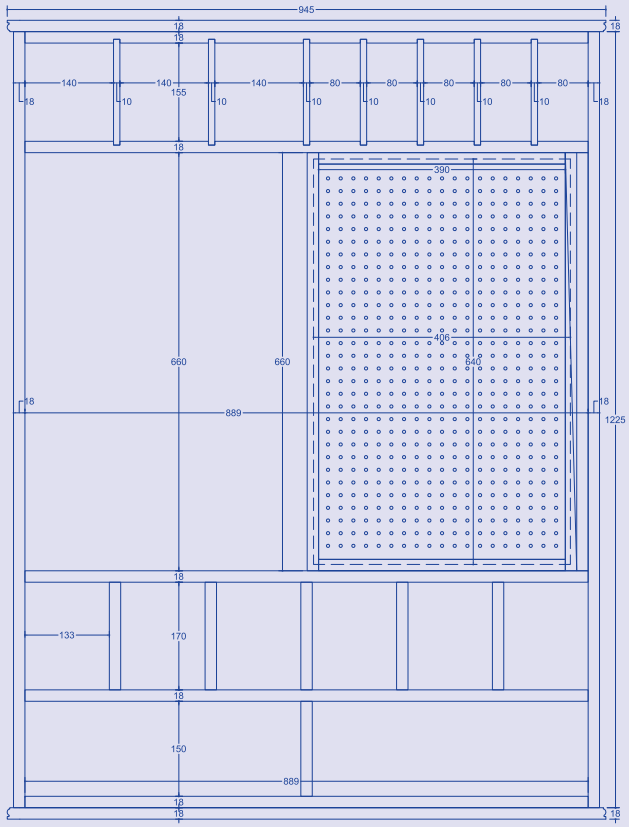

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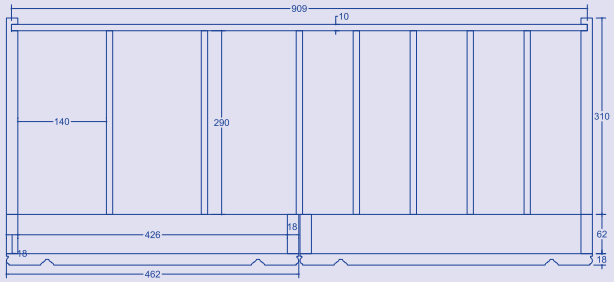

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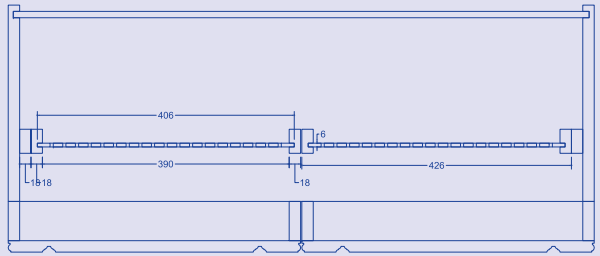

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- Fretsaw alphabet magnets by Amber Bailey
- Five-bar gate repair with Anthony Bailey
- Bob Adsett's sawtable rebuild
- Router table basics

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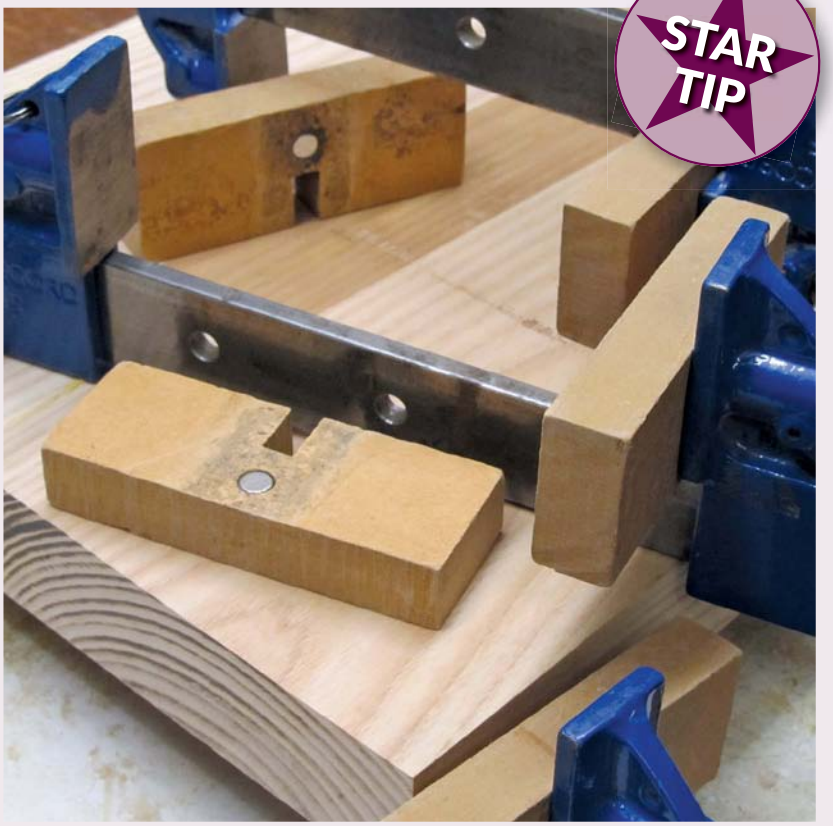
INNOVATIVE FIX

Hi Anthony, I wish to submit a tip – or is it a jig? When one clamps up furniture for gluing, especially if several sash clamps are in use, protective blocks fall out at the most inconvenient times. I have made blocks, each with a notch, so that they fit onto the bar of the clamp and a small magnet, so that they are held in placed against the paws of the clamps. Result I do not lose my rag at the most stressful time in woodwork. I still tell my wife that I will be gluing, so I will not answer the door or 'phone. I was visiting Parnham College once when the fire alarm went off – everyone left the building, except the one person gluing, who had permission to stay unless the fire appeared in the workshop. I like my record sash clamps, so I put parcel tape along the glue line to stop the glue going onto the clamps. Where do I store the blocks after the job is done? On the bar of the sash clamps, of course, so I never lose them, or forget where I put them! Best wishes for the mag.

Regards,

Michael Watson – a happy reader



Michael's self-made stress buster

AVOIDING SPLINTERS

I do all the right things using my table saw when I cut manmade board or do crosscutting with the mitre fence. I use a fine-tooth saw and set it down so half the height of the teeth come through the surface, which gets rid of breakout on the top face but not underneath. I found the easiest method was to rub down masking tape down the middle of the line I want to cut. It gets rid of most if not quite all the flaking along the edge. A low tack painters tape is best and peel it back carefully so it doesn't disturb the surface.

Gary Ransley

Left: Taping makes a big difference

ANOTHER VICE

I have one woodworking vice, but I sometimes need another one as well if the first one is used for gluing up or suchlike. So I made two matching boards with slots and screwed one to board and to the bench edge. It needs two F-clamps that will fit in the slots. It needs a little bit of jockeying to get the workpiece in the right place, but once clamped up it's solid and good to go.

Barry Neville

Barry makes a sturdy woodworking vice

CHECKING IS IN THE POST-IT (NOTE)

It is really difficult get a tight scribing fit around awkward shapes. In the end I tried using post-it notes on a sheet of paper to work around the shapes. Then it was easy enough to transfer the shapes to the wood and mark around ready for cutting out.

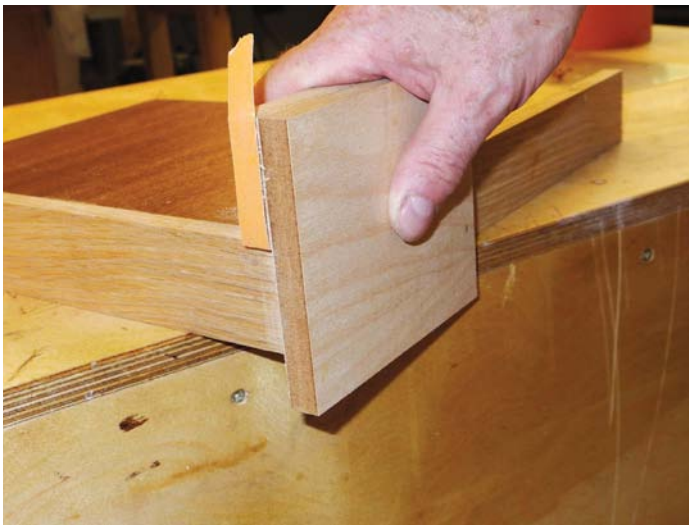
Bob Freeman

Use plenty of post-its to fit the profile

SURE SANDING

I glued some lippings to a lacquered piece of veneered board, but I needed to sand the lippings without marking the finished board. I made a simple jig that I can press against the side of the job and spray mounted a thin strip of medium abrasive along the edge of the ply, which matches the 13mm lipping so it can't sand wider than that. It works well without scoring the lacquer.

Roger Hargreave



This prevents damage completely

YET ANOTHER VICE

I wanted to chamfer some square stock, but I wasn't sure how to go about it. In the end I tried clamping in a sash clamp with some jaw facings, which sit over the rail and have a V-slot for the wood to sit in. I used carpet tape to keep the facings in place. To keep it stable I clamped the whole thing in my vice with block on the far side so it would sit tightly and I could turn the sash tommy bar to tighten it.

Jim Roberts

You can put dowels in it too

Oak & padauk spinning top box

SEQUENCE PHOTOGRAPHS BY BOB CHAPMAN, END SHOT AND TOOLS BY GMC/ANTHONY BAILEY

Great as a gift or a sophisticated toy, **Bob Chapman** turns this unique and tactile spinning top box from pieces of oak and padauk

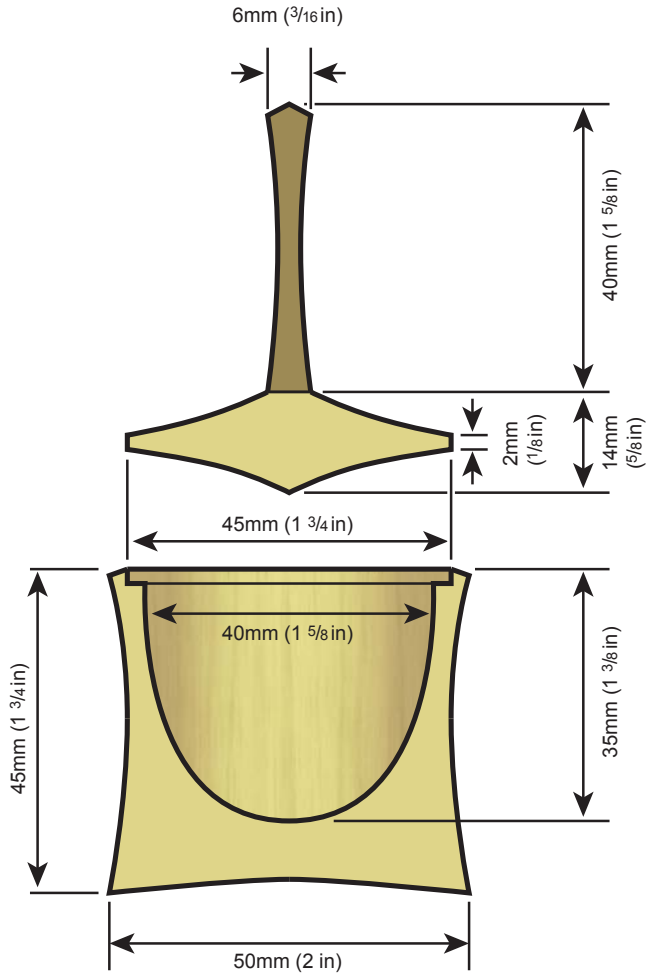
The idea for this project came as a result of an email, which I received from a lady looking to purchase one of my spinning top boxes for her husband's birthday present. I decided to make a selection of boxes for her to choose from, four in total, and each in a different wood. The item in question is a small box in which the lid is fashioned as a spinning top. I have made these for many years and they proved to be very popular when I was doing craft fairs. The result is a smooth and tactile object, and the grain pattern and the two woods work very well together.

What you will need:

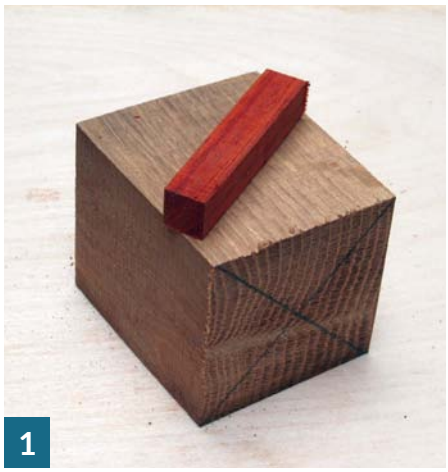
- Two small blocks of wood
- Four-jaw chuck
- Skew chisel
- Diamond hone
- Beeswax and Carnauba wax
- Long-nosed chuck
- Cyanoacrylate

Handy hints

1. Honing the burr from the top surface of a scraper makes it much less aggressive to use and will allow much finer cuts to be made.
2. Loose lids are allowed! Loose lids sell; tight lids put off potential customers. If the lid doesn't come off easily they put the box down for fear of breaking it.
3. If you have to allow the chuck jaws to stick out from the chuck body, wrap brightly coloured insulating tape around the protruding ends. Not only will they help to remind you, but they'll also cushion the blow if you forget!
4. When parting off a section for a box lid always use the narrowest parting tool you have available. The less wood you remove in the cut the better the grain pattern will match from the body through into the lid.



1 The box requires two small blocks of wood. The dimensions are not critical and can be varied to suit the timber you might have available. In this instance, the larger block is oak (*Quercus robur*) approximately 55 x 55 x 65mm and the smaller is padauk (*Pterocarpus dalbergioides*) 10 x 10 x 55mm.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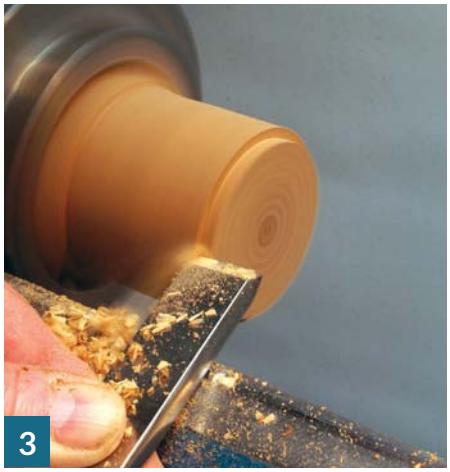
2 It is quite safe to grip a square section like this in a four-jaw chuck, as long as the chuck jaws do not protrude outside the body of the chuck. The square section is turned to the round with a 13mm bowl gouge, although a spindle roughing gouge can be used just as effectively.


2

3 The long point of a skew chisel held flat on the rest is ideal for cutting a small, approximately 5mm dovetail spigot, on the end of the block. This allows the block to be reversed in the chuck and held even more securely.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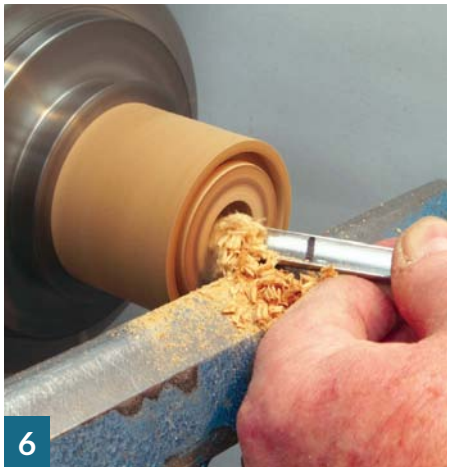
4 After cutting a second 5mm dovetail in the end, a section of the block approximately 15mm long, including the dovetail, is parted off. This will become the lid of the box. As far as possible, we want to avoid losing the grain match, so use the narrowest parting tool you have; this one is homemade from a machine hacksaw blade.


4

5 Working about 3mm in from the edge, use an ordinary parting tool to cut a groove approximately 5mm deep. Ensure that the sides of the groove are parallel to the lathe axis. The bottom of this groove is the shelf, which the lid will sit on. At this stage, its width doesn't matter as it can be adjusted when the box is hollowed.


5

6 Use a 10mm spindle gouge to bore a hole in the box and then widen it out towards the edges of the box. Note: the black ink mark on the gouge is used to indicate the required depth of about 35mm. Remember to maintain a curve on the interior of the box.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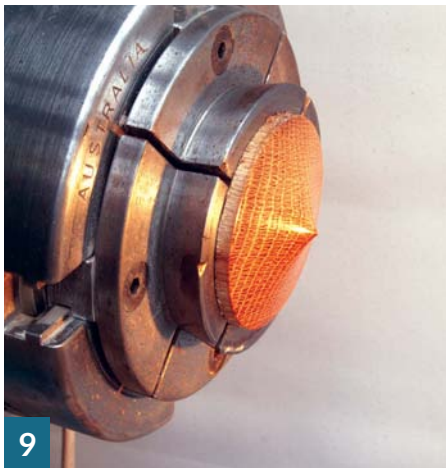
7 Use a 25mm round-nosed scraper for refining the curve and smoothing the interior. Sharpen the scraper, then hone away the burr using a diamond hone or a whetstone. Arrange the rest so that the scraper is perfectly horizontal and its cutting edge is exactly on centre height. Keep the scraper horizontal as you take light cuts until the interior is smooth.


7

8 Sand the interior, then seal and polish with beeswax and Carnauba wax to a soft sheen. Mark the position of chuck jaw number one on the outside and remove the box body from the chuck. Marking the position of jaw one will allow the box to be replaced in the same position later on.


8

9 Put the lid section in the chuck, gripping it by the dovetail spigot. Using a small gouge or even a scraper, shape the underside of the lid to a curve forming a 'spinning point' in the centre. Sand and polish the pointed surface.



9

10 Using a freshly sharpened parting tool, reduce the diameter of the lid until it is a tight fit in the box body. Keep bringing up the box body to test the fit and work slowly, removing a little at a time. When a satisfactory fit has been achieved, remove the lid of the box from the chuck.


10

11 Replace the box body, positioning jaw one with the alignment marks you made earlier. Push the lid into the body and make sure everything turns truly with the lathe on. With a drill chuck in the tailstock, drill a 6mm hole about 6mm deep into the lid. If the lid isn't tight enough to allow this, use a layer of tissue to tighten the fit until you can work on the lid without it loosening.


11


12

12 Change the chuck to one with long-nosed jaws. If you only have one chuck you'll have to remove the box and replace it later. Use a parting tool to turn down the end 5mm to a good fit in the hole in the lid.

13 Replace the box in the chuck and use a few drops of Cyanoacrylate to glue the spire into the box lid, bringing up the tailstock for support while applying gentle pressure. Use a small gouge to shape the top of the lid into the spire. Finish off with the round-nosed scraper, held horizontally on centre, to blend the curve of the lid into the curve of the spire. Note: the top edge of the box body forms part of this continuous curve.

14 Use the long point of a skew chisel to shape the top of the spire at about 40mm from the top of the box. Take care with this cut and remove the tailstock before finally parting off the waste, still using the skew. This should leave a smooth top surface. Complete the sanding, sealing and polishing of the lid. When finished, pull the lid from the box and sand gently around its edge to ease the fit.

15 Again, use the long-nosed jaws to hold the box body by expanding them inside the box lip. If you can't do this, mount a piece of scrap wood and turn a spigot to hold the box body as a tight jam fit. Note: the tailstock giving added support. Use a spindle gouge to shape the sides of the box to a gentle concave curve.

16 Finally, remove the tailstock. Very gently, because the box is not held very securely, remove the spigot with a small bowl gouge, taking very light cuts. If you are unsure about doing this, leave the tailstock in place and remove the final small stub with a sharp knife at a later date.

17 Aim to form a slightly concave base on the box so that it will sit firmly on a flat surface. Sand, seal and polish the whole of the box body.

18 Here is the finished box. Note how the lid is flush with the sides and blends gently into the spire.

19 When the box body is turned over, the concave base makes a handy platform to spin the top on. ■


13


14


15


16


17


18


19

Bob Chapman

After teaching chemistry for many years, Bob took early retirement to become a professional woodturner, and is a member of the Register of Professional Turners. He was a demonstrator at the 2009 AWGB Woodturning Seminar and is available for commissions.

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Woodland ways

Wild service trees favour clay soils

PHOTOGRAPHS BY GARY MARSHALL, UNLESS OTHERWISE STATED

Loose tooth, chequers, medicine, harpsichords and crossbows

Gary Marshall reveals the tell-tale signs of a wild service tree – and explains why he found it truly gobsmacking as a young boy…

Hone your spotting skills with the wild service tree (*Sorbus torminalis*). It fascinates many a woodsman and because it is only 'locally common' its presence in a wood or hedgerow may well elude all but those with an experienced eye. The species favours clay soils from Sussex to Cumbria but its 'strongholds', many in the South, are in old hedgerows, ancient semi-natural woodlands or plantations on ancient woodland sites. Recent planting means your nearest park or reserve may even harbour a few young wild service trees. Here, I've given some clues that will set you on the path to a positive ID, before getting to a small but not insignificant dental disaster…

Leaves

A wild service tree could be mistaken as a maple (*Acer spp.*) because its leaves are superficially similar to palmate foliage of that genus. Look closely, though, at our picture of its leaves. The lobes at the base of the leaf project horizontally while the other lobes project forwards, like those of a giant hawthorn (*Cretaegus monogyna*). The leaves emerge downily, pale green. They can be shiny in their prime but older leaves feel coarse and later show fine autumn colours.

Blossom

If you're lucky enough to see the tree in bloom you will realise that the blooms are similar to the whitebeam (*Sorbus aria*), the wild pear (*Pyrus communis*) and the rowan (*Sorbus aucuparia*). Thus it can be deduced that the wild service tree is a member of the rose (*Rosaceae*) family.

BLOSSOM PHOTO COURTESY OF WIKIPEDIA COMMONS

Leaves

Blossom

Twigs

Fruit

Bark

Twigs

Buds are alternate or at the tip of flower spurs – whereas maple twigs have buds opposite each other. The twigs are light when young but darken as they mature.

Fruit

A good blossom year is likely to yield good fruit. Historically in the Weald, Kent, where the tree is more common, its small bunches were gathered and sold as 'checkers' or 'chequers' owing to the spotty nature of its small clusters of fruit. When 'bletted' – left until over-ripe – the fruit is sharply sweet, sleepy pear soft, with a hint of apricot, plus a unique flavour of its own. I've not cooked with them but quite like the odd handful raw, although they can be gritty and the small cores are best spat out. Don't try eating them before bletting, though, as they're as dry as sloes. It's rare to find seedlings as the tree tends to remain local from suckering.

Bark

Young trees have smooth grey stems similar to those of the young alder (*Alnus glutinosa*). When larger, fissures develop, the biggest and best trees I know develop scaly, shaggy trunks as large as the beeches (*Fagus sylvatica*) and oaks (*Quercus robur*) with which they grow.

Woodland floor leaf litter

In ancient woods the wild service can be hard to spot. The best way to find one is to look at woodland floor leaf litter. The leaves are fairly slow to rot and there is no other leaf like that of the wild service tree. Find a leaf and there's a tree nearby. When you've found your tree look up, its canopy is spreading, dense and likely to be intermingled with neighbouring trees' canopies. Sometimes a leaf will have come from a small, whippy isolated tree – so slender you'll wonder how it's survived. I've seen them like this on plantations on ancient woodland sites overshadowed by pine and spruce. Their parent trees have long gone but wild service suckers remain. They even flourish if thinning is sensitively carried out to benefit remnant native species.

Mature wild service trees can surprise – those pictured here are the finest woodland specimens I know. They reach way above the woodland floor. Their trunks twist slightly in muscular fashion until they branch, often thickly, forming a wide canopy. In other woods they may be found as multi-stemmed outgrown coppiced trees.

Timber uses

The timber, classed as fruit wood, has been successfully used for many different purposes but was never planted

PHOTOGRAPH COURTESY OF WIKIPEDIA COMMONS

Wild service timber is still used for harpsichord 'jacks'

Large wild service tree (centre), with a beech in the foreground

or specifically selected as other natives. Its uses included barrels, for which oak is better, and fuel, for which hornbeam (*Carpinus betulus*) or ash (*Fraxinus excelsior*) are preferable. It is hard, dense and favoured as a specialist wood for threshing flails, mill cogs and wooden screws. It's still valued for components of harpsichords known as 'jacks' and for crossbows and gun stocks. Timber that is carefully seasoned and well kept can have a pinkish tint. Such wood holds its shape, is split resistant and is – not surprisingly – hard to come by. The fruit and leaves, meanwhile, may have medicinal importance and have been cited in the treatment of colic, diabetes and heart conditions.

In recent decades amenity planting has increased range and numbers – but it's not an easy tree to establish.

Finally, the loose tooth!

H&S warning – the young wood of the wild service is springy. As a boy, I found a multi-stemmed wild service tree along with straight, strong suckers in a remnant of ancient woodland. Needing a good stout stick for beating the next day, I eased a sucker over and stood on it. Bending over while cutting through the stem, I was whacked by its sudden release, right in my mouth – splat! It split my lip and loosened a tooth that to this day moves more than my others do. I've never done that since... but despite my 'chequered' history I don't hold a grudge against the tree. In fact it's one of my favourites, especially when truly wild. ■

Gary Marshall

Gary has had a life-long interest in woodlands and the countryside. He trained in countryside management and subsequently ran a company working with the local County Councils and Unitary Authority and their Countryside and Rights of Way Teams, as well as a wide range of conservation organisations.

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Small space woodworking

PHOTOGRAPHS BY GMC/ANTHONY BAILEY

BOOK STAND

It's no surprise that our **Editor** is a bit of a 'bookworm', so much so that he has penned the next three pages about making himself a book stand

Although I have called this a book stand it could be 'multifunctional'. It could be used to hold books, magazines, a tablet, drawings, all the possibilities are there – even the size isn't critical. It took me only a few hours to make and the result is pleasing to look at as well as functional. Now read on…

1 An offcut of 12mm ply is suitable for the task. The stand needs to accommodate a largish technical book in my case; that way I can consult the pages in the workshop without them flopping closed if I let go. The ply I have for the project doesn't need to be quite as wide and can certainly be quite a bit lower.

2 To cut down the height of the board I took out the tool drawer in the workstation first seen in issue 1 of *Woodworking Crafts*. That meant I could insert a clamp in the opening to hold down the board while sawing it. ➤

3 Using a good sharp saw, cut the board to size. The width, or I should say length grain-wise, was fine on my board so I left that as it was.

4 Next, trim all edges smooth with a block plane then bevel them slightly to make the edges look and feel more acceptable.

5 The next job is to cut the book ledge to the same width as the stand board. Make the length using a try square and then use a bench hook and a fine-tooth saw. This version has a kerf – saw cut – in the middle so workpieces are supported either side of the cut.

6 Lightly sand all edges of the ledge and then work out the size and position of the stand support. Hold a ruler in place to gain an idea of size.

7 The stand support can be shorter, which will save weight and look better. Cut the support to length after drawing a line with the try square.

8 Ply often has small gaps around the edges, so fill these with a matching woodfiller. There was a fairly large hole in my board, yours may have one too, use a narrow chisel to square it ready to put a wooden plug in.

9 Then use a strip of wood cut from the core of a waste piece of ply and glue and press it into the hole. This will be much stronger than filler alone.

10 Finally, trim it flush with a fine tooth saw and then sand the edges to a finish.

Hinges

11 You can use new brass hinges, but I had four old ones in need


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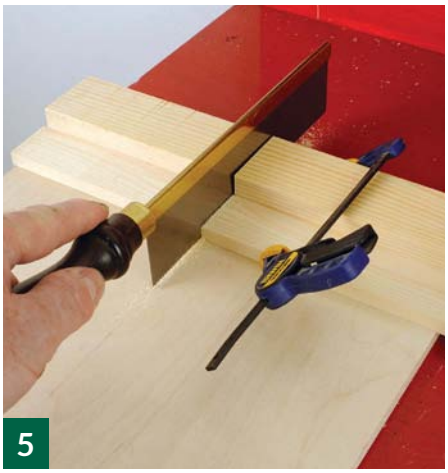
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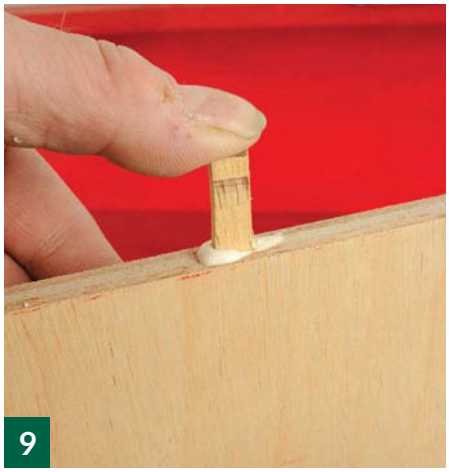
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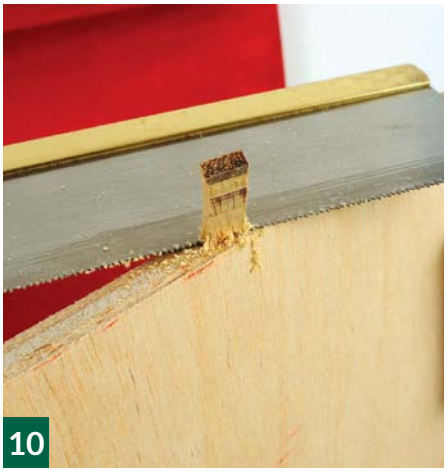
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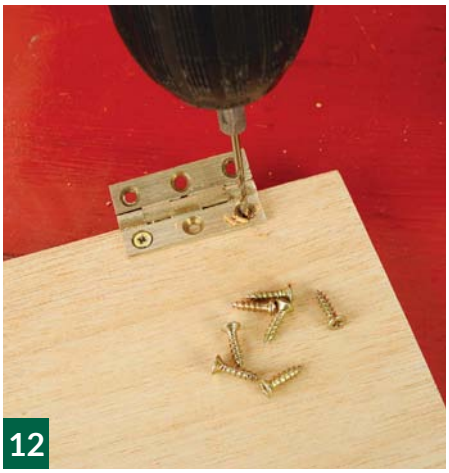
of some cleaning up. Scrape off any paint and then rub the knuckle edges and internal leaf faces on some medium abrasive until they are bright and smooth.

12 For this project I bought some special hinge screws – these have smaller heads than normal and sit flush in countersunk hinge holes. After putting in one screw, drill the other holes as the hinge is now fixed firmly and won't slip around while drilling.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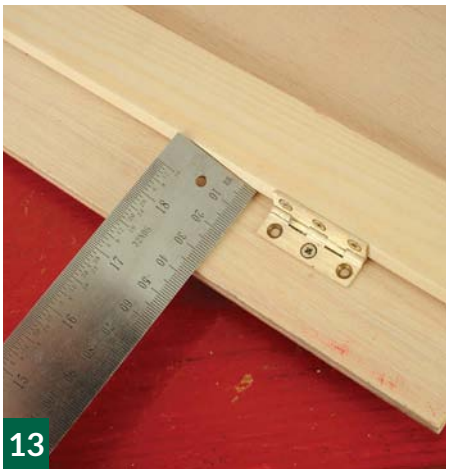
13 Fix the support in place with more screws. Set it up about 8mm from the bottom edge of the stand board when folded. The book ledge is hinged in the same way so the whole thing will go flat when not in use. Check the ledge height is parallel from end to end.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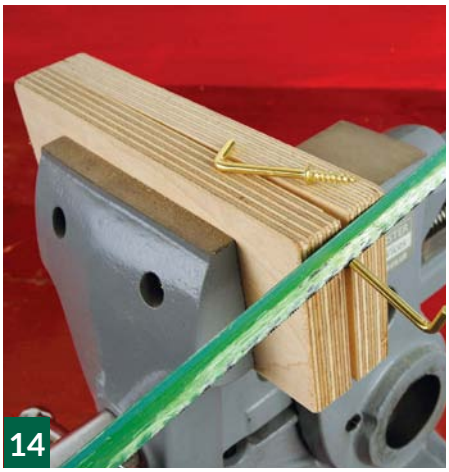
14 The book pages need to stay open so use some straight brass hooks, cut the ends off and file any roughness so they will push into holes drilled in the front edge of the ledge.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15 You could fit hooks that stand up more but this discreet device is enough to hold the pages open. When the stand is folded the hooks are turned sideways first.


15

16 I mulled over the way I might stop the support from opening too far and settled on cord running through holes in both the stand board and the support. The cord may fray, so to prevent this set it rock hard with some superglue, trim the end off and then thread it through the holes drilled.

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17 Once threaded, tie the cord with a reef knot and treat the ends again with superglue and trim off neatly. The beauty of using cord is that you can set the reading angle at your own preferred height.


17

18 You end up with a nice neat book stand that looks like this…


18

19 … or folded up, like this. You can carry it with you or pop it on the bookshelf, it's always ready as a reading aid! ■


19

READER GROUP TEST

Welcome to our **Reader Group Test** by members of our very own Woodworker's Institute Forum

Optimaxx screws

Optimaxx is a top quality high performance wood screw that incorporates a number of unique features. A specifically positioned long thin groove dramatically reduces the pressure build up on insertion by dispensing wood fibres, preventing splitting when screwing close to the edge. A sharp sawtooth formation cut out of the bottom threads bites into the timber reducing torque and resistance, enabling fast penetration without a pilot hole.

PHOTOGRAPH BY GMC/ANTHONY BAILEY, UNLESS OTHERWISE STATED

TESTERS

Ian Roberts, Nick Simpson, Farid Azman, Joan Spencer, Chris Turner, Allan Roberts, David Stroud, Alan Baker, Brian Hemsley-Flint, Chris Powell

DETAILS:

Price: from £2.42
Contact: Optimaxx
Web: www.optimaxx-uk.com

We asked the testers a range of questions, some of which were graded, others needed more articulated answers rather than just scoring. We asked what was their experience using the product and if they had any problems using them.

Ian Roberts: I was very impressed with the ability to screw in to softwoods without any preparation. With hardwoods and dense chipboard, I find the Optimaxx screws too difficult to drive in and countersink themselves without pre-drilling as a minimum.

I notice the screws have thinner shafts and wider threads than a lot of the screws I tend to use, which seems to make driving easier and the wider thread seems to hold a lot more firmly – particularly with material such as MDF where some cheaper screws with poor threads can strip the wood and spin upon tightening. The ridged underside of the heads seem to aid in gripping the wood once seated, however, I'm not convinced this benefit would be seen to the same effect with hardwoods. As an enthusiast who doesn't get through a vast quantity of materials, I prefer a good quality product that I have confidence in and have less concern about a premium price point.

Nick Simpson: I used these screws without pre-drilling or countersinking with a clean start every time. Re-used screws were slightly reluctant to start in hardwood, but a bradawl hole overcame this. There was no cam-out at all with a Dewalt drill/driver and pozi 2 bit. The screws were easy to use and finished flush with the wood with only a very small amount of raised grain at the periphery of the screw heads. I tried the screws in pine (*Pinus sylvestris*), oak (*Quercus robur*), walnut (*Juglans nigra*) and sycamore (*Acer pseudoplatanus*) with no problems at all.

Farid Azman: I used these screws without pre-drilling or countersinking; it is a nice feature and I was pleasantly surprised as I had no problem with the screws at all. There were no issues for the wood compressing or splitting when the countersink feature was utilised. I enjoyed using them and would recommend them. The screws were very easy to drive in, almost effortless in both softwood and white oak (*Quercus alba*). I found it drove into pine quite easily, but an error on my part drove it further than I wanted and seated slightly too deep.

Nick found the screws bedded in flush nicely

Allan could just press the screws in to stay in place for driving in

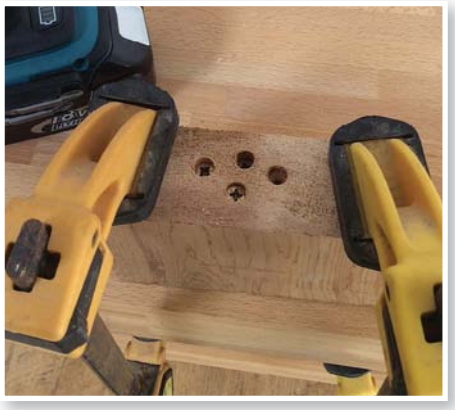
Joan Spencer: I am what you might call a 'newbie' to woodworking as a hobby and am currently sawing, planing and chiselling in the utility room. However, I felt confident to test the screws as I have built lots of flat-pack furniture in my time as a single parent. The Optimaxx screws

not only required minimum pressure to 'connect' with the wood from start to finish using my screwdriver but also to take the screw right into the wood. I am going to show my lack of experience here, but I don't know what 'cam-out' means and it sounds bad! I will say just what I found and that is the screws – all sizes – were able to be hand or power drill screwed.

Chris Turner: The main part of the screw went in easily. The screw head did not always seat fully into the wood, I had no problems with 'cam out' but when the countersinking head drove into the wood some small splits formed, also on softwoods the recess formed by the countersink head was not very clean. If the work is 'high quality' I would suggest pre-drilling the countersink.

Allan Roberts: I used these screws without pre-drilling or countersinking; they were easy to drive in and seat properly. They were easy to use, held in wood by simply pressing in both hard and softwood.

David Stroud: The smaller size screws were fine without pre-drilling and countersunk fine, but I found I still split the wood if not pre-drilled with the larger size. The screws were very easy to drive into wood both by hand and drill/driver and seated nicely. The driver bit fitted nicely in all the sizes of screw heads both inserting and removing the screws for the wood. My experience overall of the screws were very good, easy to use and countersunk nicely in softwoods. I would definitely recommend these screws to anyone as they were easy to use and seated nicely in the project.



Chris did experience splitting, even on low torque settings

Joan managed to use both hand and power to drive the screws in

Brian reckons the screw recesses are a really good driver tip fit

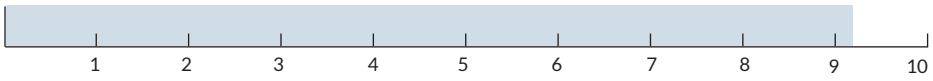
Alan Baker: The instructions were easy to follow. These screws went in without pre-drilling or countersinking and easy to drive in and seat properly in the wood with no cam-out. I would recommend them to other people.

Brian Hemsley-Flint: The instructions were very easy to follow. I used the screws without pre-drilling or countersinking. The Optimaxx screws were extremely easy to drive in and the screwdriver bit fitted well, no cam-out. I found the screws very easy to use and the ability to fix without first drilling pilot holes speeded up the job and there was no mess from drill dust to clean up, a bonus. I would definitely recommend these screws to anyone.

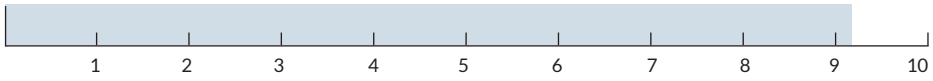
Chris Powell: I used these screws without any pre-drilling or countersinking. The screws were easy to drive in and seat except when close to the edge. I used a drill on lowest torque setting and still managed to get splits. There was very little cam-out. ■

How our testers rated the product (Average marks out of 10)

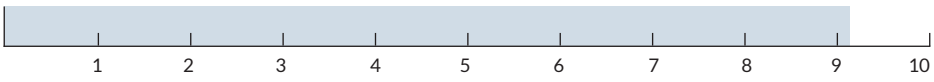
How would you rate the product performance?



How would you rate the product ease of use?



How would you rate the product overall?



Editor's Comment:

I have used a lot of different trade-rated twinfast self driving screws so I'm in quite a good position to judge the qualities of Optimaxx screws. Although they have standard Pozi recesses these are exceptionally deep and well formed which reduces cam-out, for any readers not familiar with the term it refers to the driver bit disengaging with the head recess, usually resulting in some damage to both components, so no cam-out is a definite bonus. The slim shanks help easing into the wood and the relief slit at the tip and frilled cutting spiral plus the self countersinking head with many seating ridges make these screws superior to other brands. Tradesmen will typically use an 18v cordless drill and need to place screws quickly and efficiently, which Optimaxx screws are intended to do. ■

If you would like to be part of our panel of product testers, please go to our website – www.woodworkersinsitute.com – and **SIGN UP NOW!**

Ask the *Experts*

This is your chance to challenge our Editors and for them to answer your comments and queries

ANTHONY BAILEY
Editor, *Woodworking Crafts Magazine*

MARK BAKER
Group Editor, GMC woodworking magazines

DEREK JONES
Editor, *Furniture & Cabinetmaking Magazine*

A DIFFERENT ANGLE

STAR QUESTION

"I am having trouble working out what angles are best for putting on bowl gouges. There is a lot of contradictory information. What would you recommend I do?"
John Taylor

Mark replies: John, that is an interesting question and I agree that it can be confusing for people to work out what is what. I have to say that everyone seems to have a favourite grind and bevel angle, most often it is the turner's personal preference. If one looks closely at the recommendations, though, most comments about grinds suggest angles that are very close to each other. I will tackle this question in a slightly different way and say that there are two aspects to consider.

Question 1: does the gouge reach where it needs to go, so the bevel is rubbing during the cut without any part of the blade fouling the work? Some shallow faceplate work or some spindle work allows a blade to move along the work with no problems at all so a typically recommended bevel angle of 40-45° would work well. Now many turners recommend a swept-back grind, rather than a standard grind, which is where the cutting edge is square or just off square across the flute of the gouge. ***Picture 1*** shows a swept-back grind gouge with a 40° bevel angle at the front.

To create the wings the blade is swung to either side and rotated as the blade is swung to create the side edges. In truth, this is best achieved with a specialist sharpening jig. This will enable you to repeat easily the grind time and time again.

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Picture 2 shows two bowl gouges: one with a swept-back grind and the other has a standard grind with a front bevel angle of about 60-65°.

You can see the difference between the two. The reason I show two is that there are some deeper projects that create a problem. One might be able to cut cleanly part the way with the angles on a gouge mentioned above – see ***picture 3***, but not the whole way around the work due to the blade fouling the side wall – see ***picture 4.*** In this situation the blunter angled gouge, in this case the one with the 60-65° grind, would allow the turner to pick up where the other gouge finished off and work the lower sections of the vessel without fouling the side wall.

So, I would recommend one gouge with the 40-45° angle at the front as the primary shaping tool. This is able to do the majority of the work faceplate wise. Those trickier shapes will require a second gouge with the blunter 60-65° – this can be ground with a blunter bevel angle still depending on the shape being turned – or use a scraper to finish off the bottom section.

Question 2: is the gouge cutting the wood cleanly? If the answer is yes, it is sharp. If the answer is no, adjust the cutting position of the blade to work and if it is still not cutting cleanly, sharpen it.

That said, some woods cut more cleanly than others and not all will produce lovely ribbon shavings when cutting it, but if one is finding difficulty in getting the wood to cut at all and you have sharpened the gouge, the wood may be one of those awkward sense ones that one might be better off using a scraper on. I hope this helps.

IS IT WORTH IT?

"Dear Editor, I recently had the chance to go through all my late grandfather's woodworking kit – he was a joiner by trade. I've taken up woodworking, so I wondered if there was anything useful or interesting I could add to my toolkit. Unfortunately, quite a few bit were rusted as it was all left in a dampish shed with gaps leaving it open to the elements. The chisels I think I can clean up, but the state of the planes made me wonder if it wouldn't just be better buying new instead? They look to be quite old, but I'm not sure if they are valuable. Do I just get rid of them to a scrap dealer or try restoring them? Advice please!"

Bill Grately

Anthony replies: Hi Bill, the answer really depends on your point of view I think. Most old rusty tools including planes can be brought back to use – with 'character'. They won't look new nor should they. There may be some gems among his tools in any case, you can research old tools on the internet and planes in particular can be dated with reasonable accuracy when you know what to look out for.

I enjoy restoring old tools, it is satisfying getting them working again and making them look quite smart and a pleasure to use. With planes I strip them down completely and photograph any identifying detail so I can do research later on. Next the metalwork often just needs a really good cleaning on the painted surfaces and the bare metal sides and base rubbed repeatedly across medium and then fine grades of emery paper until flat and rust free. The wooden handles may need hard cracked lacquer carefully prising off and refinishing with something more pleasant to the touch such as hard wax oil. The blade will usually need serious attention, regrinding the edge without overheating the metal followed by honing. Properly done you will end up with a plane to be proud of rather than just taking the easy option and buying new.

Top: A restored 010 rebate

Right: A rusty No.4 smoother

TOMACO THE TOOL MARKETING COMPANY

STAR QUESTION PRIZE

The Tool Marketing Company, or TOMACO, as it is known, who sell a variety of tool brands, including COLT, Sharp Edge and Narex Tools, are pleased to be sponsoring the 'ask the experts' section in collaboration with GMC Publications.

Each issue's 'Star Question Prize' will receive a Narex six-piece chisel set worth £79.95 and all other published questions will receive a 20mm half-round fine cut Narex rasp worth £20.95. For more information see www.tomaco.co.uk

If you have anything to say, write to: The Editor, *Woodworking Crafts*, 86 High Street, Lewes, East Sussex BN7 1XN. Alternatively, email: anthonyb@thegmcgroup.com

Things to do in **January**

While you aren't doing serious woodworking in the cold dark months, now is perhaps the time to check some of the essentials.

Insurance

While renewal dates can be any time of the year, many people sadly find out all too late that they are not properly covered for their workshop and shed equipment. Many are vastly underinsured and some find out they are not covered at all for their tools and equipment. Talk to your insurers, make sure you are covered properly and that you have the appropriate security measures in place to hamper any unwanted visitors. Also there are domestic CCD systems and shed alarms which can give you greater peace of mind. Check the state of fences and gate locks because if they're properly maintained that will make access that bit harder for would-be burglars.

PHOTOGRAPHS BY GMC/ANTHONY BAILEY

This padlock, hasp, staple and a few other security measure have kept the GMC Workshop safe for years

Safety – first aid

It is worthwhile checking your first aid kit as some things go out of date. If you haven't got one, please get one, as you never know when you might need it. Often plasters rather than full bandages are the most used items and a proper eyewash kit is recommended since eyes are so vulnerable.

Fire extinguishers

Not many people have them, but consider purchashing a fire extinguisher for your workshop setting. Make sure you choose the correct type and capacity. Powder or CO_2 are generally suitable where there is electrical equipment, but do seek advice.

Splitting LOGS

When we mentioned to **the Editor** during a trunk call, the words 'getting fired' and 'the chop', he suddenly made it his burning ambition to write an article all about logs

PHOTOGRAPHS BY GMC/ANTHONY BAILEY

One very tall mature pine tree – in handy slices

On the left an axe, on the right a maul

I've mentioned in the past that I belong to a volunteer footpath group maintaining walkers' rights-of-way. One of the benefits is sometimes being given free wood to burn. This time several of us divided up a large amount of logs between us as a result of clearing up all the felled wood in a colleague's garden.

Most of it was a pine *(Pinus spp.)* tree that no one else with open fires wanted, but I have a woodstove, which doesn't discriminate between species! Pines have a high calorific value due to their fibrous nature and all the resins locked in the wood, but they burn quite quickly. What I didn't know beforehand was that the tree was approximately 73 years in age and probably about 60-65 foot high when standing. That's a lot of wood even though snedding – trimming – the branches off had already taken place…

Chop or split?

We say 'chop firewood', but that isn't correct. An axe is used for chopping down trees or delimbing branches, not for splitting logs. Let me explain – an axe is slim in profile and sharp, very sharp. If you use one to split logs open it could potentially get damaged because of the force involved on such a slim blade. Instead we use the following: a maul, which, unlike the axe, has a fat head in profile and is blunt, yes blunt. In addition a sledgehammer and wedges, which are also blunt, will do the job of splitting. The extra thickness and lack of a sharp vulnerable edge make these tools ideal for splitting. Skill rather goes out of the window, it's about efficient application of force to part wood fibres.

I found it necessary with such a big amount of log slices, to stack them neatly until I was ready to get to work on them. I used a series of bandsawn wedges to stabilise the stacks so they wouldn't fall over. The weight was immense so this was essential for safety.

It became apparent that this tree wasn't going to give up in a hurry. The timber was very dense and resin packed. In addition, it had been lying in damp conditions but was effectively part seasoned, green wood is generally easier to split. Last year I got another pine tree in slices but I only needed a maul and a log grenade – this one was much tougher.

First of all I chose a dense slice without splits plus a reserve slice, both of which would act as my chopping block on which to work. A word of warning, make sure the ground, or concrete in this case, underneath is tough enough to resist the force of the blows administered each time.

Working safely

Felled trees can mean a variety of problems. In this case the pine had been chainsawn into convenient short slices but was still very heavy to move. We used a ride-on mower and trailer to shift repeated loads out to our own cars and trailers. It was important not to hurt our backs lifting or overload the vehicles concerned. Builder's gloves and steel toe capped boots were essential as well as old, snag-proof clothing. For splitting operations add a pair of goggles or wraparound safety glasses.

Stay healthy

Splitting logs is hard physical work. It isn't for everyone and you need to be fit enough in the first place. It is important to do some workout exercises first to loosen your body up and get your muscles warm. Don't work for hours on end; you will tire and become weakened. Do drink plenty, dehydration even in the depths of winter is an issue but more so in the heat of summer, keep a towel handy to wipe the sweat from your brow!

Lastly, there is a condition called 'carpal tunnel syndrome', which can be induced by heavy physical activity including shocks to hands, wrists and arms, even if you haven't had it before.

Essential safety equipment

Carpel tunnel syndrome can be induced by shocks to hands, wrists and arms

It causes numbness, tingling and pain or discomfort. Do not ignore it, desist from log splitting or anything else causing it. It can occur some time after the activity that caused it. The hand nearest the hammer head will get the most shock particularly the junction with the thumb so don't press your thumb down hard on the shaft.

Above: The log slices stacked with bandsawn wedges to prevent them falling over

Executing the wedge and blocks trick – see next page

Choosing where to split

A pine tree characteristically has regular branches all the way up the trunk. These must be avoided at all cost or you will find the wedge is jammed for good. Look out for blind knots in the bark, circular bulges that reveal where snedding has taken place some years in the past and the tree has healed itself by growing bark over the wound. Place the wedge away from any suggestion of branches or knots.

Always go for the obvious split to make the job easier

A 'blind' knot where a branch was cut off must be avoided

A 'log grenade' jammed in tight because of a nearby branch

Making the first slice

1 Place the first slice on the chopping block, making sure it doesn't rock. The first decision is what tools to use. A trial with my maul, which has served me well over the years, failed. It just bounced off the face of a log and would only part the bark around the edges. So I borrowed a sledgehammer from my father-in-law, Robert. He also supplied some 'mushroomed' steel wedges, which I didn't fancy so I bought two new ones instead. The sledgehammer wasn't heavy enough to drive them in as it weighed no more than my maul. So he kindly lent me a much bigger sledge hammer instead…

Rubber band man

2 OK, nearly sorted, except the wedges wouldn't neatly drive into the logs they were so hard. I should explain I considered an electric logsplitter but they can't cope with such big diameters or the force required. So my solution was to use a couple of strong elastic bands, the sort postmen conveniently leave lying around when delivering letters. These are double-twisted around two short wood blocks and the splitting wedge pushed down between them. It holds the wedge upright, you will need some spare bands though.

Bandsawing

Bandsawing logs can be done if the sections are small enough and you have the right blade fitted. I only reserve this treatment for awkward pieces especially where the dreaded iron-hard knots are. The logs have already been split so they can then be bandsawn easily and safely cross-grain, to reduce internal forces and only then cut lengthwise. I use a Sabrecut 3tpi green wood blade from Tuffsaws. It has wide-set teeth with the middle one of each set of three being 'unset', this gives a wider kerf and removes wood dust efficiently: www.tuffsaws.co.uk

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Try to find some splits and choose one away from a branch location. Place the wedge over and in-line with it.

3 This is not a tickle I'm about to apply. It's full blunt force, lifting the sledgehammer up high and driving it down on the head of the splitter. The first blow can just cause a small dent and wedge falls over, but strangely it's enough to seat the wedge ready for the second blow.

4 Another heavy blow then drives the wedge partway in and the split starts to open. Several more blows and the wedge is driven right in and possibly stuck in the log.

5

5 The second splitting wedge is inserted by hand further along the crack and thumped in with the sledgehammer to part the log completely.

6 A maul is also good for separating the log with the hook helping when you twist the tool. Incidentally, don't try sharpening a maul as there isn't much metal at the edge without reshaping it. Now you probably have two large chunks that need breaking down further. Fortunately, as the log gets repeatedly parted it loses some strength to resist so it does get a bit easier. You can use a wedge as before or the maul.

7 Chances are the log chunk will get jammed on the maul, lift it up and bring the wood down hard on the stump so it splits apart.

8 My preferred option with smaller sections is to use a 'log grenade'. This cheap lump of iron is easy to tap into a log and then thump repeatedly until the wood fibres can't resist the force and split open.

9 There's something important missing in the process. It's messy hard work with split pieces flying everywhere and the problem of balancing small sections on the stump in order to split them down. The answer is more elastic in the form of a couple of bungee straps.

10 As you make each split the log will roughly reassemble itself as you remove the wedges. It is much easier to do the minor splits and the whole thing stays put. Until you try this you cannot appreciate how much easier the job becomes. Then remove the bungees and prepare to stack the wood…

11 … which should look something like this! Stacking and storing is a whole other thing, but this dry ventilated shed will hold just some of this massive pine. In Norway they have been hotly debating whether split pieces should be stored bark up or bark down – don't let's get started on that one!

12 On the subject of heat, pine is dry enough, if stored well, after about six months. I keep loose bark separate because it is an insulator and can be used to damp down a woodstove fire and hopefully keep it in overnight. Still, can't stand here gossiping, I've got plenty more logs to chop – I mean split… ■


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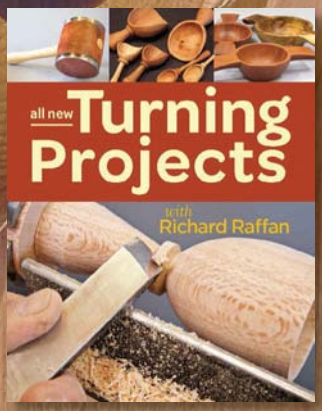

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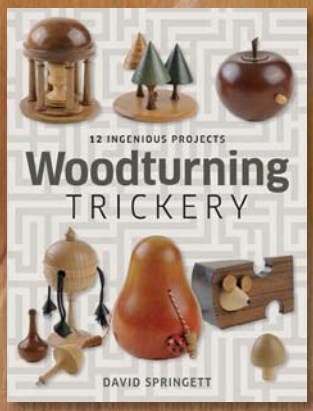

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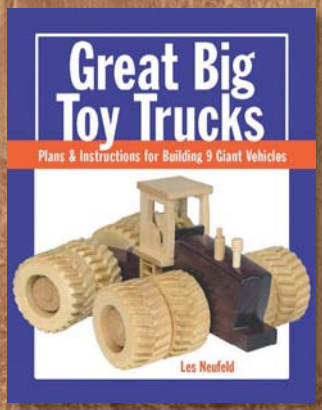

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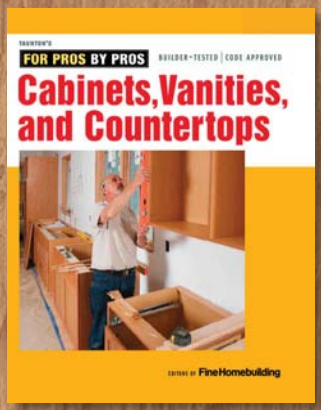

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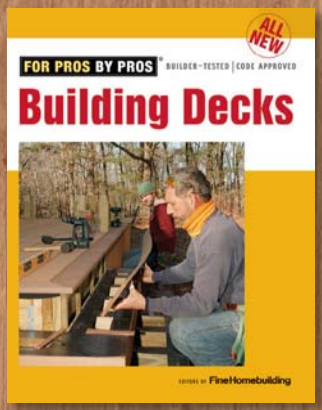

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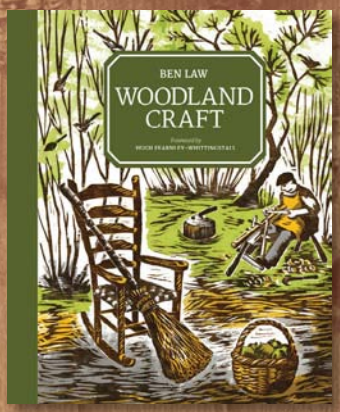

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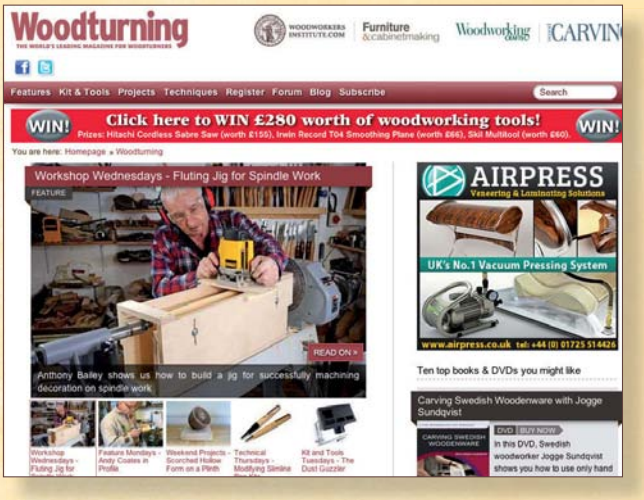

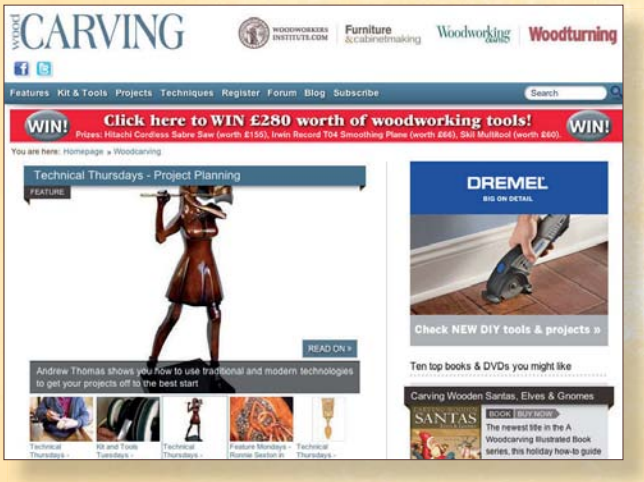

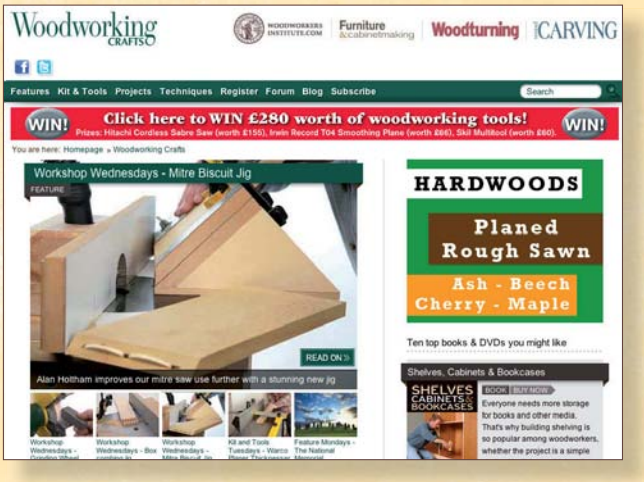

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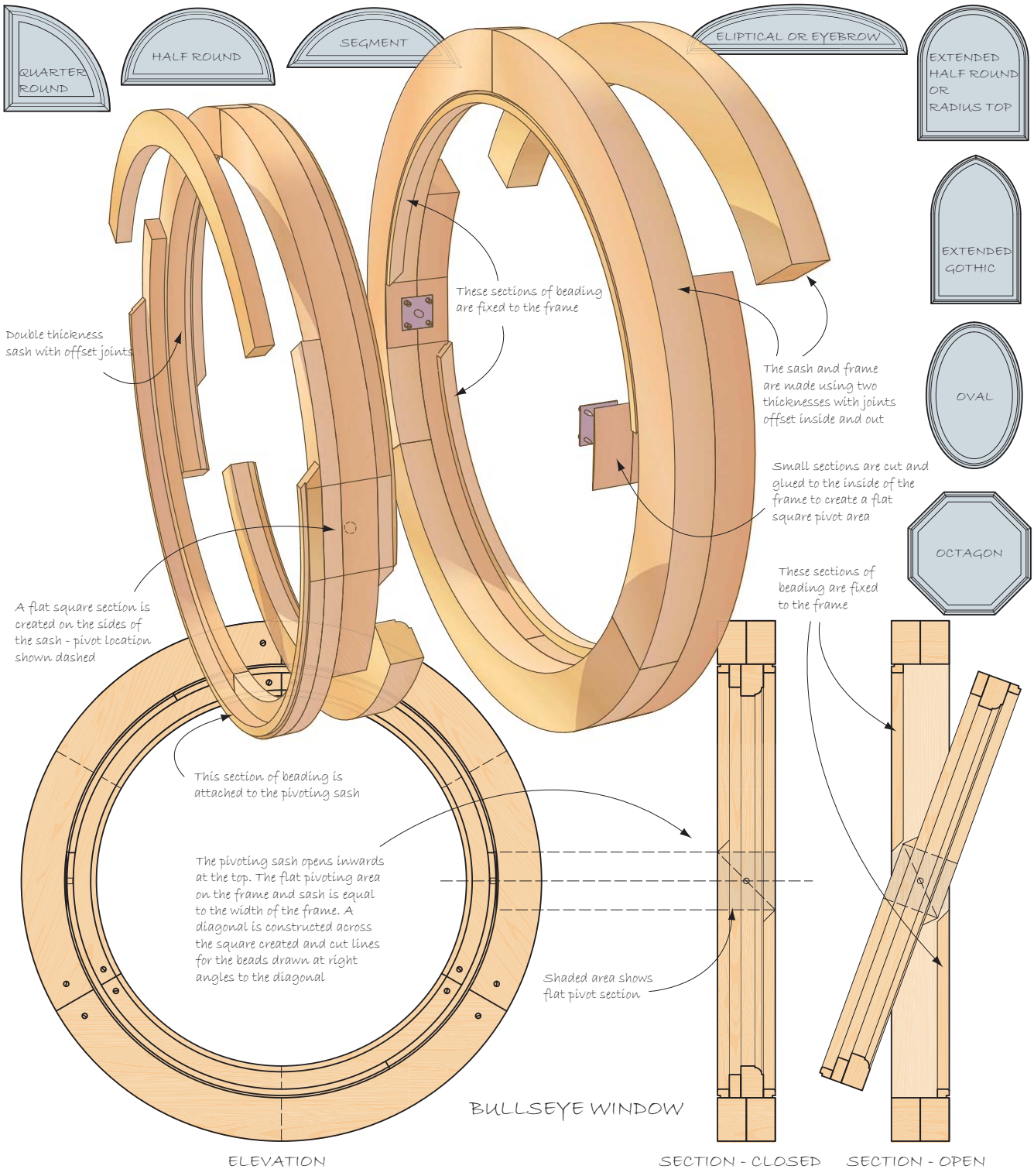
WOODWORKING GEOMETRY

Simon Rodway shows you how to build a geometric window

Geometrical windows really do come in all shapes and sizes and I've shown just a few of the common shapes here, but there are many more. As a construction example I've chosen a 'bullseye' window, which is a small round window with a sash that opens by pivoting inwards at the top. Both the frame and the sash are built up using a double thickness of timber, which allows you to offset joints inside and out, a standard technique on round frames. The tricky part when making this is to set out the cuts in the beading and the flat pivot sections on the frame and sash.

Additionally, to allow the sash to be slipped into position over the pivots, a groove – not shown here – must be formed in the side. When the window opens the beading is split between sections fixed to the frame and sections fixed to the sash. ■



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