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- THE ROCKING HORSE SHOP: 41 YEARS OF PRESERVING TRADITION

August 2018

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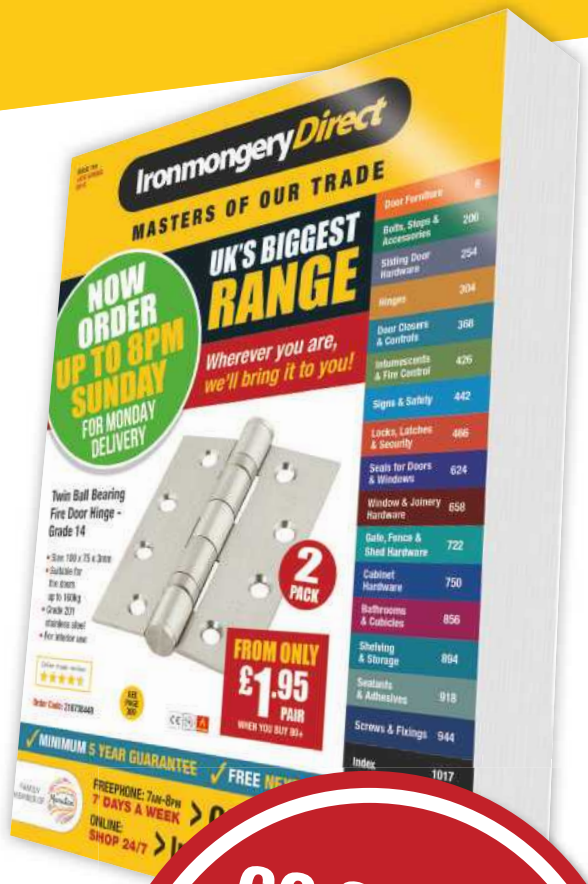

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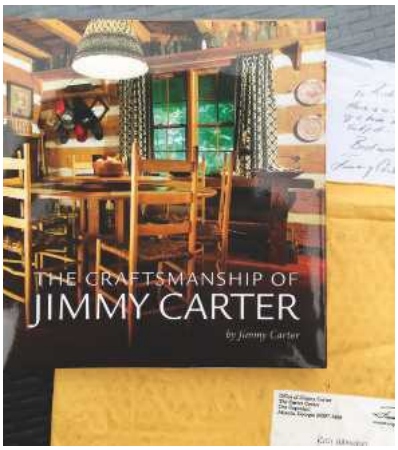

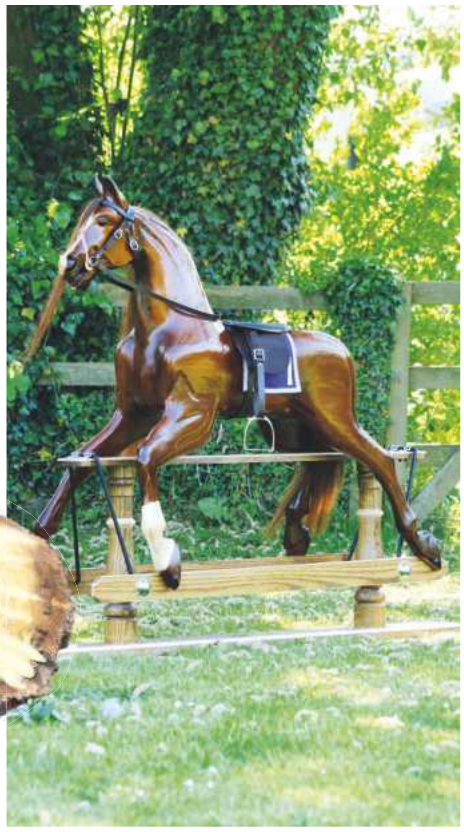

Welcome

Hello and welcome to our August issue, which has lots of fantastic woodworking surprises in store for you. We're pleased to announce that the first issue of the new incorporated title is now on sale and I was thrilled to receive a great many emails, and even letters, to let me know how much you're enjoying it. I must say that I've been overwhelmed by your support during this rather tense transition, and I'm extremely encouraged to hear your positive words going forward.

One of my favourite letters, which you can see printed on page 71, was received from a Mr Ray Willis, who has been subscribing to *Good Woodworking* since the first issue. Ray's hand-written note really did make my day, as it demonstrated to me that he had obviously gone out of his way to reach out, and that certainly means a lot. Ray, who is nearly 90, has been working with wood since the age of 12 and to this day, he is still making things in his workshop, as well as inspiring his grandson along the way. His heartwarming greeting and enclosed photos really did make me smile, so thank you to him and everyone else; it's the little things like this that really do make our jobs as Editors all the more worthwhile.

Sunny days

As well as working on the magazine and doing my best to get organised and decide what's going in the next issue(s), I've been trying to get outside as much as possible. Who would have thought it: two bank holiday weekends with wonderful weather – surely that must be a first? Like many of you, I love gardening and despite only having a small patio space, this is very much my go-to sanctuary when the sun is shining. I'm lucky to be able to look out at the colourful flowers while I work from my office, which can be quite frustrating when the sun is beating down, but lunch is often enjoyed al fresco to ensure I don't miss out!

What's in store

In terms of what you can expect from this issue, Ben Hackney's custom tool rack will be a welcome addition for anyone looking to get organised and make a home for their tools. Ben, a professional carpenter, was really chuffed to be able to share this project and the passion he has for his tools really shines through – how brilliant that each one has its own made-to-measure holder. Congratulations must also be extended to The Rocking Horse Shop, who this year celebrate 41 years of making these wonderful heirloom toys, and if you'd like to see some of their creations for yourself, as well as being given a glimpse inside their dedicated workshops, then be sure to attend Fangfest in the Yorkshire village of Fangfoss, which this year takes place from 1–2 September – see **www.rockinghorse.co.uk** for details.

Tips win prizes

It's been fascinating to receive all your hints and tips too – I've certainly learnt a great deal about what can be achieved with bits and pieces lying around the workshop! There's still lots of prizes up for grabs, so no matter if you're a general woodworker, woodturner, woodcarver or just enjoy the odd bit of DIY, be sure to send in your tip and we'll do our very best to feature as many as we can. Good luck to all those who enter, and happy reading!

Tegan

Email tegan.foley@mytimemedia.com

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Technical & Consultant Editor

Dave Roberts
Consultant Editor

52 41 YEARS OF PRESERVING TRADITION

Jane Cook and her team at The Rocking Horse Shop are truly dedicated to keeping the tradition of rocking horse making alive, and after 41 years in the business, we're pleased to report they are still going strong

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INCORPORATING Good woodworking
AUGUST 2018

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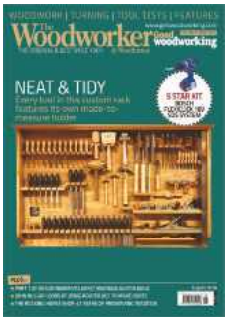

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BEHIND THE SCENES AT THE PRODUCTION OF PETER SEFTON'S NEW WOOD MACHINING SERIES

"The summer holidays are our time slot for filming with Peter Sefton. The students from his furniture school are away and we have a 2-3 week period in which to get the whole year's filming completed. The pressure is on.

I was particularly looking forward to last summer. As an amateur woodworker I have absorbed a lot from the 25 hand tools DVDs that Artisan Media have produced over the years with various woodworkers. But last year was special. Peter was to produce a series on setting up and using woodworking machines. Great for the public looking to learn about wood machining and also very handy for me.

Fortunately Peter is a natural presenter; very clear and logical. He has over 35 years' experience as a designer/maker and also a long time teaching students. This makes the process of designing the video content much easier.

We don't use a script, apart from the occasional introduction section when the autocue comes out.

It's a lot harder to use than you might imagine. Instead there is a structured plan, which Peter usually finalises on the beach during his family holiday the week before. So, bronzed, recovered and relaxed, the filming commences. Peter's spacious machine room is transformed into a studio crammed with lights, cameras and cables running everywhere. First up is the bandsaw, which is split across three full DVDs: the first on Set Up and Maintenance, then two DVDs of Advanced Techniques. That takes a full week. Next a Set Up and Maintenance video each for planer and thicknesser, plus a techniques video for each. To round off the whole job is a photography session creating two or three shots for each video.

The filming was fun and went very smoothly, but then of course the hard work really starts. Editing, sound mixing, graphics, authoring, colour... Locked in darkened rooms. Each DVD requires around a month of post production.

Now the new series is finished and available to buy. The extra bonus is that in the intervening time, my own weekend woodworking has improved massively. Until filming this series with Peter, I didn't appreciate how many things you can do with these machines and the incredible levels of accuracy you can achieve. The one downside is that my machine wish list is now even longer!" **Dave Brown** – *Artisan Media*

To find out more about DVDs from Peter Sefton, see **www.woodworkersworkshop.co.uk**.

PROTECT YOUR FURNITURE WITH TEKNOSPRO

TeknosPro's Futura Aqua 20 was used by Jan Jankowski from JJ Painting Services, a professional painter and decorator with a focus on kitchens and indoor pieces, to protect his customers' furniture. The homeowners requested a coating for their furniture that was not only visually appealing; they also wanted protection from wear and tear. Futura Aqua 20 was the perfect choice.

The bare wood was initially coated with a primer and then followed by two coats of Futura Aqua 20, a semi-matt paint specially designed for use on furniture. The waterborne product is wear-resistant making it perfect for long-term protection on detached and fixed indoor furniture, although it is also suitable for outdoor use.

TeknosPro paints are tinted to order and can be colour matched to any British standard colour, or you can choose from Teknos' own opaque colour range – Colour Mode. Use it on metal and wood building board surfaces, doors, window casements, cabinets, mouldings, panels, air ducts, staircase railings, radiators and piping systems. The paint works brilliantly on top of Futura Aqua 3 primer. The special adhesion waterborne primer is specifically designed for use on wooden and galvanised surfaces indoors yet can also be used on wooden surfaces outdoors.

Jan Jankowski prefers to use TeknosPro products instead of others across the coatings market as he finds they are more durable than other water-based paints in the industry and, as a result, are able to give an excellent finish. For further information, visit **www.teknos.co.uk.**

DIARY – AUGUST

1–2 Wood machining
6 Tool sharpening
8 Pen making
8* & **9*** Make a hat with Andrew Hall
9 Making kitchen doors & jointing
13–14 Advanced turned boxes
20–23 Make a side table
24* Spindle moulding
28 Sharpening hand tools with Tormek
29 Sharpening turning tools with Tormek
30–31* Woodturning
* Course held in Sittingbourne, Kent
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Axminster, Devon EX13 5PH
Tel: 08009 751 905
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11 & **12** Green woodworking experience
12 Birch bark stuff
13–19 Windsor chairmaking
18–19 Square basket making
20 Sharpening
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Tel: 01332 864 529
Web: www.greenwooddays.co.uk

10 Beginners' four-day course
18–19 Tool sharpening and maintenance
Chris Tribe, The Cornmill, Railway Road
Ilkley, West Yorkshire LS29 8HT
Tel: 01943 602 836
Web: www.christribefurniturecourses.com

6–10 & **27–31** Making a table
11–12 Cabinetmaking fundamentals
13–17 French polishing & hand finishes
18–19 Antique furniture restoration
20–24 Sharpening & essential hand skills
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Web: www.johnlloydfinefurniture.co.uk

11 Pyrography
13 Sharpening
14 Pen turning
15–16 Woodturning
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Bennetts Timber (Lincolnshire)
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Web: www.bennettstimber.co.uk

Black Isle Woodturning (Scotland)
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Web: www.blackislewoodturning.com

Brodies Timber (Perthshire)
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Brooks Brothers Timber (Essex)
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D Emmerson Timber (Lincolnshire)
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ISCA Woodcrafts (South Wales)
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Web: www.stilesandbates.co.uk

Scadding Timber (Avon)
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Web: www.scadding-son-ltd.co.uk

Scawton Sawmill (North Yorkshire)
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Web: www.scawtonsawmill.co.uk

S.L. Hardwoods (Croydon)
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Web: www.standrewstimbersupplies.co.uk

Surrey Timbers Ltd (Guildford)
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Web: www.surreytimbers.co.uk

Sykes Timber (Warwickshire)
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Web: www.sykestimber.co.uk

The Timber Mill (Cornwall)
Tel: 07966 396 419
Web: www.thetimbermill.com

The Wood Recycling Store (East Sussex)
Tel: 01273 570 500
Web: www.woodrecycling.org.uk

Thorogood Timber Ltd (Essex)
Tel: 01206 233 100
Web: www.thorogood.co.uk

Timberman (Carmarthenshire)
Tel: 01267 232 621
Web: www.timberman.co.uk

Tree Station (Lancashire)
Tel: 01612 313 333
Web: www.treestation.co.uk

UK Timber Ltd (Northamptonshire)
Tel: 01536 267 107
Web: www.uk-timber.co.uk

Waterloo Timber Ltd (Lancashire)
Tel: 01200 423 263
Web: No website

Wenban Smith (West Sussex)
Tel: 01903 230 311
Web: www.wenbans.com

Wentwood Timber Centre (South Wales)
Tel: 01633 400 720
Web: www.wentwoodtimbercentre.co.uk

W L West & Sons Ltd (Surrey)
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Web: www.wlwest.co.uk

Yandle & Sons Ltd (Somerset)
Tel: 01935 822 207
Web: www.yandles.co.uk

BOSCH EXPANDS ITS 18V CORDLESS TOOL RANGE

Bosch has expanded the choice of professional power tools within its already extensive 18V cordless range by adding four further products. They comprise of two combi drills, two drill drivers and a powerful impact driver, which serves equally well as an impact wrench.

Impact driver

The Bosch GDX 18 V-180 Professional impact driver is a truly universal tool, thanks to the unique Bosch GDX bit holder. This two-in-one feature combines a ¼in hexagon holder with a ½in external square holder. It enables the impact driver to handle anything from screwdriving and drilling in wood or metal to wrenching stubborn nuts and bolts.

With a maximum torque of 180Nm, speeds up to 2,800rpm and impact rates up to 3,200rpm, fast work progress is assured. Bosch Professional has described its GDX 18 V-180 as offering the best price-to-performance ratio in the 18 V class of professional impact drivers. For optimum long-term value through serviceability, the tool's gear box and carbon brushes have been designed to be easily replaced when necessary.

Drill drivers & combi drills

Trade professionals looking for a drill driver or a combi drill now have further options. The Bosch GSB 18 V-21 Professional combi drill offers entry-level economy but with professional performance, reliability and resilience. For extra power and durability, in a compact format, the all-round abilities of the GSR 18 V-28 Professional drill driver and GSB 18 V-28 Professional combi drill are on offer.

Key differences include the robust full-metal chuck of the GSR/GSB 18 V-28 models. These also feature Bosch Electronic Motor Protection (EMP), which guards against overloads and ensures a long lifetime. Life is extended in the GSB 18 V-21 tools by a serviceable design with changeable carbon brushes.

Maximum soft and hard torque levels in the 18 V-28 tools are 28 and 63Nm, while the 18 V-21 models score a respectable 21 and 55Nm. In all cases there are 20 + 1 clutch settings. Each tool is offered with batteries featuring Bosch Electronic Cell Protection (ECP), which avoids battery damage due to overloading, overheating and deep discharge.

With their wide application versatility, Bosch Professional sees the 18V-28 tools as being ideal for most tradespeople. The drill driver may particularly appeal to joiners, cabinetmakers and furniture manufacturers, while electricians and HVAC contractors are among those who will benefit most from the combi. There are also wide uses for the 18 V-21 products.

Professional quality

Professional quality is common to all four of the new tools, which are robustly constructed and highly capable in the workplace. Each is ergonomically designed, with small dimensions, low weight and a high-comfort grip, for precisely controlled operation over long shifts with minimum fatigue. An in-built LED light is another shared feature, which professionals will appreciate.

As part of the Bosch Flexible Power System, the new products are fully compatible with the chargers and batteries of all others in the comprehensive range of Bosch 18V power tools. They are now available from specialist retailers with prices starting from £176.40 inc VAT; to find out more, see **www.bosch-professional.com**.

HITACHI POWER TOOLS LAUNCHES NEW CIRCULAR SAW RANGE

Hitachi Power Tools has added two new heavy-duty 185mm circular saws to its impressive power tool range. The C7SB3 makes light work of high-speed cutting with its powerful 1,710W fan-cooled motor. It features a heavy-duty aluminium base with scale, comfortable soft grip handle and comes with an 18-tooth TCT blade and guide as standard. The C7UR also has a powerful motor and aluminium base and comes with a 55mm bevel, adjustable metal cut line guide and a wrench stored on its body for greater convenience.

Both saws employ a blower to propel any dust or debris away from the material so users can easily see the cut line. You don't need to worry about accidentally slicing through the cord either – Hitachi has added cord holders on both tools to keep the power line well out of the way so you can focus on the job in hand. The tools feature external brush caps for ease of maintenance and a unique 90° angle setting system to make precise 90° cuts. With no riving knife, plunge cutting is easier and the blades are simple to replace as both tools include a spindle lock.

With a dust extraction adaptor, wrench and carrying case as standard, plus a three-year warranty when registered online, Hitachi's secure, comfortable and powerful C7SB3 and C7UR circular saws make great additions to every workshop. For more information, visit **www.hitachi-powertools.co.uk**.

DICKIES WORKWEAR LAUNCHES NEW FOOTWEAR FOR TRADESWOMEN

Global workwear brand Dickies has unveiled the Elora, a new style of safety trainer designed specifically for ladies' feet. With a slimmer heel and reduced forepart measure to better fit female feet, the Elora style features a composite toe-cap and non-metallic anti-penetration sole, offering an ideal option for women looking for metal-free safety footwear. Particularly suitable for those working on slippery surfaces, the shoes feature a SRC rated slip-resistant sole and also have antistatic properties.

Water resistance, breathable lining and an energy absorbing sole help to offer all day comfort and dryness.

"We know there's a lack of suitable footwear options for tradeswomen, with most shoe designs on the market more suited to support male feet," said James Whitaker, Marketing Director. "We're excited to be launching a shoe that helps to meet this demand, as we look to do our part to address the needs of tradeswomen who are frustrated at the lack of choice currently available."

As with their recently launched Phoenix and Liberty styles, the new Elora trainers feature a DTc sole – one of Dickies' latest innovative outsole designs. The sole's ergonomic flex lines and geometric tread patterns provide maximum ground contact, even in wet conditions, while the flexibility offered makes this an ideal choice for tradeswomen often required to kneel or bend.

The Elora trainers marks the latest new product launch by Dickies, which is investing heavily on research and development in footwear, taking full control of the design and testing process.

Available in two colour-ways (black with orange or blue detailing), the shoes benefit from an anti-scuff toe and padded collar and tongue for extra comfort. To find out more, see **www.dickiesworkwear.com**.

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routing technology

NEW MULTI-HOLE PATTERNS INTRODUCED FOR MIRKA'S POPULAR PAPER ABRASIVES

Mirka is extending its range of paper-backed abrasives by introducing multi-hole discs in its Gold and Q Silver Ace ranges. This will improve the overall performance by increasing dust extraction capabilities compared to traditional paper abrasives.

The new multi-hole pattern reduces clogging of the abrasive surface, increases the speed of cut, and produces an improved surface finish.

Mirka Gold is an all-round product known for its versatility and quality finish, and Q Silver Ace is a premium ceramic abrasive with excellent performance on more demanding applications. The new multi-hole Gold and Q Silver Ace 150mm discs feature 37 holes for coarser grits and 121 holes for finer grits.

Craig Daycock, Managing Director of Mirka UK, says, "No matter what surface you are working on and what tools you prefer to use, our ambition is to always enable the best possible finish while ensuring a dust-free environment that is good for the operator and the production process." For more information, see **www.mirka.com/uk/uk**.

TREND'S NEW 2018 ROUTING CATALOGUE

Trend have just launched their new 2018 Routing and Woodworking Catalogue. At 260 pages it is their largest catalogue to date. It shows their complete range of router cutters, power tools, routing jigs, woodworking accessories and Trend Snappy tooling.

New and innovative product lines introduced include the Air Stealth half mask. This safety respirator, with replaceable filters, has the highest filtration efficiency of 99.99% with the lowest breathing resistance of any mask currently on the market. Its low-profile design and downward facing exhaust port ensures it won't interfere or steam up any safety goggles or glasses.

Two new jigs are also launched, the Drainer Groove Pro Jig, which allows different drainer grooves to be routed in solid timber and solid surface materials, as well as the Euro Cylinder Lock Barrel Jig, which accurately routs the recess to accept the popular euro cylinder barrels.

With further additions to their extensive range of router cutters, saw blades, routing accessories and Trend Snappy quick-release system, as well as being packed full of information, it is the one catalogue you simply must have. Pick up a copy from your local dealer or visit **www.trend-uk.com/catalogue** to either view online, download, or request a copy to be posted directly to you.

For further information and details of your nearest Trend dealer, just visit the website at **www.trend-uk.com**.

BRIDGE CITY TOOL WORKS COMES TO AXMINSTER

Axminster Tools & Machinery has just added the Bridge City collection to its range of quality measuring and marking tools. These tools are exclusive to Axminster throughout the UK.

Bridge City Tool Works is an exceptional company and enjoys a worldwide reputation for designing sophisticated, highly functional woodworking tools. As standard bearers of the industry, they have been innovating how to make traditional hand tools for over 35 years. These tools are crafted to the highest of standards using the finest materials, and once in the hand and in use, a Bridge City tool will give you the ultimate woodworking experience.

Below are just some of the tools within the Bridge City range:

Try Square TS-2v2 200mm

An accurate and reliable tool with a glass bead-blasted stainless steel blade that is graduated: 0-200mm on the outer edge and 0-150mm on the inner edge. The edges of the blade are square, but not sharp and the scales are easy to read even in a dim light. There is also a 1:8 cut-out for dovetail layout. Priced at £65.95.

Mitre Square MS-1.5v2 226mm

A fine mitre square with outstanding accuracy and styling. The handy size makes the MS-1.5v2 mitre square perfect for marking out or checking mitres. The blade is satin finished hard stainless steel, 31mm wide, 226mm long and an impressive 1.5mm thick. Priced at £63.95..

Multi Tool MT-1

With multiple precise functions this tool is a pleasure to use. The MT-1 combines the following functions: 200mm sliding bevel, 1:8 dovetail saddle square, 1:6 dovetail saddle square and regular saddle square. An effective cam-lock holds the stainless steel blade firmly in position. The blade has a 1:8 dovetail cut-out and a pencil notch on the tip that allows you to use it to draw a line parallel to an edge. Priced at £101.95.

Adjustable Square AS-24v3 600mm

One of the most versatile bench layout tools you will ever own. Featuring a 285mm long, split, anodised aluminium head, the fixed half of the square gives you a permanent 90°, 600mm long T-square with an accuracy of ±0.05mm over the entire blade length. The other half of the head pivots; set the blade of the tool to any angle you require and flip the square to use it as a 600mm adjustable bevel. Priced at £171.96.

As with other quality brands, you would be forgiven for simply wanting to display these tools rather than use them. In the words of John Economaki, founder of Bridge City Tool Works: "A tool should be as compelling when not in use as it is when serving its intended purpose." To see the full range of Bridge City tools and pricing, visit **www.axminster.co.uk/bridge-city** – please note all prices given above are inclusive of VAT.

BOFA LAUNCHES POWERFUL WOODWORKING DUST EXTRACTION UNITS

BOFA International, a global leader in fume and dust extraction technology, has recently launched a new range of woodworking dust extraction units for small workshops as well as schools and colleges.

The new DustPRO Wood range comprises of six models, each tailored to specific performance requirements, with all capable of capturing airborne wood dust that can cause serious health issues.

The units' extraction range covers larger chippings down to dust just 0.3µm (3 microns) in size, and their design makes them ideally suited to smaller workshops and education and training establishments. Each unit combines large filter capacity with high vacuum fume and dust extraction performance, and incorporates BOFA's unique reverse flow air technology to enhance filter capture and ensure longer filter life.

Other features include reusable bags, low friction filters, High Efficiency Particulate Air (HEPA) technology and drop-out chambers for wood chippings.

"Sawing, routing, milling and particularly sanding processes are known to generate inhalable dust, with the potential to create lung disease and breathing problems unless appropriate extraction systems are in place," says John Horsey, BOFA's technical manager. "If not captured through effective local exhaust ventilation (LEV), this fine particulate can lead to occupational asthma, skin disorders, rhinitis and, in the case of hardwood dust, a rare type of nasal cancer. The fumes associated with dyes and solvents also need to be managed effectively."

By law, all employers must assess the risk to worker health by reference to workplace exposure limits (WEL) set by the Health & Safety Executive under Control of Substances Hazardous to Health (COSHH) regulations. Both airborne hardwood and softwood dusts have a WEL of 5mg/m³ averaged over an eight-hour period.

Not only must employers install appropriate LEV, ideally a fume and dust extraction system, they must also test each LEV system every 14 months (effectively every year) and keep records for five years.

"What's commonly overlooked is that as well as having a primary health benefit, a properly designed and installed extraction system also delivers productivity gains because maintaining a dust-free environment keeps machinery in optimum working condition and can avoid costly downtime caused by equipment contamination," finishes John. To see the full range of dust extraction units, see **www.bofa.co.uk**.

CHESTNUT
PRODUCTS
FINISHING SCHOOL

Using Burnishing Cream on Sanding Sealer.

1 Burnishing Cream is a creamy liquid which contains a very mild abrasive; so mild that it will cut back a finish and leave a shine. Always shake the bottle well to mix the abrasive into the liquid.

2 Prepare your work as normal and apply sanding sealer. Cellulose Sanding Sealer is best for this (Acrylic Sanding Sealer and Shellac Sanding Sealer can be used provided sufficient time has been left for the sealer to harden). Cellulose Sanding Sealer is ready for burnishing within minutes.

3 Use Burnishing Cream sparingly, don't over lubricate the surface. Use Safety Cloth to apply it with the lathe running, using a firm (not hard) pressure to maintain contact between the timber and the cloth.

4 Continue the process, adding more Burnishing Cream to the cloth if necessary (still sparingly). Carry on until you see the shine grow. If too much Burnishing Cream is applied use a dry cloth to bring up a higher sheen.

5 The piece should now feel silky smooth to the touch.

For best results and protection overcoat with any of the waxes in our range or Friction Polish.

More information available from your local stockists or contact us at:

PO Box 260, Stowmarket, IP14 9BX
Tel: 01473 890118
mailroom@chestnutproducts.co.uk
www.chestnutproducts.co.uk

FELDER GROUP UK HOSTS SPRING IN HOUSE EXHIBITION

FELDER GROUP UK recently hosted an annual Spring In house Exhibition at their UK headquarters in Milton Keynes. Visitors were given a great opportunity to see one of the widest range of machines on the market and have one-on-one time with the technical sales team, product managers and service technicians. The real highlight of the show, however, was the live demonstrations that were performed on the Hammer A3-31 planer/thicknesser, which was equipped with the award-winning Silent-POWER spiral cutterblock.

Felder Group UK's Chief Executive, Matthew Applegarth, commented: "It was great to see so many people in our showroom across the two days and for us to be able to demonstrate just how good our machines really are!"

FELDER GROUP is one of the leading suppliers of woodworking machines for private, business and industrial use, boasting one of the largest ranges in the industry with over 150 machines across the Hammer, FELDER and FORMAT-4 brands.

For more information on any products and services from FELDER GROUP UK, visit **www.felder-group.co.uk** or call **01908 635 000** to speak to one of their expert advisors.

What's new from

'THE' TOOL SPECIALISTS ● WWW.DM-TOOLS.CO.UK ● 0208 892 3813

D&M TOOLS

TREND DG/PRO DRAINER GROOVE PRO FRAME

MANUFACTURER: Trend
D&M GUIDE PRICE: From £214.95

This new jig from Trend is designed for routing draining grooves in solid timber and solid surface worktops. Made from 12mm hardwearing CNC machined phenolic, the X and Y-axis ski and carriage allows forward, back and side-to-side movement, as well as providing a 0.5° fall.

The router carriage has a hole to accept a 30mm guide bush and the carriage can be locked to allow parallel groove routing for standard drainer grooves. The router carriage can also be used for tapered surfacing applications with a 19mm diameter straight cutter.

The outer frame has index holes at 25mm centres to restrict length of slots and includes two index pins. Five inner template accessories are available separately to give various groove effects, such as straight slot, straight fan, curved fan, lightning fan and hot rod. Please note router carriage is not used when inner templates are fitted. Requires suitable plunge router with 30mm guide bush and cutters. A Unibase may be required for certain makes and models of router.

TRITON POCKET-HOLE JIGS & ACCESSORIES

MANUFACTURER: Triton
D&M GUIDE PRICE: See website

Triton have introduced a new range of pocket-hole jigs and accessories, for quickly and efficiently producing strong joints for a variety of uses including furniture and cabinets.

The range includes:

- Single (1) and Double (2) Mini Pocket-Hole Jigs with a strong nylon body in a compact design; hardened steel drill guide and plug setting guide; plug setting guide assists in fully seating wood plugs; for use with minimum 12mm materials.
- Adjustable Pocket-Hole Jig (3) made from heavy-duty aluminium alloy; for use with minimum 12mm materials; designed and optimised for indoor and outdoor projects; double guides adjustable up to 80mm width; provides stronger joints than standard.
- Seven-piece Pocket-Hole Jig (no clamp) and eight-piece Clamping Pocket Hole Jig (4) with hardened steel drill guide with two-drill fixed spacing; removable drill guide for bench top or mobile use; 3.2mm incremental settings for 12.7-38.1mm thick material.

Triton pocket-hole jigs are well-suited to production tasks: quicker to assemble, versatile, adaptable, repeatable and easy to use.

BOSCH FLEXICLICK 18V SDS SYSTEM

Supplied with four interchangeable chucks, **Phil Davy** looks at the FlexiClick 18V SDS system from Bosch – a powerful, sophisticated tool with excellent performance

When I tested the Bosch 12V FlexiClick drill several months ago, I was impressed by both its build quality and versatility. The concept of interchangeable chucks on a small, pro tool was certainly appealing after my initial scepticism. Its bigger brother is this 18V version, consisting of a GSR 18V-60 FC drill/driver plus four detachable chucks. Also available as a bare unit if you already have Bosch batteries, this kit contains the full works. It comes with two 5.0Ah Li-ion power packs, providing most users with more than enough power. Also included is a fast charger, with full recharge in about 45 minutes. Everything is housed in a stacking L-Boxx, part of the Bosch Sortimo stacking system.

Bluetooth & SDS

What sets this kit apart from the 12V system in particular is the inclusion of an SDS Plus chuck. This will probably be of more interest to builders and site workers than dedicated woodworkers or DIYers, who usually find a standard combi drill's hammer action quite adequate. The other significant feature, apart from increased power and performance, is the addition of Bluetooth technology. With a Bosch Low Energy module inserted in the handle you can instruct the drill from an app on your phone. These include kickback control and electronic clutch settings that can be adjusted wirelessly, within a range of 30m. Clever stuff indeed.

But back to the drill itself. As you'd expect these

With a Bosch Low Energy module inserted in the handle, you can instruct the drill from an app on your phone

The drill is fairly compact, measuring 190mm from front to back with standard chuck fitted. This reduces to 140mm with chuck removed

Gear selection is via a slider button positioned on top

An LED display enables you to check current charge level by depressing a small button on the pack

Batteries simply slot into the handle

At the end of the motor shaft is a spring-loaded, ¼in hex socket, enabling bits to be directly inserted

With the relevant unit aligned with the end of the drill, you twist the collar to click it into position

Both the offset…

… and 90° adaptors terminate in a hex socket, and these units are fitted to the drill in the same way

days it's fairly compact, measuring 190mm from front to back with standard chuck fitted. This reduces to 140mm with chuck removed. The slim handle is comfortable for smaller hands, with soft-grip rubber where you need it. With a 5.0Ah battery on board overall weight is 1.95kg, so the tool feels very sturdy from the start. A large steel belt clip is screwed to the base and can be fitted either side or omitted altogether.

Equipped with a brushless motor (with electronic protection) and two variable speeds (0-600rpm and 0-1,900rpm), gear selection is via a slider button up top. Controlling speed when driving screws or small bits is no problem with the smooth-action trigger. A standard forward/reverse button is located above this.

Not surprisingly, there's an effective white LED worklight at the base of the handle, which remains on for 10 seconds after trigger release. The 20-way torque collar rotates nicely, with clear numerals if you need to check the setting at a glance. Maximum torque is 60Nm, considerably more than the 12V tool.

The Li-ion batteries feature Bosch's Electronic Cell Protection, which manages the cells to prevent damage, overheating and results in longer working life. An LED display enables you to check current charge level by depressing a small button on the pack. Batteries simply slot into the handle.

Chuck convenience

At the end of the motor shaft is a spring-loaded, ¼in hex socket, enabling bits to be directly inserted. Excellent for driving screws in confined spaces. Fitting a chuck is child's play: with the relevant unit aligned with the end of the drill, you twist the collar to click it into position. In case of doubt, icons indicate correct rotation to lock or unlock the chuck.

A heavy-duty 13mm Rohm chuck is standard, with knurled steel outer sleeve. The jaws will grip bits down to 1mm diameter. Both the offset and 90° adaptors terminate in a hex socket, and these units are fitted to the drill in the same way. Once locked in place, you can rotate the socket to any of 16 positions around the motor axis by pulling the relevant adaptor outwards, then twisting it.

Fitting the SDS Plus chuck cleverly converts the drill to rotary percussive action, with impact energy of 1J. Containing the piston, this increases overall length to 265mm, though you still end up with a relatively compact drill. The textured side handle can be positioned anywhere around the chuck, locking easily with a twist of the wrist. There's provision for a hexagonal depth rod, though oddly none is provided. A benefit of SDS is rapid bit fitting, with removal simply by sliding a collar backwards. With suitable bit inserted, drilling performance is impressive into concrete and masonry. Don't forget those ear defenders, though – I found it's far noisier than regular hammer action.

Conclusion

If you sometimes find yourself requiring the considerable punch of rotary percussion (as opposed to hammer action) but don't want the weight and bulk of an SDS drill, the 18V FlexiClick system could well be the answer. You can simply swap chucks as needed. And there's Bluetooth, too, which I've not really touched on here.

This is a powerful, sophisticated tool, with excellent performance fitted with either standard chuck or hex bit adaptors. There are several buying options, but the full kit is very expensive. If you can't find a solution to your screwdriving or drilling access problems here, I reckon you're unlikely to with any other cordless tool…

SPECIFICATION

Max torque (hard/soft): 60/31Nm
No-load speed: 0-600 & 0-1,900rpm
Chuck capacity (min & max): 1.5 & 13mm
Torque settings: 20+1
Battery voltage: 18V
Weight excluding battery: 0.9kg
Max drilling diameter in wood: 38mm
Max drilling diameter in steel: 13mm
Max screw diameter: 10mm

Supplied with:

- 2 × battery – GBA 18V 5.0Ah
- Angle adaptor – GFA 18-W Professional
- Hammer adaptor including auxiliary handle – GFA 18-H Professional
- Metal chuck adaptor – GFA 18-M Professional
- Offset angle adaptor – GFA 18-E Professional
- Quick charger – GAL 1880 CV
- L-BOXX 136 & L-BOXX inlay for tool and charger

Typical price: **£609.31**
Web: www.bosch-professional.com

THE VERDICT

PROS

- Four interchangeable chucks, including SDS Plus; Bluetooth connectivity; two 5.0Ah batteries

CONS

- SDS Plus bits needed for maximum benefit; full kit is expensive

RATING: 5 out of **5**

There's provision for a hexagonal depth rod, though oddly none is provided

This is a powerful, sophisticated tool, with excellent performance fitted with either a standard chuck or hex bit adaptors

BATAVIA MAXXROLL SANDER

Phil Davy takes a look at this versatile tool, which is ideal for sanding a variety of materials such as wood, metal and plastics

You may not have come across Dutch manufacturer Batavia before, though we tested their MaxxSharp tool sharpener a few months back in *Good Woodworking*. Although a relatively recent portable sander format aimed at DIYers, the MaxxRoll is not unique. We first saw the Bosch Sanding Roller some time ago and there's been one or two similar products since then.

This is hardly a delicate power tool in terms of performance, though variable speed does mean you can reduce its abrasive action when necessary. Designed for rough sanding timber, metalwork, stonework, stripping varnish and paintwork, the two flap wheels and sanding drum included are fairly coarse at 80 grit. Although finer abrasives are available, the MaxxRoll's primary task is fast removal of material rather than finer finish sanding. Fitted with a narrow flap wheel, shaped work such as turned legs or columns can be cleaned up, too. It's also ideal for rust removal and general renovation work.

Double action

Ideally you should grip the MaxxRoll with both hands rather than one, the elongated body making it easy to manoeuvre. This is shrouded in textured rubber and has several motor cooling slots, one of which created a welcome cool draft when sanding outdoors in hot weather!

Equipped with a 300W motor, the tool is activated by operating a slider lock-on button. You slide this sideways and forwards to power up the sander. This double action sounds awkward, though it's easy to master and means the tool can't be fired up accidentally. Switching off again is easier.

Behind the power button is a recessed dial, controlling speeds from 1,600 to 3,300rpm and convenient to access while sanding. Cable length is a respectable 3m, while the tool weighs 1.75kg.

A cast alloy arm protruding from the front end of the body houses the drive for the steel shaft, over which the wheel is fitted. Changing a sanding wheel or drum is straightforward, though it's not a tool-free process. You depress the spindle lock

The two flap wheels and sanding drum included are fairly coarse at 80 grit

Ideally you should grip the MaxxRoll with both hands rather than one, the elongated body making it easy to manoeuvre

Equipped with a 300W motor, the tool is activated by operating a slider lock-on button

Behind the power button is a recessed dial, controlling speeds from 1,600 to 3,300rpm, which is convenient to access while sanding

A cast alloy arm protruding from the front end of the body houses the drive for the steel shaft, over which the wheel is fitted

To change a sanding wheel or drum, you depress the spindle lock button and insert a hex key at the end of the shaft to release the wheel's retaining screw

button and insert a hex key at the end of the shaft to release the wheel's retaining screw.

Not a problem for the occasional swap, but if you're swapping frequently between abrasive wheels this soon becomes a pain. Both shaft and accessories are keyed to prevent slippage as the wheel is in contact with the workpiece. The hex key can be stored near the end of the cable, though this means the case lid will not shut.

Abrasive sleeves

While flap wheels are mounted directly on the shaft, the rigid plastic sanding drum is fitted before adding the sanding sleeve itself. Sleeves are a pretty tight fit, so swapping one means using the spindle lock button while twisting the abrasive free; not the easiest of tasks. The drum is 60mm wide, while supplied flap wheels are 10mm and 60mm each.

A semi-circular plastic guard gives some protection from the rotating abrasive and is secured at the rear of the arm with a screw. It can be adjusted through about 100°, depending on how you present the tool to the workpiece. A small dust port enables you to hook up an extractor, though at 24mm (internal diameter) finding an adaptor to fit will be tricky. You may need to cut down a common stepped rubber adaptor for this.

With such tools replacement drums and flap wheels can be difficult to source, though luckily Bosch sanding accessories are compatible with the MaxxRoll. Finer grade wheels (120 and 240 grit) are optional extras, costing between £5 and £10 a time depending on size if you opt for Bosch. It's worth mentioning Batavia's own accessory pack, consisting of 15 assorted drums, flap wheels and sanding rolls, costing around £20. This includes a wire brush wheel, conical sanding drum and Scotchbrite polisher, which opens up the scope of the tool.

Conclusion

The MaxxRoll could become an almost essential power tool for those house renovation projects, particularly where there are beams or similar to strip. It's certainly handy for reviving garden furniture, fencing, etc. I found it fairly easy to control with one hand, even though it's designed for two. It's not the easiest tool for left-handers to get to grips with, even though the power switch is central. Fast and furious, you may need to finish flat surfaces with a random orbit sander or similar afterwards. Supplied in a tough plastic storage case, it also comes with a two-year warranty.

SPECIFICATION

Power output: 250W
Power supply voltage: 230-24V ~ 50Hz
Idle speed: 1,500-3,000rpm
Grinding roller width: 5-60mm
Axle size: 12mm
Power cable length: 3m

Supplied with: 1 × rubber roller: 60mm; 1 × grinding roller: 60mm; 1 × flap disc: 60mm; 1 × flap disc: 10mm; 1 × robust transport case

Typical price: **£69.95**
Web: www.batavia.eu

THE VERDICT

PROS

- Rapid, coarse sanding of timber; ideal for stripping recycled materials

CONS

- May be awkward for left-handers; spare flap wheels and abrasives can be pricey

RATING: 4 out of **5**

Batavia's accessory pack includes a wire brush wheel, conical sanding drum and Scotchbrite polisher, which opens up the scope of the tool

Sleeves are a pretty tight fit, so swapping one means using the spindle lock button while twisting the abrasive free

A semi-circular plastic guard gives some protection from the rotating abrasive and is secured at the rear of the arm with a screw

The sander is certainly handy for reviving garden furniture, fencing and so on

TORMEK® T-8

MADE IN SWEDEN

GIVES THE SHARPEST EDGES. BUILT TO LAST.

The specially developed rubber on the zinc drive wheel ensures a constant speed, even under full load.

The sleeves are integrated in the fully cast housing, which minimises play for the Universal Support.

Stainless steel main shaft with EzyLock makes it easy to change stones without using any tools.

The powerful industrial motor is a true workhorse.

7 YEAR WARRANTY

THE TORMEK T-8 is a high quality machine which sharpens your edge tools with the highest precision. Water cooled sharpening is gentle on the steel and the edge is continuously cooled by water — there is no risk that the steel becomes over-heated and loses its hardness.

This machine is built for continuous use. Its unique drive system is efficient and manages to hold a constant speed, even under full load. You get a sharpening system that will sharpen your edge tools razor sharp, making them a pleasure to use.

The Tormek jigs give you full control over the sharpening, see all at tormek.com

*The **Square Edge Jig SE-77** makes it easy to sharpen chisels and plane irons.*

*With the **Gouge Jig SVD-186** you can easily follow curved shaped tools and v-tools.*

*With the **Knife Jig SVM-45** you can sharpen most of your knives.*

*The **Tool Rest SVD-110** is ideal when sharpening turning scrapers.*

For more information visit **www.tormek.com** or call UK importer: BriMarc Tools & Machinery 0333 240 69 67

TORMEK®

Sharpening Innovation

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Axminster Tools & Machinery, **Nuneaton**, Warwickshire CV10 7RA	02476 011402
Romford Tools Ltd, **Romford**, Essex RM1 2EP	01708 765489
Westcountry Woodworking Ltd, **St Austell**, Cornwall PL26 7SR	01726 828388
Axminster Tools & Machinery, **Sittingbourne**, Kent ME9 8QP	01795 437143
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The Carpentry Store, **Naas**, County Kildare, Ireland	045 883 088
John J Ronayne Ltd, **Thurles**, County Tipperary, Ireland	0504 21033

Tormek has Authorised Skill Centres in the UK and Ireland, where you can speak to a factory trained person who will demonstrate how easy it is to sharpen with Tormek.

Please come and see why Tormek is No1 for all sharpening.

TORMEK SKILL CENTRE OPEN EVENTS SUMMER & AUTUMN 2018

See how easy sharpening is with **Tormek**

To appreciate the perfect sharpness you experience with Tormek, come and see us at these events. We can run through the key jigs with time to answer questions and make sure you understand what makes Tormek No.1 for all woodworkers! We look forward to seeing you.

Date	Event name	Post code	Town	County	Website/retailer
23-24 June	Axe Vale Show	EX13 5RJ	Axminster	Devon	www.axevaleshow.com
30 June	UKIWS	CV2 2ST	Coventry	West Midlands	www.ukiws.co.uk
1 July	UKIWS	CV2 2ST	Coventry	West Midlands	www.ukiws.co.uk
7 July	Axminster Warrington	WA2 8NT	Warrington	Cheshire	www.eventbrite.co.uk
24-26 July	New Forest Show (with Axminster)	SO42 7QH	Brockenhurst	Hampshire	www.newforestshow.co.uk
26 July	Norfolk Saw Services	NR3 2AW	Norwich	Norfolk	www.norfolksawservices.co.uk
12 August	Snainton Woodworking Supplies	YO13 9BG	Scarborough	North Yorkshire	www.snaintonwoodworking.com
18-19 August	South Downs Show (with Axminster)	PO8 0QE	Petersfield	Hampshire	www.southdownsshow.co.uk
25-26 August	Model Boat Convention (with Axminster)	WA12 0HQ	Newton le Willows	Lancashire	www.modelboatconvention.co.uk
1 September	Chalfont St Giles Show (with Axminster)	HP8 4QF	Chalfont St Giles	Buckinghamshire	www.csgshow.org
7-8 September	Yandles	TA12 6JU	Martock	Somerset	www.yandles.co.uk
24-28 September	Basingstoke Green Week (with Axminster)	RG22 6HN	Basingstoke	Hampshire	
28-29 September	Raitts	Ireland	Stranorlar	Donegal	www.whraitt.ie
12-14 October	'The' Tool Show with D&M Tools	TW16 5AQ	Kempton Park	Surrey	www.thetoolshow.com
3-4 November	The ToolPost	OX11 7HR	Didcot	Oxfordshire	www.toolpost.co.uk
9-10 November	The Carpentry Store	Ireland	Naas	Co. Kildare	www.thecarpentrystore.com
16-18 November	Harrogate Show	HG2 8QZ	Harrogate	Yorkshire	www.skpromotions.co.uk
7-8 December	Toolite	GL17 0SL	Mitcheldean	Gloucestershire	www.toolite.org.uk

Please note: to find more events go to **www.brimarc.com/events**

LEIGH B975 BOX JOINT & BEEHIVE JIG

Jonathan Salisbury looks at a unique jig that promises to produce perfectly fitting box joints every time

Jigs are of course a godsend when it is difficult to obtain sufficient accuracy at speed with hand tools, when the operation would be dangerous without it, and/or when a large number of identical pieces need to be cut. As soon as measuring, marking and hand cutting joints is going to take longer and become tedious in no time, and a router is sitting idle on the shelf, it makes sense to take the plunge (pun intended!) But at what cost? £200 plus, and that's for the basic model; if you only have a few joints to cut, is it worth the investment?

Contents set up and ready for use

Template and adjustable stops

Guide bush set up at the mid-position '5'; the line needs to be marked centrally from front to back on the sub-base

Review criteria

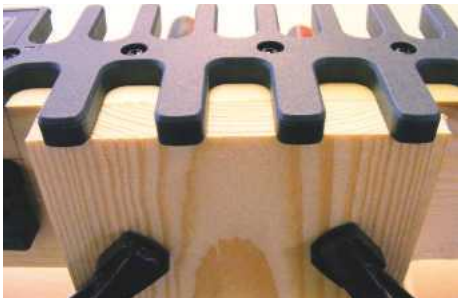
Axminster sent me the new Leigh B975 box joint and beehive jig to try out. At £79.99, ownership of a jig that is only used every now and then becomes justifiable, providing the possibility of time-saving at a reasonable price. Before beginning I decided that the criteria for this review would be as follows: is it simple to set up, safe to use, quicker than doing the same job by hand and does it produce accurate and tight fitting joints? I decided to award bonus points for intuitiveness (there are always those who don't like reading the instructions first, but not me!).

The box set includes a two-sided comb-shaped template (one side for ½in, the other for ¾in joints), an elliptical guide bush and a nut to fix it to a suitable sub-base, a pin wrench tool to adjust the guide bush, a ½in straight cutter, two adjustable side stops (one for each size of joint), two step-over cams for longer joint cutting (one for each size), and an instruction booklet and DVD.

DVD & instructions

I think it is absolutely essential that you read the instructions before you begin, even if you

Guide bush and nut; the bush is elliptical, but this isn't clear in the photo!



Timber aligned and clamped for the first joint; note the even overlap of wood in the recesses at each end, which ensures the joint is central

are an experienced joint-jig user and only need to confirm that you really do know what you are doing. If you decide to only watch the DVD included in the pack, which is excellent, every demonstration is accompanied by a message stating it has been assumed that you have read the appropriate chapter of the instruction booklet, so make sure you do!

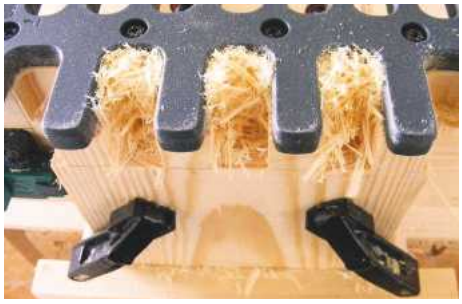
The jig is not ready to use out of the box. Setting up is a little time consuming, but simple enough (providing you follow the instructions!). The template and side stops need to be fixed to a board, which Leigh make from two pieces of 19mm MDF; I used two pieces of standard-sized softwood, which worked just as well. The template has a step on the underside to ensure correct alignment; good design!

In use

Once this first task is complete, the jig is a breeze to use. Firstly, clamp the wood to be jointed in a vice and align the jig so that there is an even amount of wood appearing in the slots at either end of the timber. Clamp the jig in place (the end of the timber must be square, by the way!). The adjustable side stop is kept in the 'S' (for socket) position, slid up to the edge of the timber and locked in place. Mark the thickness of the board and set the depth of the router cutter, then switch on the router and follow the template. The jig is then removed, the piece of timber turned around, the jig re-clamped and the second joint cut. Repeat as many times as you have pieces of timber that require the sockets. To cut the 'P' (pin) part of the joint, flip over the hinged end of the stop and align the wood against this. Cutting the pins is of course the same process as cutting the sockets. The ½in side is straight in and out, but the ¾in sockets needs to be cut in a U-shaped

The adjustable side stop in socket position is slid up to the edge of the board and ensures repeated accuracy

Setting the router cutter depth; the line is drawn by placing the timber that will form the second part of the joint under the template and then marking along the underside with a pencil



The first joint cut, with shavings

The stop is moved to the pin position in order to cut the matching joint

movement from left to right. There's an arrow on the jig to remind you. Be aware that cutting with the grain creates a great quantity of wood straw!

Unlike most guide bushes, which are circular, this one is elliptical. This allows joints to be cut a touch larger or smaller to ensure a tight fit (half a mark changes the setting by a mere 0.001in, or 0.025mm). If the joint is loose, the bush is rotated clockwise to tighten it; if too tight, turn the other way. The supplied tool allows easy and precise amounts of rotation and the screw thread is fine enough to lock it in place by hand. The bush is initially set up at '5' and indexed to allow adjustment to be measured. Happily, 'tighter' and 'looser' are labelled clearly so you won't have to remember which way to turn. It is essential to check the tightness of the nut frequently to ensure that the guide bush hasn't come loose. I also kept forgetting that the guide wasn't circular and that the handles must be kept in line with the axis of the jig. This was something that required concentration since I have become used to being able to rotate my router around jigs and templates or into cuts and not having to worry about how it is aligned.

The Leigh jig is somewhat shorter than others on the market, which reduces the size of joints that can be made in one go. Moving it to a new position risks misalignment and the side stops can also get in the way. Although there is a limit on the width of board that can be jointed, the mysterious 'step-over' cams are slid into the template and turned to touch the inside of one of the existing sockets so that further, correctly aligned sockets can be cut. Refer to the instructions for how to set this up as it requires a second piece of wood with the correct dimensions. Once I got the knack of using this, it worked very well; the wide joint was as perfectly aligned as the narrow joint cut without moving the jig – certainly impressive! As for your router, it needs to have a ½in collet to use the supplied cutter and a sub-base with a 30mm recess for the bush. If your router isn't already equipped with one, this latter feature will be an additional expense, or investment, depending on how you look at it, but other jigs costing much more do not supply required router fixings either. Using a bush also requires precise alignment and zero lateral movement of the base, so if yours has any slack, either in the base or the plunge mechanism, you would be well advised to have it serviced – or seize the opportunity for a decent upgrade. If you prefer to use a router table, it is also possible to turn the jig and board assembly upside down, but ensure you read the instructions for safety purposes.

But what about the beehive jig capability? Well, beehives are often made by stacking open boxes called supers and the corners of these are often joined with a comb joint. Leigh are (I think) merely drawing attention to the use of their jig to help speed up super manufacture and thus widening the potential market.

Conclusion

I am very impressed with the performance of this jig. While most are made from metal and the appearance of the dark grey comb is therefore a little different, the quality of manufacture is excellent. Tolerances are high and consistently accurate joints can be made both quickly and easily. The top also provides a smooth, low-friction surface for the router base to move on and is sufficiently hard to not wear too quickly, if used with care, cleaned thoroughly and looked after. I wonder if wear and tear might affect the locking parts of the side stops; they are an essential part of the setup and, as a new product, it has not had the benefit of long-term use in the real woodworking world to ascertain if or when deterioration will occur. I contacted Leigh directly to ask if replacement parts are available and they confirmed that these are from any of their distributors throughout the five-year warranty period. Finally, the limit to the two sizes of joints you can make will not be an issue for the majority of projects, but is something to consider if you want more flexibility.

I felt a bit mean subtracting 0.5 points from the rating for the fairly minor shortcomings; it has everything you need from an entry-level jig, except the wooden beam to mount it on and the router and sub-base, of course. For anyone who doesn't have the time, or sufficient enthusiasm, to mark, cut and finish the occasional box joint (or 50) by hand, compared to the alternative products, then this jig represents excellent value for money.

SPECIFICATION

- Produces perfectly fitting box joints every time
- Ideal joint for tool chests or storage boxes
- Produces several sizes of beehive super
- ½in or ¾in pins on boards up to 33mm thick
- For use with hand-held router or router table
- Supplied with Leigh e10 guide bush
- Board width up to 452mm (hand-held)
- Includes user guide and instructional DVD
- Router must be able to take threaded guide bush
- Requires a router with a ½in collet and suitable sub-base to take the guide bush
- Five-year warranty

Typical price: **£79.99**
Web: www.axminster.co.uk

THE VERDICT

PROS

- High quality components provide for accurate, tight fitting joints; simple system that is easy and quick to use; excellent value for money

CONS

- Only cuts ½in and ¾in joints; maximum board size is 20.6mm thick and 246mm wide; requires a little setting up

RATING: 4.5 out of **5**

The step-over cam shown in alignment position; the socket to the left has yet to be cut

The finished joint

THE rustic FURNITURE MAKER

Dave Roberts meets **Lynne Cavalot**, whose rustic furniture-making requires little equipment but one important tool

Some aspects of life in the borderlands have the appearance of simplicity, and some of the woodworking you'll find here can be an unapologetically direct response to that. Lynne Cavalot's rustic furniture, for example, might be described as a 'celebration of simplicity' – but only if you're willing to appreciate everything that 'simple' entails.

In the 70s, for example, there was a huge influx of people seeking an 'alternative' lifestyle. "It was like hippy central!" says Lynne, who came to the borders from northern England, left briefly, and then returned to stay in the 1980s. "They were opening vegetarian shops, selling pulses and lentils on the street, buying derelict houses, and doing them up. And they all just took it in, the locals – they were very accepting." Even in the '80s, when Lynne and her husband Martin finally quit modern Milton Keynes for ancient Llanfyllin – "which we'd never heard of!" – the borderlands operated values as different as the two towns: "Annie May Watkins," who owned the house they wanted but couldn't afford to buy, "gave us tea and showed us round; she met the kids and" – partly because the pair were keen to keep the house, whose timber-framed heart dates from the late 16th century, as much the same as possible – "she wanted us to bring them up here."

Lynne and Martin's empathy for the house counted for more with Annie May than money, "so we moved in, and I haven't wanted to be anywhere else since. I took the kids to school the first day, up over the hill, and I said: 'Now, I want you to look at this: everywhere you look there's a hill; I want you never to forget it, and never take it for granted."

There's a whole bundle of values – or ways of valuing, perhaps – in that little history, and they're all part of what needs to be understood if you're going to call either life here, or Lynne's furniture, 'simple'.

Japanned; oak and hazel: attracted by the appearance of ebonising, Lynne experimented with a tin of black paint

Wedding chair; oak and hazel. "You get some fantastic screwy, twisty bits with the hazel, so you can have these beautiful cross-pieces"

Child's chair. This piece was made of reclaimed fence posts, and detailed with dowels which, once trimmed flush with a Japanese saw, "become part of the pattern; they look so cool. I love dowels"

Fork chair; oak and hazel. "Finishes? It depends what I'm making. If it's furniture, it's always been Danish oil; if it's something that's really dry and I want it to travel right through, I mix it with turps or white spirit, and that takes the oil into the wood"

Duck to water

A teacher by training, Lynne began working for Mencap, the learning disabilities charity, where she became involved in a project with the Welshpool and Llanfair Light Railway, for which a team of volunteers led by Lynne and Dan Grove, set about clearing back the trees lining the track. Their original plan was for three months' work for the volunteers, but things went so well that, "10 years later," Lynne laughs, "the Trackside project was still there" – cutting the trees for logs, splitting them for kindling, burning them to make charcoal, turning them on pole-lathes.

Among the people who taught the group its skills was Bob, a rustic furniture maker, "who showed us how to do some basic stuff with a few tools. We started making stools and boot racks; the RSPB asked us to make bird boxes. I'd done art at college – ceramics, painting, fabrics – but I'd never worked with wood until [then]. I took to it like a duck to water." The action of the pole-lathe, for instance, "was just like being at a potter's wheel." When it came to rustic furniture, meanwhile – which requires a creative eye and an almost lateral way of thinking to find and respond to the shapes and possibilities in the materials – "I could see things that sometimes other people couldn't.

"People were giving me wood all the time – hazel from a coppice, ash from beside the river – so I started making furniture, and people seemed to like it." When she left Mencap she took on a shared studio with a friend, but eventually the tools came home where, for the last six years, she's made her furniture in the comfort of a purpose-built garden workshop, which centres on a solid bench and the minimum of tools.

The subtlest tool

A drawblade and a pair of spokeshaves, two Japanese saws, a Veritas power tenon cutter, and a set of cabinet scrapers are the essentials of Lynne's workshop. "Oh, and clamps; but if I don't have clamps, I just use string and a bit of wood. We always used to do it that way; it's easier."

With this compact tool kit, Lynne can cut materials, peel bark, shape and joint components, and glue them together. Most joints that aren't mortise-and-tenon'd with the 1in cutter and a corresponding Forstner bit are pegged with 10 and 15mm proprietary dowels. "I don't use nails or screws; I wouldn't know how to."

Rustic furniture doesn't need much in the way of tools, of course, because it isn't about making the timber conform so much as, well… congregate. Not needing specialist equipment means, as Lynne says, that anyone can give its techniques a go; versatile as a small armoury like this may be, though, it still needs one more tool, and a subtle one at that – imagination.

Daniel Mack, whose books have been a source of inspiration to Lynne, has said that, 'rustic building is a synthesis of the maker's imagination and nature's whimsey'. Internationally renowned equestrian artist, Heather Jansch, helpfully unpacks Mack's pithiness in describing her own approach to driftwood sculpture (See: Something that's 'right'), but there comes a point when words fall short. For, even though Lynne's approach may now benefit from her practiced eye and experience, it's arguably easier to put accuracy into a dovetail than it is to bring that ineffable 'rightness' into rustic furniture because there's a respect in which, though chairs are chairs and tables tables, every chair and table has to be made as though for the first time.

Celtic non-religious chair; fence posts and oak. "I always want to make chairs; I see chairs in everything"

Seat; blackthorn and oak. "I'd never have thought to do this shape if the oak round hadn't broken"

Stool; oak, blackthorn, cherry and hazel. The seat is made from a 430-year-old floorboard, the legs are blackthorn, and the cherry and hazel stretchers have been spokeshaved to reveal the pattern of bark, sap- and heartwood

The result is that you can describe the process but not prescribe it. "Sometimes wood tells you exactly what you're going to do with it: it'll shout at you what it's going to be; it's already in there," would be one of Lynne's descriptions. Or: "All the things you'd want to hide, don't; just leave them there, shouting." And: "Make a virtue of the flaws" – knots, bark, cracks, wild grain, burrs – "they're what makes it wood." It's a reaction to the natural, and one that balances around a point between what the wood has done, and what the maker will do.

Slab back; oak and spalted beech

SOMETHING THAT'S 'RIGHT'

Heather Jansch with one of her driftwood sculptures

Diminutive, wry, practical, articulate, creative but still commercial, Heather Jansch is a dyed-in-the-wool, roll-up smoking, wine cork-pulling artist from the school of cuts and calluses, and – based near the edges of Dartmoor – another variety of borderlander. Compared to the polished products of the furniture maker, Heather describes her driftwood sculptures as 'rough as rats', but they also have a fascinating mixture of the organic and the ordered. On the one hand, the textures and shapes are largely dictated by the materials, yet from that palette she selects the pieces whose line will convey her intention by perfectly describing the tension in a line of muscle or sinew.

Heather thinks of this correspondence between the idea and the object in terms of a 'frequency': "It's about looking at something that's 'right'. I know it when I see it, and I also see it in the way that people respond to the sculpture." Fine-tuning this frequency to achieve that 'rightness', however, might be a matter of taking ¼in off here or there, but it can mean setting the whole piece aside for 18 months. Either way, it's a process that can't be forced: "I don't like to impose my will too strongly on form," Heather maintains, so carving, for example, is kept to a minimum to avoid interfering with those natural textures and shapes. "Instead, I prefer to wait and see what happens"

Garden workshop: daylight, a bench, a handful of tools, and the makings of more furniture

"A bit like improv' theatre"

Sadly some of us would fail the Rorschach test that is Lynne's way of looking at found materials and seeing furniture: "I just look at the wood, see what it needs to be, and make something; if I like it, someone else tends to like it, too. It's a bit like improv' theatre." While there's a type of freedom in this – an off-the-edge-of-the-map sort of freedom that wouldn't suit every maker – it's not without its limitations. When Lynne began placing her furniture with a local craft shop, for example, "everything got sold and I couldn't keep up with it! I can't knock things up in a week; sometimes if I'm making a chair, it can take three months. Some of the pieces are really complicated." It's the difficulty of simplicity, you see. First, there's the collecting of materials: "I've plenty of sources for round pieces – friends with woodlands or hedges – but slabs don't often come along," though discarded oak fenceposts are one source. For larger boards, there're always the sheds at Dave Hinton's timber yard, of course (see *GW*332), but therein lies temptation: "I fall in love with everything; I have to rein myself in, otherwise I'd have loads just because it's so beautiful." Then there's the drying – Lynne prefers to work green wood, but shrinkage plays havoc with tenons, of course – the seeing and arranging, the joint-making, the dry assembly, and final gluing-up… "Now I just make what I want, and if people like it, fine."

Old oak fence posts look as though they're rotten, but the drawblade reveals what Lynne calls 'brown marble'. Spokeshaves and scrapers are used to shape and finish

Rorschach test: do you see old wood or do you see a hare?

Another limitation with rustic's improv' nature is the uniqueness of the pieces. A friend, who'd seen one of Lynne's chairs and thought it would be ideal for her cello-playing, went to Lynne: "'I want one the same', she told me. 'But I can't make one the same', I told her. 'I'll never make another chair like that.'" The commission that followed had to wait on materials and the rustic muse – after all, says Lynne – "I'm only doing this for pleasure. I'm not a businesswoman; it doesn't cost me anything, but I don't make any money at it, either." Instead, Lynne values her work differently: she has the pleasure of people's reaction to the natural in her work: "I have the joy of someone liking what I've done." And that – a pleasure as complicated as it is simple – is surely something never to be forgotten, and never to be taken for granted.

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Photograph by **Dave Hutton**

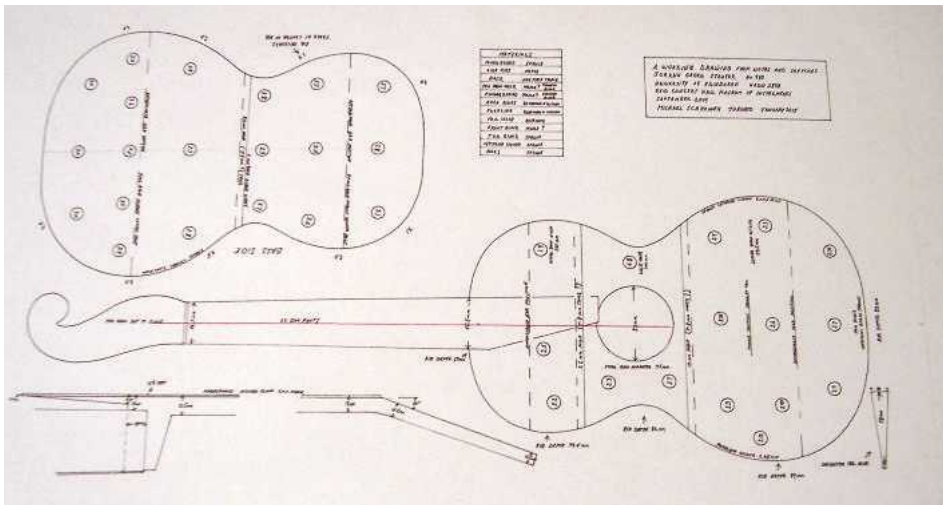
STRIKE A CHORD

In part 1 of this three-part series, **Shaun Newman** shows you how to make an early Viennese guitar in the style of Johann Georg Staufer

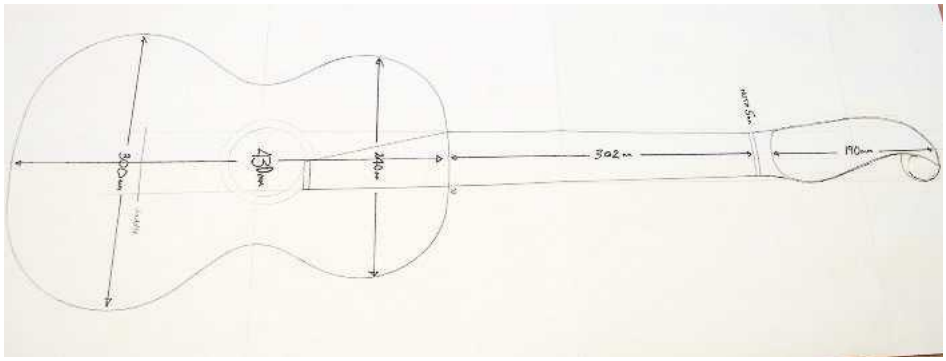
One of the joys of making musical instruments is that you never know what the next commission might be. When a call came in for me to make a copy of a 'Staufer Legnani' classical guitar originally made around 1830, I was thrilled at the prospect. I knew the job would be full of challenges given the unusual tuners and the highly decorative bridge, so although a little daunted I accepted the commission eagerly.

A little history

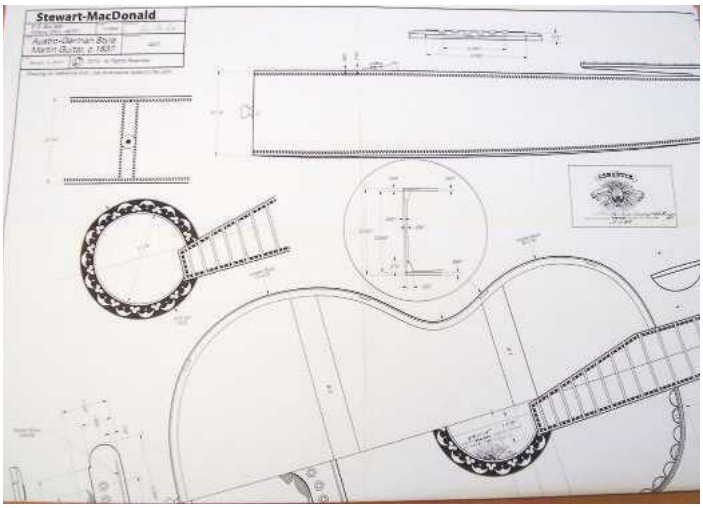
Johann Georg Staufer was born in 1778 and died in 1853. He was one of the foremost instrument makers in Europe and had workshops in Vienna. He made guitars for some of the leading players and musicians of the time including Regondi, Mertz, Legnani and Schubert. Luigi Legnani suggested a number of construction ideas to Staufer who was always looking to improve his guitars. It is thought by some musicologists that Staufer was the first to introduce a detachable neck for a classical guitar to aid portability and to allow for adjustments to the action (i.e. the height of the strings above the frets) to be made easily. He also invented the 'Staufer-Mechanik' in 1825, which was a set of metal tuners with the buttons running along one edge of the headstock rather than having three on each side. He was truly an extraordinary luthier in that he also made high quality violins and cellos, and invented a new instrument, the 'arpeggione',



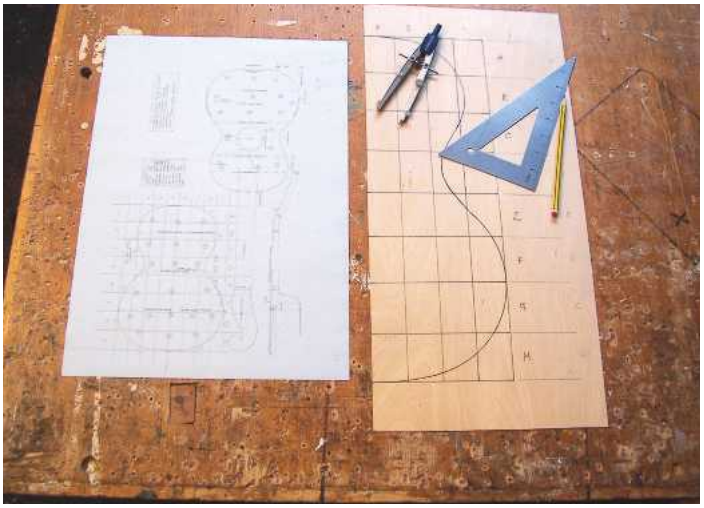
1 Drawings made by Michael Schreiner



2 My own working sketch with some dimensions



3 A Christian Martin guitar plan available from Stewmac



4 The half body template transferred onto ply

which is bowed rather than plucked and has six strings in guitar tuning. The instrument is half guitar and half cello, and even attracted the attention of Schubert, who wrote a sonata for it.

In Staufer's workshop, so it is believed, worked an apprentice named Christian Frederick Martin. He took his skills and knowledge from Vienna to America where he founded the famous 'Martin' brand, which is still in production today.

Making a start

The first task in this commission was to find a drawing of the guitar, which as it turned out, proved to be quite difficult. I contacted some of the leading makers of Staufer copies (Bernd Kresse, Miodrag Zerdoner, and Gary Southwell, for example) but none had a working drawing. Luckily, the customer for this guitar, after conducting some online research, told me of some drawings made by Michael Schreiner in 2014, and published as a free PDF in 2015 (**photo 1**). They are of a model produced at about the right time, so I made my own plan from these sketches and created a full-sized outline by scaling the A4 drawing up to the correct dimensions (**photo 2**). The customer also found more drawings and details of a Staufer guitar from the website of Thomas Ochs in Germany where a free PDF can be found with measurements and pictures. I was grateful for the head start this offered me but discovered later that a full-sized plan with virtually identical measurements is also available from Stewart-MacDonald (see list of suppliers). The plan is of a C.F. Martin guitar, so is a little later than Staufer, and has a slightly different bracing structure (**photo 3**).

The next task was to find some suitable timber for the component parts, which included maple for the back and sides, spruce for the soundboard and mahogany for the neck and head. I decided on sipo mahogany for the latter and ordered the maple and spruce from Alpenholz Pahler, a supplier of the very timbers Staufer would have used from the Markneukirchen area of Saxony in Germany. Luckily the German firm Rubner, famous for their well-engineered guitar tuners, still manufacture the Staufer-Mechanik. I ordered a set and gulped as I paid the invoice!

The construction mould

While awaiting the arrival of the timber and tuners, I set about making the mould. There are two principal ways of constructing a classical guitar, the first being to use a workboard with cams that hold the instrument in place while working, and the other is to use a mould. I favour the mould method as it holds everything very

5 Hardening the template edges with CA adhesive

6 The body shape is transferred onto boards to make the mould

7 The mould boards are then roughly cut out on the bandsaw

8 The hardened edge of the template attached to the mould board for final finishing

9 The inside edge of the mould should be flat and smooth

10 The completed mould – note the removable block to allow the neck through

11 A rebate is cut on the underside of the mould body

12 The mould 'well' prevents damage to the soundboard

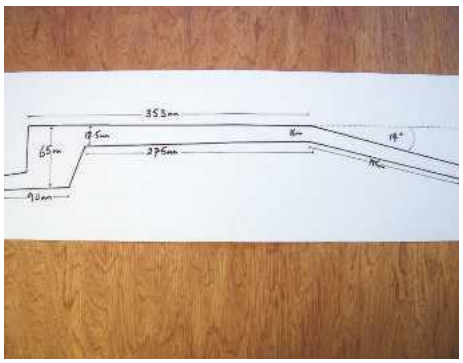
firmly during the many operations that need to take place. First, a template is created, which is half the shape of the body (**photo 4**). This is made from 6mm plywood and has to be cut and finished with care as a bearing-guided flush cutting router bit is used to create the final finish to the sides of the mould, and any uneven areas of the template will be transferred to the sides themselves. To harden the inside edge of the template a coating of CA adhesive is applied; this hardens the edges and prevents small dents being made into the template as the cutter bearing is pressed against it (**photo 5**).

The sides of the mould are made from softwood boards 535mm long and 205mm wide. The outline is transferred from the template onto the boards (**photo 6**), which are then cut roughly to shape on the bandsaw (**photo 7**). Each half side is then finished by attaching the template with small, countersunk screws and using the router with a flush cutting bit to give a smooth finish (**photo 8**). Three boards are required for each side and are glued together to form a sandwich. Both mould sides are then brought together, and the inside edges smoothed (**photo 9**). The structure is then attached to a base of 22mm Stirling board with coach bolts. The baseboard is 760mm long and 405mm at its widest point. A space must be made at the neck end of the mould to allow the neck to pass through during construction. The piece that is removed is glued together at the centreline and held back in place with dowels (**photo 10**).

Two further tasks are required before the mould can be used. First, a rebate measuring 6 × 6mm must be cut into the underside edge of the mould sides (**photo 11**). This permits the braced soundboard to be placed under the ribs later in the construction process. The next task is to make a well for the baseboard so that when the soundboard is fitted the curvature that is applied does not get damaged (**photo 12**). Once the mould is complete, it is treated with several coats of polyurethane varnish to help prevent any part of the instrument becoming attached to the mould during the build.

The neck & headstock

Many of the 'Legnani' model guitars had a detachable neck that was held in place by a through-bolt and a clock key mechanism. The customer for this guitar decided against the mechanism as there are instances where the idea, though it may be a good one, causes more trouble than it is worth. I therefore chose to make the neck, heel and headstock using the traditional Spanish 'slipper heel' method. First a template is made in the shape of the neck and



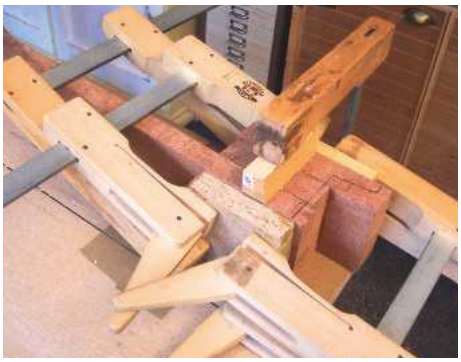
13 The neck and heel template

14 A scarf joint is cut into the sipo mahogany to form the headstock joint

15 The headstock joint in cramps

16 The headstock ready for facing

17 The ebony headstock face



18 The heel block before carving

19 The cone-shaped heel nearing completion

20 The ledge at the top of the heel to accept the soundboard

21 The Staufer-Mechanik housing under preparation

22 The housing now complete

23 The disassembled Staufer-Mechanik

24 The headstock showing the Mechanik in place

25 A commercially available heated bending iron

26 The ribs held inside the mould

27 The tailblock in place

heel (**photo 13**). A billet of sipo mahogany around a metre long, 25mm thick and 75mm wide is required, which is then planed smooth all round. Approximately 200mm is cut from one end to create a scarf joint to produce the headstock angle, which is 14˚ (**photo 14**). Next, blocks are cut from the other end of the billet to form the heel. The shape of the headstock is distinctive and will eventually accommodate the backplate and tuning mechanism. At this stage the headstock is cut oversize and will be adjusted later during the fitting of the Staufer-Mechanik. After cramping into place (**photos 15** & **16**) the head is planed flat and then faced with a thin sheet of ebony that has been reduced to just 2mm in thickness (**photo 17**).

Out of the crude block at the end of the neck (**photo 18**) a cone-shaped heel is formed using a sharp chisel and a Japanese marking knife. This heel shape is typical of early 19th century guitars and was often made of a pine block rather than the same timber as the rest of the neck. In the sides of this block two tapered slots are cut. These will later receive the ribs of the guitar, which will be held in place with cedar wedges. This method of construction offers strength due to the opposing grain directions (**photo 19**).

To allow the soundboard of the guitar to sit flush with the upper edge of the neck, a 2mm ledge must be cut into the top of the heel. This can be done with a chisel or a rebate cutter and router (**photo 20**).

The Staufer-Mechanik presents a challenge in that it must be inset into the back of the headstock. This involves cutting out channels for the winding mechanism and for the button rods. This must be done with extreme accuracy as the screws which hold the backplate in place come very close to the edges of the slots (**photos 21** & **22**). Once the backplate is positioned, a clean line may be drawn around its edge and the headstock can be neatly trimmed back.

To achieve the accuracy that is needed I found it useful to take the whole mechanism apart (**photo 23**) so that I could trace around the winding gear and along the button rods with a fine marker pen. It also gave me the opportunity to pinpoint exactly where the barrels, through which the strings pass, should align along the head. If these holes are even a fraction of a millimetre out of line, it is almost impossible to fit the Mechanik into place, and if it is forced in, it will not operate smoothly (**photo 24**).

The ribs

Each of the two guitar sides, also known as 'ribs', are planed to just under 2mm thick, sanded smooth with 320 abrasive and cut to the correct shape. The heel end of the rib is 65mm wide, the tail end 82mm, and the overall length is first cut to 680mm and later adjusted when the two are fitted into the mould. The ribs must be bent exactly to the form of the inside of the mould and this is done on a hot bending iron (**photo 25**). Such irons are quite expensive, and the investment is really only worthwhile if the intention is to make several instruments that require shaped sides. Alternatives can be found, not least a home-made bending iron made from a piece of cast-iron pipe with a gas blowtorch to provide the heat from the inside. Examples can be found in books and articles on guitar making as well as on YouTube.

Before bending it is as well to wet the timber as this creates a steam cushion that helps prevent splitting as pressure is applied during the process.

28 The tailblock inlay slot is cut out with a sharp chisel

29 The inlay is cramped into place

30 Once in place the tailblock inlay is looking good

31 The rib ends at the heel cut to an angle

32 A dry fit of the heel-to-rib wedges

Maple scorches very easily so it is important not to have the iron too hot and to keep wetting the wood. Once the required shape is achieved, the ribs can be held in place with braces made from blocks of wood, screw-threaded bars and wing nuts (**photo 26**).

The tailblock

The tailblock is made from a small billet of mahogany and used to strengthen the lower end of the guitar and to help counterbalance the weight of the headstock and tuners. The block is 82mm high, 65mm wide and 17mm deep. The side facing the inside of the end of the guitar is curved to fit the profile of the lower part of the instrument and the inside edges of the opposite side are chamfered. Once the block has been glued into place (**photo 27**) the guitar ribs can be removed from the mould to allow a decorative inlay to be placed along the join where the two rib ends meet. This inlay is made from a small piece of rosewood 2mm thick and tapers from 7mm to 15mm. It is edged with sycamore and black tulipwood purfling. The purfling is optional. The inlay is held inside the channel with cam clamps and the ends trimmed flush once the glue has dried (**photos 28, 29** & **30**).

Attaching the ribs to the heel

Before the ribs, with their new tailblock and inlay, are returned to the mould the heel ends should be cut off at an angle to conform to the angle of the slots that will house them with the aid of the tapered wedges mentioned earlier (**photo 31**). It is best to fit the wedges into the slots with the ribs in place dry, as once the wedges are tapped in with adhesive the Titebond will grab quickly, making them extremely difficult to remove (**photo 32**). Any gaps that appear where the rib locates with the heel slot can be rectified by tapping in a thin veneer, which will help to push the join flush. Any scraps that protrude can be trimmed flush with a sharp chisel once the glue has cured.

It should be remembered during this part of the build that before the ribs are finally put into place, they should be held clear of the mould 'well' by small pieces of hardboard or similar just 2mm thick. This will allow for the front of the guitar to sit at the same plane as the neck as it is being fitted.

NEXT MONTH

In the September issue, Shaun makes the soundboard and rosette before preparing the soundboard for fitting

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1 Setting up a couple of dovetailing jigs: one with infinitely adjustable spacing (left) and one with fixed spacing (right)

ROUTER JIGS FOR FURNITURE MAKING

John Bullar looks at using router jigs for dovetails and mortise & tenon joints in furniture making

In this article we will look at using router jigs for dovetails and mortise & tenon joints in furniture making. I will discuss standard techniques as well as some variations to make different types of joints. We will also broach the knotty question of whether and when to use a jig rather than a hand saw and chisel.

Everyone admires hand-cut joints and they can be efficient for small one-off projects as they require zero set-up time. I also think it's important to be able to show off fine hand tool techniques in prominent positions because that is one of the exclusive features people look for when buying fine handmade furniture.

However, for a job that calls for rows and rows of joints, perhaps inconspicuously placed at the back or inside of a cabinet, a decent router jig can certainly speed things up. Although it will probably take a while to set up the jig and try the settings on scrap wood, once this is done it will churn out matching joint after joint – like shelling peas!

2 A selection of dovetail cutting bits both tapered and straight

Dovetailing jigs

The earliest and simplest dovetailing jigs consist of a comb-shaped template clamped over the ends of two boards. One clamp holds the end of a vertical board beneath the front of the comb while the second clamp holds the end of a horizontal board tightly behind. Driving the router cutter in and out of the comb pattern, so it repeatedly

3 Routers are powerful cutting machines that must be tightly controlled. Guide collars locked in place around the cutter shaft enable the router to be accurately guided by the fingers of a jig

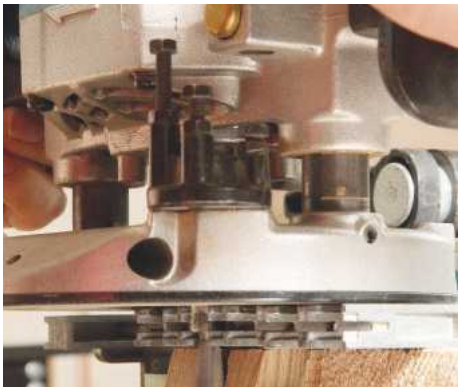
4 The simplest set up, but one used a lot in furniture making, is a fixed spacing jig for making a row of half-blind dovetails

5 Copying a traditional furniture making technique, variable position jigs allow the spacing of sockets to be made closer towards the edges of a wide joint

6 Using tapered fingers and a straight cutter enables the jig to produce a good set of through-dovetails

7 Through dovetails cut on the jig are being assembled on the frame of this box

8 Cutting sockets requires the board to be clamped vertically in the jig so the length of board is limited by the bench height



9 By fitting wedges in the clamping jaws of a standard dovetailing jig, the board can be angled to produce angled dovetails

passes through the end of the vertical board and into the end of the horizontal one, produces a well fitting set of tails and sockets.

This elegantly simple device has been responsible for millions of efficient batch-made furniture joints over the decades. However, while the joints are all the same, it must be said they can look rather mediocre compared to fine handmade joints. The solution the toolmakers have come up with is to make the jigs adjustable for different widths, lengths and spacings of dovetails. They have also devised ways to make through-dovetails as well as the lapped or 'half-blind' type (**photo 1**).

Guiding the router

Router cutters are specially made for dovetailing work. Most are conical in shape, although through-dovetails also require the use of straight-sided cutters (**photos 2** & **3**). Usually a starter set is supplied with a new jig and any replacements must have exactly the same dimensions otherwise the joints will not fit.

The cutter passes through a collar fitted to the base of the router and this collar must be an exact fit to the gap between the template fingers. The jig works by tightly controlling the movement of the router without any room for judder or snatching, which would spoil the perfect match between both sides of the joint.

Lapped joints

Unlike hand-cut dovetails, where the through variety is simplest, with a router jig it is quickest and easiest to make lapped-dovetails (**photo 4**). This is fortunate because these are most commonly used in drawer sides. A typical chest of drawers may contain over 100 tails – a huge amount of work to produce by hand. Lapped dovetails can be cut with a fixed comb-shaped template, or for a more varied pattern, with one using moveable 'fingers' (**photo 5**).

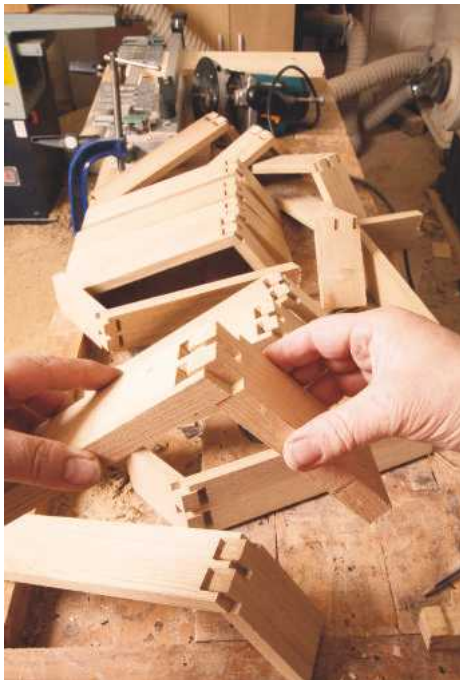
Through joints

While the dovetail jig naturally lends itself to cutting corresponding pairs of lapped joints – both halves at the same time – in order to adapt it for through-joints a number of changes have to be made. Firstly, each half of the joint must be cut separately; secondly, each half of the joint uses a different cutter: a conical one for the tails and a straight version for the sockets; and thirdly, the shape of the comb is different – the fingers are straight for the tails and tapered for the sockets (**photos 6** & **7**). All these factors increase the setup time so the decision to use the jig rather than cutting by hand depends on having a larger number of joints to cut.

Another factor to consider is the length of the board you are cutting the tails on, because it must stand vertically under the jig. One possibility is to raise the jig but if the board is longer than a metre or so, it may be easier to cut the joints by hand (**photo 8**).

Angled dovetails

Dovetail joints are normally cut at 90° and so the jigs are designed to work on right-angled joints only. However, in furniture making, we often need to produce different angles such as those for seat backs, tapered cabinets or multi-sided boxes. One solution I have found is to make through-dovetails on a conventional jig but with a pair of wedges clamped either side to tilt the wood. Start by sawing off the ends at the chosen angle, then with the router cutting both sides of the joint while the wood is tilted, everything else is set in the normal way (**photos 9** & **10**).



10 A batch of angled dovetails being assembled. Sockets are cut in the same way as tails with wedges in the jaws of a standard jig

Rows of mortise & tenons

As well as producing dovetail joints, the comb-type router jig can be used to cut straight-sided pairs of finger joints. Alternatively, by plunging the router in a series of sockets, you can produce a row of mortise & tenons. The sockets need to be squared up with a chisel to look like conventional through-mortises and this is a useful joint when used to support mid-height shelves, for example (**photos 11** & **12**).

Mortise & tenon jig

When using a small router, mortise & tenon joints do not lend themselves to batch production as easily as dovetails do. The joints tend to be larger and they require accurate plunging, rather than simply following around a template.

There are, however, some effective and versatile mortise & tenon jigs designed for use with a heavy-duty router (**photos 13** & **14**). Unfortunately the price tag is considerably more than most dovetail jigs, but still competitive compared to dedicated mortising and tenon cutting machines.

Mortise & tenon jigs also have the advantage of being very adaptable. For example, simply by swapping the template the joints can be made long or short, wide or narrow and single or double. The depth can be as shallow as you need, or as deep as the router can cope with.

While the finished joints – unlike conventional mortise & tenons – have rounded ends, they look great and fit snugly so are therefore very strong when glued up (**photo 15**).

Angled mortise & tenons

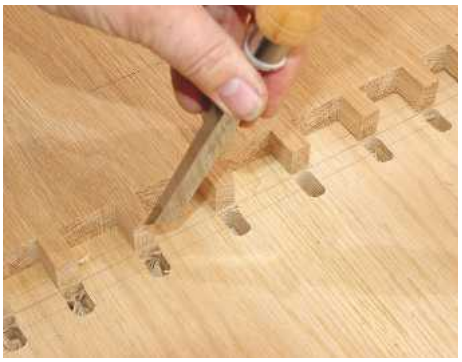
Makers of router jigs for mortise & tenons have anticipated the need for angled joints and they include a tilt adjustment in the clamping arrangements. This makes production of well-fitted angled joints nearly as straightforward as right-angled ones – ideal for more ambitious work like making chair frames (**photos 16** & **17**).

Conclusions

Modern versatile router jigs require more set-up time than some of the old-fashioned quick and simple ones, but for producing batches of similar joints, the payoff is in results that look almost as if they could be handmade. Even so, for the purposes of fine furniture making, I recommend keeping up hand skills alongside using jigs for batch work.

NEXT MONTH

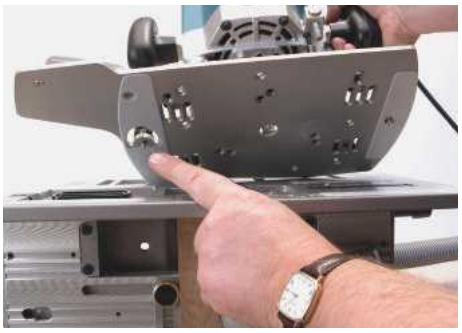
In the last part of this series, John guarantees there will not be a single mention of 'the dovetail' as he looks at some of the trickiest procedures in a furniture maker's workshop – chairmaking



11 This row of mortise & tenons are cut with a standard dovetailing jig using a straight cutter. Round-ended sockets are quickly squared up with a mortising chisel

12 The assembled row of mortise & tenons completely match the row of dovetails above them, cut with the same jig settings

13 A dedicated mortise & tenon jig has the router attached to a guide plate, which is slid around the joint as it is cut



14 The guide plate has two precision pins beneath it: the left one travels around a template while the right one slides back and forth in a slot

15 The finished mortise & tenons have matching rounded ends. The template for this joint can be seen clipped in place beneath the wood

16 The mortise & tenon jig is designed for a variable clamping angle when cutting the tenon

17 The angled tenon has matching angled shoulders while the mortise is a conventional straight one

FROM LOG TO CHAIR

John Greeves talks to **Mark Griffin** about the making of a Gentleman's chair

Should this really be called a Gentleman's chair? The name seems so disingenuous when you examine the murky past surrounding it. The early origins of the Gentleman's chair arose from the humble reading chairs. These were first made in England for private libraries in the early 18th century. The reading chair was shaped so that the person could easily sit astride it like a horse, resting his arms on the broad yoked armrest at the top with a small adjustable book ledge attached at the back.

Aside from its intriguing form of a narrow back and broad shoulders and a multi-adjustable board on the back, the chair often possessed a swing out candle stick and pocket either side of its shoulder, as well as a drawer in the front seat. Maybe the gentleman sat reading *Tom Jones*, *Robinson Crusoe* or even *Gulliver's Travels*, if not some other best-seller of the day. Of course there were other variations of the chair, but the basic format persisted, allowing the person to straddle it as they browsed their book.

There were other off shoots of this concept with some prayer chairs (prie dieu) having a very similar build to that of a Gentleman's chair but neither a prayer or a litany could anticipate what would come next.

From being the stately reading chairs of erudite gentlemen, these humble specimens suddenly found themselves transformed into the 'cockfighting chairs' of the 18th century. The cockpit was where gentleman and pauper were allied side-by-side and where all social classes mingled, intent only on the frenzied betting of a deadly blood match.

Furniture makers were quick to seize the opportunity to offer cockfighting chairs with the same narrow backs and crested tops to anyone able to purchase one. William Hogarth, a contemporary of the day, captured the cold reality and cruelty of the sport in his etching entitled 'The Cockpit 1759', but cockfighting wasn't actually banned in England and Wales until 1835.

Inside the cockpit at St Fagans National Museum of History, Wales

A completed Gentleman's chair

Cleaving

FURTHER INFORMATION
To find out more about Mark Griffin and his chairs, see **www.rustic-ash.co.uk**


Tangential cleaving


Tangential cleaving – guiding the split


The cleaving brake

Why a Gentleman's chair today?

Mark Griffin (Griff) (see photo overleaf) is a green woodworking chairmaker based in Oxfordshire who specialises in designing and making a wide range of chairs including rocking, spindle back, lath back, ladder back and the backward facing cock-fighting or Gentleman's chair. All the components are made from green ash and employ traditional techniques using only hand tools and a wet-dry jointing technique that he learnt from working with renowned chairmaker, Mike Abbott. The components, once assembled into a chair, have the seat woven in either Danish cord, paper rush, sisal, bark or kamba.

Mark was introduced to green woodworking in 1989. He's a member of the Association of Pole Lathe Turners and Green Woodworkers as well as the Heritage Crafts Association. He was only able to indulge his passion for green woodworking fully after he retired from the fire service in 2015, which was when he set up his own business, Rustic Ash Chairs.

A friend of Griff who had a bad back asked if he could design a specialised chair for him: "This particular friend always sat on a chair the wrong way round," Griff tells me.

He researched the topic and came across an 18th century chair that was, in his words: "Quite padded and elaborate, with the sitter straddled across it." He had unearthed the cockfighting or Gentleman's chair, which was the perfect remedy for his friend's bad back. He came up with his own contemporary design, which included a very narrow backed chair with a woven seat. His friend could sit astride it without splaying his feet while comfortably resting his arms on the top, and as such was able to relieve the nagging pain.

Since then Griff has constructed upwards of 35 similar chairs with varying back patterns. The chairs, by the way, are "extremely comfortable to sit on both ways," and at the time of writing, Griff was busy making four of these particular chairs as part of a dining table set.


Rung and rail blanks


The shaving horse

Chair description

Some of the decorative features may differ in Griff's unique Gentleman's chair design. His has a narrow back and a woven trapezium-shaped seat. The 'undercarriage', as it's called, consists of all the rungs beneath seat height. The components at seat level are referred to as seat rails and the components going across the back as back rails, or again, simply as back rungs. The decorative feature is sometimes created with the spindles held in place with these back rails or rungs. There's no gluing and the chair is held together by compressing oval tenons into round mortises. The height of the seat is anywhere between 440 and 480mm, but generally ranges from 450-460mm in height with the back 950-1,000mm, depending on individual specifications.

Timber selection

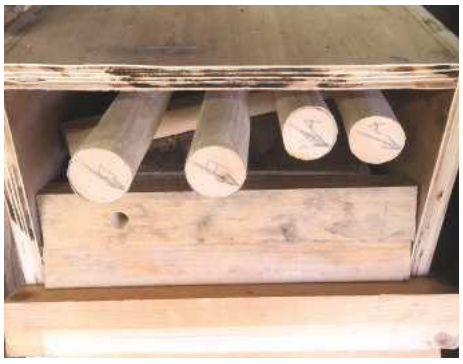
Griff harvests his timber from a local mixed woodland, which contains Douglas fir, larch and other indigenous species. As a volunteer he has an arrangement to work in the woodland one day a week with the land owner and in return can take away a tree cut into 4-5ft lengths every few weeks. "The ash is ideal for me," he says. "The land owner can't use it, as it's not really big enough for any commercial use and all it's really doing is taking nutrients from the soil." The ash has to be reasonably knot-free, especially for the back legs, which are the strongest component in the chair. It doesn't matter if there are pin knots in the front legs and even in the rungs and rails, which can look quite attractive, providing they don't weaken the structure.

Splitting logs/cleaving

The logs are generally split from the top of the tree down. An axe head is used first followed by two different sized froes with a wooden maul. Griff uses a cleaving brake to hold the timber

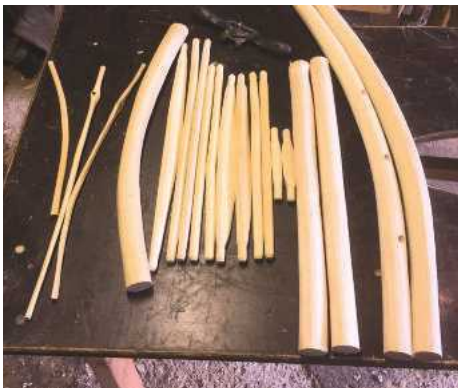

Shaving the back chair legs


Shaved chair legs


Two pairs of chair legs in the steam box, ready for steam-bending

Chair legs in the jigs, ready for drilling

Drying cabinet, powered by a household light bulb



Components for one Gentleman's chair

he's cleaving. The logs are split lengthways with the grain into quarters and then eighths. If size permits they are also split tangentially to produce leg, rung and rail blanks ready for further shaping with an axe or drawknife. "I use a small axe for trimming out the large waste, then get it onto the shaving horse," he says.

The shaving horse

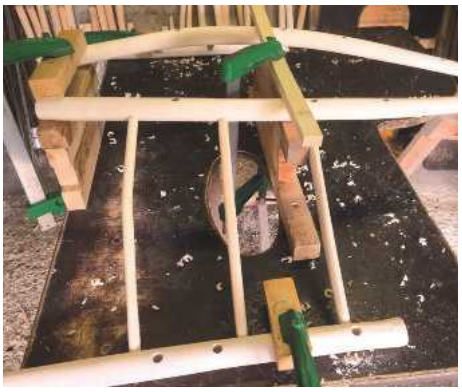
The wood is split or cleft rather than sawn, then a drawknife and spokeshave are used to refine the shape while following the grain. This is important on the legs because not only do they appear lighter but they retain the strength of a sawn piece of timber twice their size. The ash for the chair legs must be kept as damp as possible. They are only made after the smaller components have been shaved and dried. The back legs are initially shaved to approximately 40mm diameter, then they are steamed and held in jigs to create the ideal shape. These are the only components to be steamed in the construction of a Gentleman's chair.

Before steaming takes place, however, each individual cleft is held in the shaving horse while Griff uses a drawknife to shave down to approximate dimensions ready for drying and bending. All the components are made on the shaving horse including the legs, rungs, rails and spindles. Griff grades the timber: "I'll choose the best piece once it's been split for the back legs, followed by the front legs, then see how I'll use the rest," he says. He generally crafts all the smaller components that make the 'under carriage' (components from seat down), plus the back rungs and the spindles ready for the dryer. He then shapes a tenon on the rungs, rails and spindles.

The drying cabinet & refining

The smaller components are then placed in a drying cabinet over several days. There's no gluing involved; it's a wet-dry joint known as an interference fit, or press fit where the fastening is achieved by friction after the parts are pushed together rather than using any other means. It's a minimum of 48 hours before these smaller components are ready. "I have a little moisture meter and the ash goes from about 35% when it's split down to less than 4% after the drying process," Griff says. That's quite remarkable considering the dryer is a home-made insulated box with vents, which is only heated by a light bulb. For the rungs and rails, spindles dry more tangentially than they do radially, so you get an oval tenon. This is important when you later come to assemble the chair. You want the long side up and down the leg, so that when you squeeze them together using the press, most of the pressure is up/down and not side-to-side, which may split the wood.

Once the smaller components are dried, they are taken out and Griff refines the shapes using a spokeshave and later a cabinet shave to get rid of any tool marks.

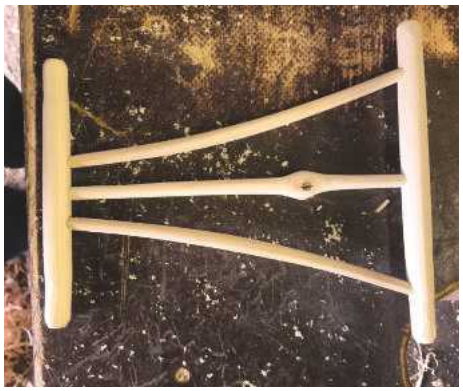


Chair sides in the jigs, ready for drilling

Joint cutting & assembly

Griff holds the legs on the bench and drills the mortises using various angled jigs. "If I'm making only one chair, I drill the holes so they are all vertical to each other and a certain distance apart, depending on how high you want the seat to be." He twists the leg and uses an angle jig to drill at a specific angle. Griff explains that he assembles the sides of the chair before the front

Chair temporarily assembled using bungees and dummy rails ready to check the back frame fitting



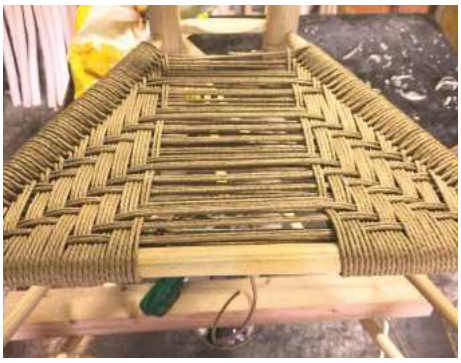
The back frame

Partial assembly of the Gentleman's chair


Ready to fit the chair crest


Oak wedges keep the chair crest in place


Gentleman's chair assembled and ready for oiling before seating


Seat weaving in Danish cord


Seat weaving completed


Finished chair next to a shaving horse

and back. He has a home-made press, which incorporates a two ton hydraulic jack, and this squeezes the parts together. Once he has the two sides assembled, he then lays them back to back, before raising them so he can drill the holes at right angles for the other side.

He uses a set of dummy rungs to insert loosely into the mortises. After this he puts a large 'bungee' around the chair to hold it in position. Once he's got up to seat height and assembled it with loose pieces, this gives him an indication as to how the back legs will align.

At this point Griff can make any adjustments to the back rungs. "The timber may not be perfect. You might need to shorten or extend those back rungs when you make the back assembly," he says. When he uses the press to assemble the chair, it creaks and groans. Occasionally, Griff says: "You may get a component that snaps, but I've never had a chair that's come to pieces."

Once he's put it all in place and checked the dimensions, Griff will then assemble the back and drill any holes necessary for the spindles he wishes to add for decoration. He drills the bottom of the rung for the spindles to fit in, then he feeds each spindle up from the bottom through the hole before dropping them back into the lower of the back rungs.

One of the last things he does is to cut the tenons on the top of the back legs once the back frame is assembled. He then fits the top rail or crest, where you rest your arms.

Before he weaves the seat, he gives the chair a coat of Danish oil; this is applied with a brush and left to stand for about half an hour before it's burnished off with a cloth. The following day he gives the chair a second coat, but this time with a cloth and leaves it to stand for a day before he seats it.

Seating

In the past, Griff has woven in Danish cord, paper rush, sisal, bark and kamba but generally he favours Danish cord, as it provides greater uniformity. He knows he can achieve a much neater finish from the Danish cord than he can from sisal, Wych elm bark or seagrass (which, incidentally, cats like to get their claws into). He has a variety of patterns, but he generally likes to use a modified Irish pattern, where he builds up the warp and the weft at the same time. He starts in both corners and continues until he leaves a strip down the middle. Griff likes to keep the weave tight and adds twists and twirls as he proceeds.

The ideal chair

Griff believes that there is a certain aesthetic or proportion to every chair. Sometimes he's been asked to build a chair of a certain size and dimension by a client only for them to have something they didn't really envisage. He tries to steer people from going too far away from the standard sizes. "They often think this is what they want, but it isn't really," Griff says. "What's important is for people to sit on one and appreciate how it feels." For this reason, he doesn't sell by mail order, only at shows. Here he always insists people experience the chair for themselves before they make any immediate decisions.

The future

Bernard Shaw once said: "Happy is the man who can make a living by his hobby." This is something many people crave and one dream Griff has achieved. He considers himself to be a very, very lucky person, not because he has all the riches in the world, but because he's doing something he truly loves.

In the future he would like to move to a small place with his wife in Pembrokeshire with a bit of woodland. His ultimate aim is to run courses in green woodworking so others can benefit from his experience. In the words of Eleanor Roosevelt: "The future belongs to those who believe in the beauty of dreams," and it seems, perhaps, many more of us should be reaching for our star.

TOOLS, EQUIPMENT & MATERIALS

Tools & equipment

- Wood brake, shaving horse, maker's bench
- Large and small froe
- A wooden maul
- Steam chest
- Japanese saw
- Standardised set of chisels from 3-50mm are sometimes used for paring the tops of the back legs
- Drying cabinet
- Drill and drill bit set
- Drawknife
- Small axe
- Spokeshave
- Cabinet shave
- Bungee cord

Materials

- Green ash
- Danish cord
- Danish oil
- Paper rush
- Sisal
- Wych elm bark
- Kamba
- Abrasives

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FESTOOL
Tools for the toughest demands

"THERE'S NOTHING ELSE LIKE IT IN THE UK"

Not far from the bustle of Junction 3 on the M6, **Axminster Tools & Machinery**'s flagship Nuneaton store has become a mecca for woodworkers who journey from across the UK and beyond to discover its walk-in 'wow factor' appeal

Under a high arched roof, the impressively lit aisles of this well thought-out space don't disappoint. A mouth-watering array of high quality house brands – including UJK Technology, Rider and Axcaliber – invite further attention. These are arranged alongside famed hand tool brands such as Lie-Nielsen and Veritas, while their power tool offering includes favourites from Bosch, Festool, Makita, DeWalt and Fein. Choice and sheer visual appeal are just two good reasons why so many trade and craft professionals – as well as keen shed amateurs – are coming back for more.

Opened in 2009, the 14,000sq.ft store is one of eight trade and retail outlets now operated by Devon-based Axminster Tools & Machinery – still a family-owned business – which began trading back in 1972.

Like its seven sister stores, Nuneaton's reputation as a 'cave of wonders' is built on more than choice and attractive presentation.

"It's about the total experience; about product knowledge and getting hands-on,"

Getting hands on is very much part of the 'Axminster Difference' – here a customer gets to grips with the carving workstation

A panoramic view of the 14,000sq.ft Nuneaton store – flagship of the eight stores operating around the country

says Axminster's Sales Director, Darran McLeod, who has led much of the company's retail expansion over the past 12 years. "We take pride in not being a trade counter. There's nothing like getting to grips with tools and machines first-hand to get a feel for their general 'fit', comfort, weight and performance. This applies to all our customers, from quick-stop trade professionals to more leisurely craft and hobby enthusiasts who are happy to spend an hour or two browsing the aisles."

"Over the past two years, we've worked hard to provide customers with ample opportunity to try tools for themselves. We have a number of interactive workstations around the store and these are permanently set up to test hand tools and power tools as required," he says.

'Live Workshops'

Along with various workbenches and demo tables, all stores offer a 'Live Workshop' – a dedicated facility for demonstrating larger floor-standing machines in a safe environment. These workshops also provide a stage for regular demonstrations by nationally and internationally recognised professionals. Axminster is proud to enjoy a particularly strong following among woodturners and brings in some of the UK's favourites including their own Axminster Skill Centre tutors Colwin Way and Jason Breach, plus other keenly followed demonstrators such as Steve Heeley, Andrew Hall, Phil Irons, Mark Sanger and Chris Fisher (the Blind Woodturner).

At Nuneaton, floorspace allows for some of these demonstrations to be fully staged

10 of the UK's top woodturners competed in the free to attend 'Ten Turners Turning' event hosted in-store

A choice of locally sourced UK hardwoods is now a feature across all stores

Look, touch, try, compare is part of the appeal as Axminster distances itself from being a trade counter experience

Just one of the store demo benches – an invitation to try scrollsawing

FURTHER INFORMATION
Address: Axminster Tools & Machinery – Nuneaton Store, Bermuda Trade Centre, Hamilton Way, Nuneaton CV10 7RA
Tel: 024 7601 1402
Web: www.axminster.co.uk

Axcaliber is just one of the quality house brands that have helped Axminster to forge a unique identity in the industry

Acting Store Manager Tristan Ainsworth (left) and Sales Advisor Rob Sheehan with a hand-made oak hub – part of a Forestry Wagon restoration for the 'Friends of Brandon Wood', which the store supports

competitive events. In 2016, the store hosted 'Ten Turners Turning', featuring 10 of the UK's top woodturners competing in a day's programme of specialist events, with the winner decided by audience vote. Last year, a 'showdown' between creative specialist Mark Sanger and Leicester-based commercial turner Richard Findley drew in a large crowd of fans and followers. The Nuneaton store provided an ideal arena for this rare spectacle of skills as Mark and Richard went 'lathe to lathe' against each other.

Nuneaton at the forefront

A further development of the Nuneaton store is planned for later in the year, with alternative woodworking and engineering courses offered in what will be a satellite Skill Centre, relieving some of the pressure on the popular courses already offered at Axminster's Devon headquarters and at their Sittingbourne store. These are likely to be one- or two-day courses and will introduce new tutors such as widely followed furniture maker Matt Estlea, who will appeal to a younger generation of aspiring woodworkers.

As Axminster Tools & Machinery continues to grow, Nuneaton will be at the forefront of the company's evolving retail strategy as it strives to strengthen and enhance the in-store experience alongside its award-winning online sales platform – **www.axminster.co.uk**.

"The stores provide an opportunity for us to immerse the customer in our brand, through the physical space, the products, the interactivity and the quality of our product advice. A great deal of our marketing is still word-of-mouth and we want to keep providing compelling reasons for customers to visit and return to the store – and to tell others about their experience," continues Darran. "We are often told by visitors that 'there's nothing else like us in the industry' and that's a position we're eager to sustain. The 'Axminster Difference' is a strength and the Nuneaton store is a great example of how we deliver a memorable brand experience."

A shared passion

Axminster likes to say to their customers that 'we share your passion'. Why not plan a woodworking pilgrimage to their Nuneaton store, and find out for yourself.

AXMINSTER TOOLS & MACHINERY – COMPANY HISTORY

Axminster Tools & Machinery (as it is known today) was founded in 1972 when Ron Styles and the late Graham Brown opened a tool shop in Axminster, Devon. Originally known as Axminster Power Tool Centre, it was situated near the town centre in premises dating back to the mid 19th century. There were just a handful of employees, doing all sorts of jobs, before the age of computers, when virtually all tasks were carried out manually. Back then Ron's eldest son Bernie became part of the team, and in 1982, his younger son Ian joined the company. Ian was instrumental in launching mail order and the catalogue in the same year. Another significant date from the '80s is 1988 when the company organised its first national show – Axminster Tools & Machinery Exhibition – which ran every year until 2005.

Launching a website

As the company continued to expand, it outgrew its original premises and in 1995 distribution and administration moved to Weycroft Avenue, on the northern edge of Axminster. By then more members of the Styles family had joined the company: Bernie's wife Marjorie and Ian's wife Katina, followed in 1996 by Bernie's eldest son Alan.

During the second half of the '90s the internet took off and in 1997 Axminster launched its first website, which, after three years, became a selling site. That same year the company began manufacturing own brand tools in its engineering facility.

Retail growth

Moving on to retail, in 1997 Axminster opened its second store in Faversham, Kent. In 2003 the store in Axminster moved to a new building on the other side of town, where the following year the company set up the Skill Centre – a facility to run woodworking and engineering courses. In 2004 the Faversham store moved to larger retail premises in Sittingbourne. Other stores opened in High Wycombe and Nuneaton in 2009, plus Warrington in 2011. Basingstoke followed in 2013, and North Shields and Cardiff opened in 2015, giving the company eight stores across the UK.

Between 2004 and 2010 growth continued with the introduction of new technology and systems in the warehouse, leading to greater efficiencies and effectiveness. In 2007 Axminster moved into acquisitions, buying BriMarc Associates Ltd thereby creating a re-sale division. 2010 also saw the launch of a new website and in 2011 the company changed its name to Axminster Tool Centre Limited to reflect its diverse range of products.

In 2009 Ian's daughter Hayley joined on a permanent basis and the following year Tim (Bernie's younger son) took up a role in the company. At one point in 2010 Axminster employed 10 family members, spanning three generations.

40 years of trading

The year 2012 saw Axminster celebrate 40 years of trading, advertising on TV and in the *Mail on Sunday* for the first time. The company also launched the Evolution SK114 woodturning chuck, manufactured in Axminster.

In 2013 the company announced it would trade under the name Axminster Tools & Machinery and adopted a new logo. Other developments included a new website, built entirely in-house, as well as the introduction of a three-year guarantee on all Axminster machines.

A significant change at the top took place in 2016 when Alan Styles took over from Ian Styles as Managing Director. Also that year, a new responsive website, again built in-house, was launched.

Today Axminster Tools & Machinery continues to be a family-owned business employing over 280 staff, with the majority based at the Axminster headquarters. The company is a multi-channel retailer with customers across the UK and overseas. Axminster sells woodworking and engineering machinery, power tools, hand tools and accessories. Its customer base ranges from industrial, trade and the educational sector, right through to the home user

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WIN! 1 OF 3 SETS OF PETER SEFTON'S ULTIMATE BANDSAW DVD COLLECTION – WORTH £49.97!

If you're serious about bandsaws but would like to know more, then this fantastic competition from Wood Workers Workshop will give you the chance to win your very own collection of expert DVDs from furniture maker Peter Sefton

Comprising three individual DVDs, Peter Sefton's *Ultimate Bandsaw* DVD Collection sees him guiding you through the following topics: bandsaw blades; commissioning a bandsaw; deeping cuts; ripping cuts with the grain; freehand curve cutting; waney edge boards; laminates; consistent circles; creating a tapered leg; setting up for cutting joints; making corner halving joints and bridle joints; converting green logs to boards; making 3D cuts; cutting a cabriole leg, round stock and veneers, as well as cutting curves, wedges, tenons and consistent dovetails. Extra content includes the topics of workshop layout, dust extraction, rust prevention and folding/unfolding a bandsaw blade.

As Peter shows, a bandsaw is a big investment but it is a truly versatile machine. Whether you are buying a new or second-hand version, or just wanting to get the most out of your current model, Peter's course will demonstrate how to set up, maintain and use it safely, ensuring you make the most of your bandsaw and therefore achieve the best results possible.

Improve your bandsaw knowledge

Peter has 35 years' experience using bandsaws as a designer-maker, as well as through teaching their set up and use to students at his furniture school. He shares his knowledge here, with the first DVD in the series covering commissioning and tuning up a machine as well as a thorough review of blade selection. The second and third DVDs cover an incredible range of advanced cutting techniques, all of which produce fast, highly accurate and repeatable results.

This set of three DVDs is sure to improve your knowledge of the bandsaw as well as furniture making in general.

HOW TO ENTER

To be in with a chance of winning 1 of 3 sets of Peter Sefton's *Ultimate Bandsaw* DVD Collection (comprising three individual DVDs), just visit **www.getwoodworking.com/competitions** and answer this simple question:

QUESTION: NAME ONE OF THE TOPICS COVERED IN THE DVD COLLECTION

The winners will be randomly drawn from all correct entries. The closing date for the competition is **20 July 2018**

Only one entry per person; multiple entries will be discarded. Employees of MyTimeMedia Ltd, Woodworkers Workshop and Artisan Media Ltd are not eligible to enter this competition

41 YEARS OF PRESERVING TRADITION

Michael Wem's rocking horse signature

The mouse carved into the leg of Michael's bench – a tribute to the 'Mouseman'

Michael shaping a rocking horse's body

Jane Cook and her team at **The Rocking Horse Shop** are truly dedicated to keeping the tradition of rocking horse making alive, and after 41 years in the business, we're pleased to report they are still going strong

In terms of the history of the rocking horse, it is thought that the first ever example was made for Prince Charles in 1604, who later became king in 1625. They became most popular over the Victorian era, however, and were often seen in a nursery setting. Not only a toy, the rocking horse gave children a great opportunity to experience horse riding before they actually got on the 'real thing'.

A popular project in this magazine, and one seen by many as the pinnacle of carving skill, the rocking horse is still enjoying popularity and can be seen as making something of a resurgence in recent years. One such establishment that is helping this heirloom craft to flourish is The Rocking Horse Shop, situated in the small village of Fangfoss in the East Riding of Yorkshire. I spoke to owner Jane Cook, who is thrilled to tell me that 2018 sees them celebrating 41 years of making rocking horses in keeping with the Victorian tradition, so I started by asking her about their recipe for success. Jane comments that, in her opinion, the reason they are still going strong is due to them sticking to what they do best: "We have a very niche market, which is an inch wide but a mile deep. We like to say that if it's to do with rocking horses, then we do it."

Jane says that whenever anyone finds out what they do, they always have a story of a rocking horse from their childhood, whether in their home, at school, in the doctor's surgery or even in the local shoe shop. The rocking horse, with this in mind, can therefore be seen as something of a timeless classic – a toy that lasts for many generations – and Jane thinks this is why they are as popular today as they have always been. "Because they are made of wood they can easily be repaired and ready for the next generation to ride," she finishes.

Business background

Jane explains that the business was started by Anthony Dew in 1976 who began making and selling rocking horses with his then wife, Pat. Anthony soon realised that there was a real desire for people to make them themselves and this was when he started to introduce the plans and accessories in addition to selling the finished items. Since Anthony has fully retired, the business now belongs to Jane, who together with her team of nine employees, work from their purpose-built workshops on site.

In terms of how the business is split, Jane says that restoration accounts for 10% of what they do, but in addition, the courses side makes up a fairly large portion as well as selling the completed rocking horses (which, according to Jane, are typically purchased by parents and grandparents who want to buy or make something that will be passed down through the family) as well as plans, books, DVDs, timber packs and accessory sets, which are mostly sold to hobbyists.

Meeting the team

Jane is very proud of her team, all of whom are exceptionally skilled at what they do, from carving to leather making. They comprise of Michael Wem, Jonathan Smith, Andrew Brown, Rowena Morris, Barbara Brown and Jayne Pope, who all work in the workshops; as well as Dawn Woodward, Linda Gurnell and Nicki Waudby, who are responsible for sales, packing, purchasing and

Michael carving a head...

... and painting a horse's facial features

invoicing; and then there is Jane herself, who, in her words, tries her best to keep it all together!

Michael Wem joined the company two years ago as a master carver and carves most of the rocking horses: "He is certainly making them individual to him," says Jane, "and he is also a key person when it comes to restorations." Michael is the main tutor for the carving courses; he is passionate about what he does and loves to inspire and teach others to continue the craft. I also learnt that Michael has links to the Mouseman, so how does this influence endure in his work today? Jane explains that Michael served his apprenticeship at Robert Thompson Crafts in North Yorkshire, and the company's Victorian founder was known as the 'Mouseman' due to the church mouse he routinely carved into his furniture. In tribute to his mentor, Michael has carved a commemorative mouse into the leg of his workbench in the rocking horse workshop: the creature's nose and whiskers appear from a hole cut out of one side of the leg, and its tail dangles from the other. Michael also inscribes his own trademark signature into each horse he makes – a horse's head, with its wild mane displaying a sharp zigzagging line that spells the initials 'M.W'.

In terms of the leather and hair accessories, Rowena, Barbara and Jayne are responsible for this side of things. Each accessory they make is handmade and the materials they use are stringently checked to ensure they comply with toy safety regulations. "Rowena tacks up all our new horses and they can often be seen trotting

Barbara Brown sewing a saddle

Jane Cook tacking up a rocking horse

Jayne Pope polishing a handmade saddle

Rowena Morris hand-stitching a bridle

Student rasping a mini rocking horse

Half-size rocking horse with teddy bear

from the woodwork shop into the leather workshop, queueing for their tack and hair," says Jane. "We supply many types of tack depending on the horse that has been purchased, from nail-on tack, removable, to hand-stitched."

Jane explains that they currently produce 17 different rocking horse designs for makers of all abilities. All their plans come with actual size drawings, step-by-step instructions and detailed pictures, and they are also backed up by instructional DVDs. "We've recently introduced different plans for various skill sets: we supply those for simply constructed rocking horses – a weekend project – right the way through to a carved carousel – a more intricate project. The plywood horse plans are the newest: these have been incredibly popular and are now our biggest sellers," she comments.

Making a rocking horse

When it comes to making a rocking horse, which woods are best to use? Jane explains that theirs are made in one of two ways: the traditional horse is made out of hardwood and the more modern style from plywood. For the hardwood horse, tulipwood is preferred. "Although this is a hardwood, it is nice and soft to work, and we like it because it is easy for beginners to use, and they soon start to see their project take shape." Birch ply is chosen for the plywood horse, as it contains very few gaps in the layers, and the stands for both are made using ash.

When it comes to construction, the hardwood horse comprises of around 25 pieces of wood. "We start by carving the head and the legs," says Jane, "which makes it easy to carve before the whole thing is glued together. Once glued, we remove a large part of the wood with an Arbortech disc fitted on an angle grinder (or similar), and once this is done we start to add the detail using a gouge and mallet." For the plywood horse, this is glued together and gives a more three-dimensional shape to start carving – again, an abrasive disc is used to remove most of the wood before reverting back to hand tools and mallet.

An exciting opportunity

When researching the business, I was excited to discover that a rocking horse made by Michael was recently used in the TV series *Victoria* – so how did this come to be and how has this exposure affected commissions for rocking horses? Jane tells me that they were very lucky to be selected as the supplier of rocking horses for this popular series – their small traditional model on bow rockers was seen most weeks, either next to the crib or being ridden by Victoria's children. "You may have also seen some of our horses in the toy shop during the Christmas special, which aired on Christmas day," she says. Jane explains that this presented a great commercial opportunity for them and, as a result, the sightings have been mentioned by many of their customers. "I think this just goes to show how rocking horses have been around for so long and everyone has a memory of riding one."

The nursery scene from the recent TV series *Victoria* and the rocking horse that was used throughout

Rocking horse courses

As stated earlier, the carving courses represent an important part of the business, and Jane tells me that they currently run two from their workshops: the carving of a medium or large rocking horse head and the carving of a mini 'Rocky' rocking horse, both of which can be seen opposite.

Starting with the 'head' course, this takes place over three days and during that time the student will learn exactly how to create this integral part of the rocking horse. "Although they do not get to carve the rest of their project with us," says Jane, "we do provide them with enough knowledge throughout the three days to ensure they feel comfortable about going home and finishing it themselves. Students are also taught about tools and shown how to sharpen them"

Moving on to the second course, this is also three days long, and here the students are shown how to carve their very own mini version, which is ideal for teddy bears and dolls. "This is a great course, which will equip you with the skills and knowledge to carve a whole rocking horse, and although it is small, the same principles remain, so the student can then go away and make a full-size model if they so wish." Both courses have a maximum number of six students, which ensures that each participant is given as much one-on-one time as possible.

Jane informs me that the workshop was recently home to many young students completing A levels or degrees who were making a rocking horse for their main project, as well as three veterans from Catterick Garrison, each of whom set about making a rocking horse to help with their recovery journey. "They did an amazing job, and we made them honorary members of The Guild of Rocking Horse Makers."

'Hero' – the latest design ready to leave the stable

Students on the carved head course with their heads held high

Important events

As restoration plays an important part in the business, Michael and the team must find a lot of satisfaction in piecing an old horse back together knowing it will be passed down through generations to come. Jane comments that they particularly enjoy being able to tell the owner who originally made the horse as well as giving them a little history about the maker. "Obviously it's particularly gratifying to be able to put the battered old horse back to how it would have originally been for the next generation, and hopefully the next generation to come," Jane says. "Our customers have such wonderful stories about their rocking horses: how they got that broken ear, why their sister cut the horse's hair – lots of lovely little anecdotes."

It's safe to say that Jane and her colleagues are actively passing on traditional craft skills, so do they plan on doing this for another 41 years? "I hope we can carry on for even longer than that," she says. "Traditional crafts are so important in a throw-away world. People really do like to work with their hands and make something special; it would be very sad to think people wouldn't want to do something like that any more."

Events such as Fangfest are testament to the fact that the craft tradition is still very much alive, and this popular attraction is a pivotal one on The Rocking Horse Shop's calendar, as it gives them the opportunity to show visitors what they do, inspire them through demonstrations and really engage with the public. The event sees around 2,000 visitors each year, all of whom come to see what Jane and her team do and how they do it. "We put on demonstrations of rocking horse carving, painting, tack making and also show how we finish a rocking horse. In addition, we have over 20 craftspeople in our grounds demonstrating their traditional crafts, from those working traditional pole-lathes to willow weavers." There really is a lively mix and you can also expect to see classic cars and tractors, the local pottery open their doors to demonstrate and let people have a go, and the church even gets involved as they put on an amazing flower festival. "It truly is a celebration of practical arts," says Jane. So if you fancy a trip to East Yorkshire to see what this event is all about, put a date of 1–2 September in your diaries and prepare yourself for lots of free activities for adults and children alike, as well as being given the opportunity to see and learn what really goes in to making a traditional rocking horse.

Take a look online

If you're either in the market for a rocking horse commission or fancy learning about the steps involved in making one, The Rocking Horse Shop's comprehensive website is a great place to start. Not only will you find a wide selection of photos detailing the stunning range of horses on offer, visitors are also treated to a glimpse inside the workshop, which shows the carving of the horse, the painting, as well as the application of the tack and leather work, and if you'd like to keep up-to-date with what's going on, why not take a browse through the regularly updated news and blog section. Making such an heirloom item is clearly one which commands a great deal of skill, and Jane and her team are doing a fantastic job in continuing to carve a tradition. We hope that they manage to do so for a long time to come, because keeping time-honoured skills alive is fundamental to the future of the craft.

FURTHER INFORMATION

To find out more about courses at The Rocking Horse Shop, see their range of rocking horses for sale, or to purchase plans and accessories, etc. visit **www.rockinghorse.co.uk**

A fine selection of completed rocking horses

END-GRAIN ENVY

Colin Simpson turns a lovely end-grain bowl from a piece of mulberry, which features a strikingly attractive natural-edge

1 Heart shakes normally radiate out from the pith

It is more usual to turn bowls from side-grain timber. That is to say the log has been planked and the bowl blank cut from the plank. Turning end-grain bowls, from a whole log, means that the pith or first year's growth will be in the bottom of the bowl and it can develop heart shake (**photo 1**). However, this is not always a problem, particularly if you make the piece with an even, reasonably thin wall thickness.

Mounting between centres

Here I am going to turn an end-grain bowl from a log of mulberry I was given about six months ago. The wood had been stored indoors for about a year before I was given it, but it was still quite wet. There will be small splits that develop at the end of the log, so it is always a good idea to remove about 50mm from the end before cutting your blank. I used a chainsaw to process my log, which was about 250mm in diameter (**photo 2**).

The pith was offcentre, which suggests that the tree grew at an angle, perhaps on a slope or had to bend away from a nearby tree. I used a 10in disc to find the approximate centre of both ends (**photo 3**) and then mounted the log between centres. I like to turn a chucking point on this type of work as soon as possible; that way I get a second chance should the between centres hold fail. Use a fingernail profile bowl gouge to square off the end of the log (**photo 4**), keeping the cut near the tip of the gouge – do not be tempted to roll the tool up and use the wing. **Photo 5** is another angle of the same cut clearly showing the wings are well away from the wood. Cut the chucking spigot, making the same cut, and then tidy it up with a skew chisel on its side (**photo 6**).

Turning the outside

I wanted to keep the bark on a section surrounding the rim of the bowl and in order to judge where this would be, I squared off the top end of the log. This is the same cut as the previous one, just on the other end (**photo 7**). Next I started to round over the outside of the bowl. Remember, this is

2 Remove at least 50mm before cutting your blank

3 Locate the centre at both ends and mount between centres

4 Square off one end using a fingernail bowl gouge

5 Use the tip of the tool, keeping the wings away from the wood

6 Tidy up the chucking spigot with a skew chisel

7 Square off the top and define the natural-edge rim

8 I had difficulty shaping the outside due to the unevenness of the bark

9 Chopping cuts quickly remove excess wood but…

10 … leaves an untidy finish

11 Now the bowl part is cylindrical, shaping will be much easier

12 A smaller spindle gouge enables access to the underside of the rim…

13 … but keep it on its side to prevent a catch

14 Drill a hole in the centre of the bowl…

15 … and hollow from the hole towards the rim

16 Keep the cut near the tip of the tool

an end-grain bowl so the cuts are made from the widest diameter to the smallest – or downhill, if you prefer (**photo 8**). The start of this cut was very bouncy as the tool began to hit the uneven bark. I decided to make a series of chopping cuts to remove the bark and get into solid wood (**photo 9**). This doesn't leave a pretty surface finish, but is a very efficient cut for removing wood (**photo 10**). Now I could return to shaping the outside, still using the bowl gouge as before (**photo 11**). I then changed to a smaller, fingernail profile spindle gouge to cut the area under the wing of the bowl; this enabled me to cut right into the corner (**photo 12**). Keep the gouge right over on its side, which will prevent the wings from digging in (**photo 13**).

Hollowing end-grain

With the outside shape complete, turn the bowl round and mount it in your chuck. Hollowing end-grain vessels is different from side-grain bowls. Start in the middle and cut towards the rim. The middle is the most difficult to remove, so it is best to drill it out (**photo 14**), and then hollow from this hole. Start with the gouge about 2mm inside the hole with the flute pointing towards 10 o'clock. Swing the handle away from you in an arc, pivoting the tool on the toolrest (**photo 15**). Continue this cut, using the cutting edge just to the left of the tip of the tool, going a little deeper and a little wider each time (**photo 16**).

Use a spindle gouge to cut a bead where the natural-edge rim of the bowl meets the hollow (**photo 17**). Remember to roll the tool onto its side to prevent the wings catching on the wood (**photo 18**). Alternatively, you can cut the bead using a skew on its side (**photo 19**).

It is important to try to get as even a wall thickness as possible when using wet wood. The wood will dry more evenly and this will reduce the chances of it splitting. Check the wall thickness regularly using double-ended callipers (**photo 20**). I was aiming for a wall thickness of around 8mm.

I used a round-nosed scraper to clean up the inside of the bowl. To reduce the overhang over the toolrest, I angled it inside the bowl. Make sure the scraper is very sharp and take very gentle cuts – remember you are scraping end-grain (**photo 21**).

17 Cut a bead using a spindle gouge with the wings ground back…

18 … but keep the wings away from the wood

19 Alternatively, cut the bead using a skew chisel

20 Check for an even wall thickness using double-ended callipers

21 Light cuts using a round-nosed scraper will clean up the inside of the bowl

22 Wet sanding creates a slurry rather than dust

23 Clean the abrasive regularly with water

24 Reverse the bowl onto a dolly…

Wet sanding

Normal sanding on wet wood will very quickly clog the abrasive so I use a technique called wet sanding. This method has several advantages: firstly, the surface of the wood does not dry out due to heat generated by friction, and secondly, it does not create dust. Instead the dust becomes a slurry on the abrasive that can easily be washed off. You can wet sand with oil, but in this case I used water, but bear in mind that water and electricity do not go well together, so keep the water away from the electrical parts of the lathe. Reduce the speed of the lathe to avoid water spray. Wet the surface and the abrasive and hand sand in the normal way, between 6 and 9 o'clock. **Photo 22** shows the slurry produced. Wash this off regularly in the water bath (**photo 23**) and continue to sand down through the grits until you are happy with the surface finish.

Finishing the base

Finally, reverse the bowl onto a wooden dolly (**photo 24**) and remove the chucking point using a spindle gouge (**photo 25**). Normally, I undercut the base of the bowl so that it doesn't rock or spin when it sits on a table. In this case, and in keeping with the rustic nature of this piece, I rounded over the base a little so the bowl will find its own level when it has dried. Leave the piece a few days to dry naturally and then apply the finish of your choice – I am going to use Danish oil.

25 … to turn away the chucking spigot

26 The completed end-grain bowl in mulberry

EVERY TOOL IN ITS PLACE

Ben Hackney had been wanting to build a custom tool rack for years but could never find the time, but since making his own version tailored to his specific needs, he says he'll never look back

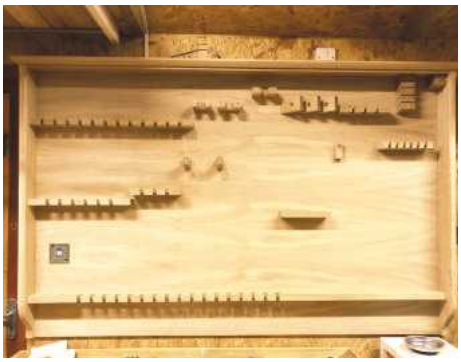
I'd wanted to make a tool rack for a long time but hadn't got round to it until recently. Here I'll share the story of my build and hopefully inspire others to have a go at making their own bespoke version. The following steps show how I went about building this project.

Step 1: Getting started

I started off by measuring the space above my workbench, which is where I wanted the rack to be placed. I planned on making it as big as I possibly could as I have lots of nice tools to display – those that I use the most frequently. My brief was for the tools to be within arm's reach as and when they were required. The dimensions of my rack are 1,700mm wide × 1,100mm high. The first job was to cut the 19mm oak-veneered MDF back board. I used my plunge saw and track for this task. The back board is the only veneered part of this project; everything else is solid oak.

Step 2: Milling & framing

The next step was to mill all of the oak to the desired sizes. All parts are 25mm thick, as I wanted the tool rack to be strong but to also look chunky. Once I had milled all the parts, I then went about making the sides and top (frame). The sides are 120mm wide with a curved end at the bottom, purely for decoration, and a 7mm stop chamfer on the side of each piece. These have a rebate in the back inside edge, which allows the back board to sit in flush with the oak. This enabled me to screw the back board to the sides while hiding the edge of the veneered MDF.



1 Organising the positions of the various tools

2 Bevel edge chisels from 3mm up to 50mm all have their own place

3 A handmade oak dead blow mallet being placed on its custom holder

Next was the top piece, measuring 150mm wide. It has a 25mm chamfer to the bottom edge and a 10 × 15mm oak strip between the two sides, which helps to hide the LED strip I later installed.

Step 3: Layout & fixing

Now that I had the side and top frame fitted to the back board on the bench, I had to think about how I was going to fix it to the wall. I knew it was going to be heavy and would require plenty of fixings with big enough screws in order to achieve a good bite into the studs. Being solid oak and thinking of all the tools I wanted to display, I soon realised it was going to weigh a fair amount. After planning how I was going to approach this, while the rack was on the bench,

4 All other mallets are also given their own custom holders

5 Hammers hang on oak dowels, which are drilled and glued in at a 10° angle

6 Pull saws sit in shallow holes, which lock the bottom in and the tops are held by magnets

7 Files and scrapers slot in nicely

8 Squares sit horizontal in shallow slots

9 Three simple shelves houses various planes and miniature tools

I began to mark the location of the studs and then proceeded to lay the tools out to decide where I wanted them to go. At the same time, I also worked out the settings of the holders, etc. so that I could then drill the holes that would allow me to fix the tool rack up behind where the shelves, etc. would be placed. This also helped me to decide how best to fit things. With all the holes now drilled, I was able to screw the rack to the wall before continuing. A scrap length of wood screwed level to the wall, at the correct height, allowed me to get the job done as I was on my own and, at this stage, the rack was already quite heavy. With a deep breath and a heavy lift up onto the temporary wood I had screwed to the wall, the rack could now be firmly fixed in place.

Step 4: Making holders for chisels, files & screwdrivers

I was now at a stage where I had to start making all the holders, etc. This did take some time as I had a lot of tools to accommodate. All of my bench chisels, mortise chisels, pairing chisels, carving chisels, files and screwdrivers had the same type of holder, all with their own custom sizes for the individual tools. I worked out the length required for each type and the size of hole needed for each tool and began to drill the holes 50mm apart using the pillar drill. The next step was to cut slots that were thinner than the holes, in every single hole, which were wide enough for the tool to fit through even if this meant turning it round on its side. This was achieved using the table saw with a sled in place and the blade raised to the correct height; this enabled me to cut up into the hole to form a slot. These were then screwed to the back board through the front. I counterbored a 12mm hole, then drilled a clearance hole so that I could fill all the fixing marks with oak pellets later on. This was repeated for the holders (**photos 2** & **3**).

Step 5: Mallets & hammers

I then moved on to my mallets. Each one has a custom-made holder to fit each individual mallet. Here I used the same method as for the chisel holders, but ensured to make each hole bigger and shaped them to hold each tool firmly. The hammers are all held up on oak dowels that were drilled and glued into the back board at a 10° angle; this would stop them from slipping should there be any vibration from machines, etc.

Step 6: Pull saws

My Japanese pull saws sit on a shelf with a shallow hole drilled where the bottom of the handle locates and the blade end is held by an oak block cut with a 45° angle on the fixing end. This helps to save a bit of space and there is a strong magnet recessed just below, which allows it to sit flush. This idea worked very well as they look as if they are balancing on the shelf, whereas the saws are actually very secure. My small flush trim saw hangs on a small block with a magnet recessed, as this one is very light so therefore doesn't require a shelf beneath it (**photo 7**).

Step 7: Scrapers & rules

Up in the top corner I cut a block of oak measuring 50 × 50 × 150mm with four slots halfway through with a 10° angle, again 30mm apart. This would house my various scrapers. Next to this a small block measuring 70mm was placed into the right-hand top corner with a large round head pin nailed in on a 10° angle, which holds my 1m rule. This needed to protrude 70mm as it came past the bottom chisel holder/shelf. Behind this long rule, attached to the right-hand side piece, are my 600mm, 300mm and 150mm rules, which are hooked on smaller round head pins at a 10° angle.

Step 8: Combination squares

My combination squares sit on three 30 × 30mm blocks with slots cut into them, which were made on the chop saw with a depth stop set up. My spokeshave is located on two oak dowels, which are glued at a 10° angle as before.

Step 9: Planes & finishing

Finally, my planes sit on three shelves. The bottom shelf is thinner and smaller as this houses my miniature tools. All holes were pelleted and I installed an ultra bright LED strip to the underside of the top piece, which helps to light up the rack and also has the benefit of casting maximum light onto my workbench. The completed tool rack was then finished with two coats of Danish oil.

Summary

The entire build took around two days. As I said at the beginning, I've wanted to make this tool rack for a long time but I always seemed to be too busy working. Now I've completed it, however, I wish I'd done it years ago; it's so nice having your main hand tools at arm's reach, right above your workbench. So, if you're thinking about building your own custom tool rack, then don't hesitate, just do it – I guarantee you won't regret it.

10 The completed tool rack without the LED strip fitted. These tools are my go-to selection for the majority of my work

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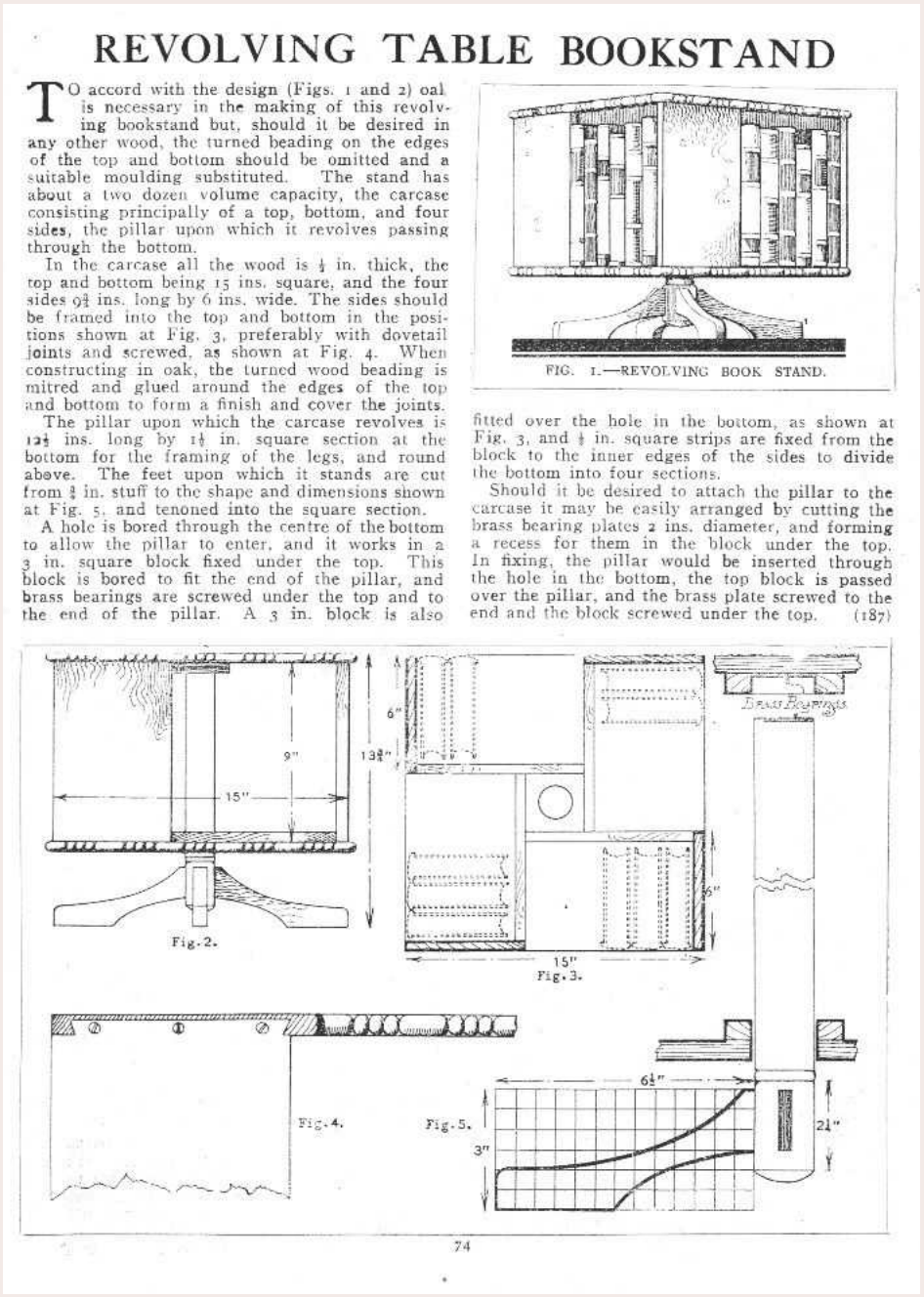
A literary revolution

Robin Gates suggests this revolving bookstand from the March 1924 edition of *The Woodworker* is an elegant tribute to the enduring qualities of books

'The report of my death was an exaggeration', Mark Twain wrote to the *New York Journal* in 1897. The same might be said of the demise of the book, which, despite confident predictions to the contrary, has not gone the way of signal flags and Morse code, and is very much alive and kicking against the electronic competition.

While some old established branches of the book trade have withered, new shoots are constantly emerging as niche publishers and book stores appear, fed and watered by online sales which have, if anything, only made 'proper' books more widely available and affordable. Like many, I suspect, I'll read from a screen if I have to, checking the weather forecast or train times, but when I want to relax with a good book an e-reader just doesn't cut the mustard. It looks wrong, feels wrong and smells – well it smells of nothingness. Indeed, my sole use for an electronic device in a literary context is for adding the traditionally printed matter to my virtual shopping basket, thence to track its delivery to my door.

Which is why this elegant revolving bookstand, taken from the March 1924 edition of *The Woodworker*, strikes me as even more relevant today than it was 94 years ago. It's functional yet also quietly symbolic of the world having turned and the book having turned with it.



REVOLVING TABLE BOOKSTAND

TO accord with the design (Figs. 1 and 2) oal is necessary in the making of this revolving bookstand but, should it be desired in any other wood, the turned beading on the edges of the top and bottom should be omitted and a suitable moulding substituted. The stand has about a two dozen volume capacity, the carcase consisting principally of a top, bottom, and four sides, the pillar upon which it revolves passing through the bottom.

In the carcase all the wood is ¼ in. thick, the top and bottom being 15 ins. square, and the four sides 9¾ ins. long by 6 ins. wide. The sides should be framed into the top and bottom in the positions shown at Fig. 3, preferably with dovetail joints and screwed, as shown at Fig. 4. When constructing in oak, the turned wood beading is mitred and glued around the edges of the top and bottom to form a finish and cover the joints.

The pillar upon which the carcase revolves is 12½ ins. long by 1½ in. square section at the bottom for the framing of the legs, and round above. The feet upon which it stands are cut from ¾ in. stuff to the shape and dimensions shown at Fig. 5, and tenoned into the square section.

A hole is bored through the centre of the bottom to allow the pillar to enter, and it works in a 3 in. square block fixed under the top. This block is bored to fit the end of the pillar, and brass bearings are screwed under the top and to the end of the pillar. A 3 in. block is also fitted over the hole in the bottom, as shown at Fig. 3, and ½ in. square strips are fixed from the block to the inner edges of the sides to divide the bottom into four sections.

FIG. 1.—REVOLVING BOOK STAND.

Should it be desired to attach the pillar to the carcase it may be easily arranged by cutting the brass bearing plates 2 ins. diameter, and forming a recess for them in the block under the top. In fixing, the pillar would be inserted through the hole in the bottom, the top block is passed over the pillar, and the brass plate screwed to the end and the block screwed under the top. (187)

9" 13¾" 15" Fig. 2.

6" 15" Fig. 3. Brass Bearings

Fig. 4. Fig. 5. 6½" 3" 21"

74

A missed opportunity?

Within a footprint of around 22in (56cm) square, allowing room for free rotation, it's designed to house around two dozen volumes. Strangely, though, the 9in (23cm) internal height is ½in (13mm) shy of accommodating bound 1920s copies of *The Woodworker*. Oops!

Earlier incarnations of the idea, in the 1800s, were in mahogany and with circular tiers, stacked like a dark chocolate wedding cake, no doubt harmonising with rows of rich leather bindings. *The Woodworker*'s version is a four-square one-storey affair in oak, the defining timber of the old English interior, and has an Edwardian feel.

In retrospect, the piece seems oddly backward-looking for the 'jazz age'. In those years following the brutality of World War I, people sought distraction in novelty, and they found it in the cinema, radio, and a rapidly expanding range of consumer goods mass-produced by methods honed during the emergency of international conflict. Meanwhile trains, boats, planes and cars were becoming sleeker and faster, with their stream-lined shapes often echoed in furniture and domestic appliances. Things were judged obsolete merely for falling out of fashion. Perhaps a bookstand speaking of slower candle-lit days was a calming influence in a world turning with such indecent haste.

Bookstand construction

The oak for the revolving carcass was to be ½in (13mm) thick, with sides framed into the top and bottom by dovetails and screws, and a chaplet (beaded) moulding to cover the joints. The four feet were to be of ¾in (19mm) stuff, tenoned into the square base of the pillar, and I daresay calculated with sufficient spread to prevent a capsize in the event of uneven loading. The central pillar carries one half of a brass plate bearing, with the second attached to the top's underside; today, a steel thrust ball-bearing, designed for unidirectional axial loads, might turn more smoothly.

This bookstand makes good use of space, and would be both a functional and attractive addition to an alcove or vacant corner. Short of tailoring dimensions to fit the books and location, I can't find much to alter – there's little more or less to it than is required to do the job. That said, a lighter timber might suit today's brighter book spines better than sombre mahogany or dark-stained oak. And anyone handy with electrics might discreetly integrate some accent LED lighting.

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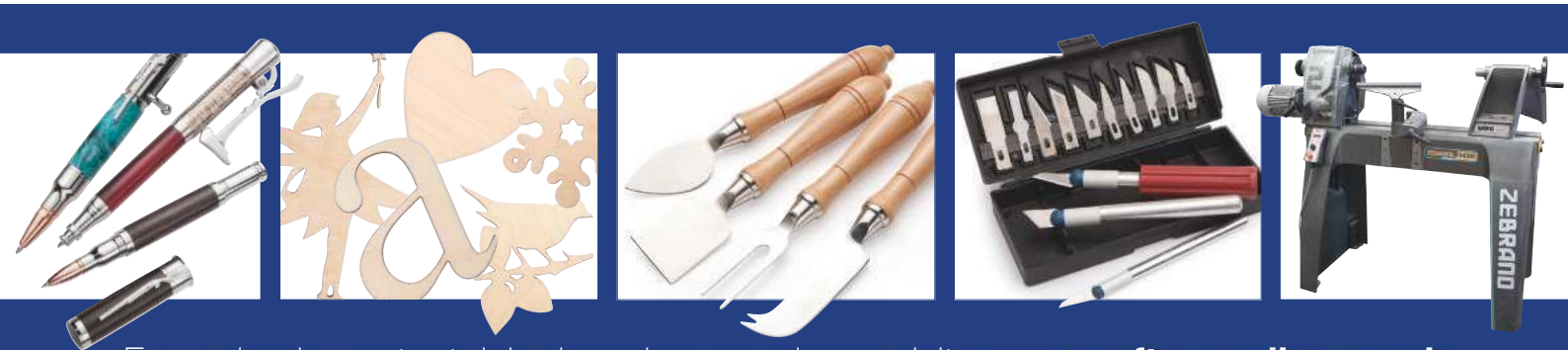

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Pressure treatment of fencing poles

The treatment of timber with preservatives

Peter Bishop demonstrates a number of different techniques for preserving timber

The old adage 'prevention is better than a cure' is very apt! As we've previously discussed, wood comes under attack from two different directions: insects and fungi. Different types of beetle and fungi can attack standing timber, logs and lumber. There's not a lot that can be done about dealing with these when the tree is still growing, a little more when it's turned into a log, but loads when it's planked up. So with a bit of common sense, maybe a few chemicals and good housekeeping, there is no reason why we shouldn't, at the very least, control these destructive elements.

Good housekeeping

The primary principle that will help protect timber from insect and fungal attack is good housekeeping. Once trees are felled they should be collected and stacked in an open, well ventilated location and not left there too long. Here in the UK stacks of softwood logs, if left piled up for long periods, will undoubtedly end up with some 'blue' stain fungal infection. In addition, logs left like this will be invaded by beetles boring into the sapwood primarily, but, if left long enough, into the heartwood as well. Once converted it's important to dry the lumber as quickly as possible, under controlled conditions, to avoid other defects impacting on quality.

Pressure treated timber

Timber treatment methods

Taking care of our valuable timber resources should reduce the need for preservation; however, there are a number of well-established methods of timber treatment that might best be applied if required. Some are a bit archaic, and some work better than others, so here's a brief outline of the most common processes.

Pressure vessels

A waterborne preservative, which contains both insecticide and fungicide, can be forced into the outer structure of timbers under pressure. The process is carried out in a pressure tested, sealed steel container, which is usually constructed as a tube. Timbers treated in this way should be dry enough so that the preservative, when

Applying preservative with a brush, ensuring the end-grain is especially well covered

Applying preservative with a spraying system

Telegraph poles after treatment in a pressure vessel

Evidence of flight holes created by emerging insects

administered, can stick to the internal cell walls. To ensure the treatment has longevity the preservative will have an additional fixative chemical; this will avoid it being flushed out if exposed to wet conditions. We can often recognise timber that is treated under pressure because a green colouring has been added to the basic chemical mix. Fencing and roofing timbers are the most common we come across. There are stringent health and safety rules and regulations that have to be adhered to when commercially handling any preservative treatment. There's one in particular: after treatment, the timber is required to stand and drain for at least 48 hours before it can be released for use. All run offs are contained and recycled or disposed of as hazardous waste.

A similar method employs a double vacuum method. The timber to be treated is sealed in a pressure vessel, a vacuum is created, the preservative introduced under pressure and, finally, a second vacuum is introduced to remove the excess. This method was originally spirit-based but, with changing legislation, has now been modified to a water-based preservative. Double vacuum treatment, often trade marked as 'Vac Vac', is usually applied to timbers that are used in construction above the damp proof course level. Finished joinery such as skirting, architraves and windows are typical. Some manufacturers of the preservative add colourings for ease of identification. Yellow and brown are the most common. The process should not materially change the dimensions of the timbers treated.

Brushing & spraying

Coal-tar based preservatives, such as creosote, have been used for many years. These can simply be applied to exposed timbers with a paintbrush or a spray machine. Penetration is not deep and treatment should be repeated on a regular basis, probably every year or so.

Dipping

An alternative to the above, and less labour intensive, is dipping the target timbers in a bath of creosote. As long as the run off is safely contained, this may be a quicker method to employ. However, the preservative does not penetrate any deeper.

Steeping

Submerging timber entirely in tanks of preservative, for several days or even weeks, can increase the levels of preservative penetration and, therefore, the life cycle of the components. This method was often used for railway sleepers and telegraph poles; however, these days, most poles and sleepers are pressure treated.

Hot & cold

Dipping timber in separate baths of hot and cold preservative leads to some improvement in penetration. A partial vacuum is created when the components are submerged in the hot bath of preservative and then dipped in a cold bath. This helps to draw the preservative into the timber structure. Quicker than steeping, the baths normally only last between 4-8 hours each.

Other preservation techniques

All the above are useful methods for administering preservatives but will not do your fine piece of furniture much good! The furniture beetle is the chap who'll cause the most problems. With them you sometimes just need patience. If you think that you have an infestation, remember the life cycle, then check out the bottom and backs of the piece in question. If fresh flight holes and piles of dust are apparent, then careful administration of a proprietary insecticide will do the job over time. The best approach, if you can, is to apply a deluge coating of preservative to all affected areas. If not, be a bit more precise and use a syringe and squirt the insecticide directly into the worm holes, cracks and crevices. The objective here is to stop the cycle and avoid further infestation in this or other pieces. As subsequent beetles try to emerge they should eat their way through treated stuff and die before they can mate. Applying treatments for three or more years will ensure the life cycle is interrupted and the beetle eradicated.

There are also some specialist preservation techniques using temperature. Small pieces can be left in the freezer for a while. This will kill the little blighters off, but do take care and thaw out the item slowly. For those irreplaceable heirlooms, it is worth seeking specialists in these heat- and cold-related treatments.

If you're working with timber outside, say building a fence, then there's one key factor to bear in mind with regard to fungal attack – rot. It's a well-known fact that timber in or near the ground will rot 160mm above and 150mm below ground level. This is the point where all the factors will be ideal for fungal growth and thus destruction of your timber component. So, whatever you do, make sure this vital portion is well treated. Pre-treated under pressure should be best but the alternative is for you to soak this section in a propriety preservative yourself.

Finally, if you are using a preservative, always read the manufacturer's instructions carefully and do exactly as they tell you. Don't be as casual as I and my brother once were, many, many years ago. We were painting a wooden cattle feeder with creosote, one each side. Having splashed each other we suffered from multiple minor burns for days afterwards. A salutary tale if ever there was one.

NEXT MONTH

In the September issue, Peter will move on to looking at what you need to consider when setting up a workshop (part 1)

Woodworm treatment
Photograph courtesy of **West Wales Damp Proofing**

A rotting fence post

LETTERS

★LETTER OF THE MONTH

COUNTRY ARMCHAIR, MADE NEW

Dear Editor,

In the June 2018 issue of *The Woodworker*, starting on page 30, you featured Peter Bishop's restoration of a 'country armchair, made new'. I'm presently trying to make the same chair, using the parts that are heavily 'woodwormed'. I've managed to turn the legs, using the old ones as a pattern, but since I need to replace all the components of the chair, I would therefore appreciate some more information.

1. How do you go about cutting the arched, curved top to the back of the chair?
2. Are the narrow, curved back pieces cut out or are they steamed and formed?
3. How do you go about turning the top of the back arm parts?
4. How do you carve out the bottom of the chair? I.e. is the back (top) cut out like this (**Fig.1**) or like this (**Fig.2**)?
5. With the back parts, are they turned at the top, before the bottom is cut to shape and tenoned for the bottom (**Fig.3**), and with the back pieces, are these cut to shape like so? (**Fig.4**).

I was unable to obtain a piece of beech wide enough for the bottom, so I'm going to have to dowel and glue two pieces together (**Fig.5**).

Is there an easy way to get the leg supporting-arm spindle and everything else drilled out for correct angles? I don't have a laser to mark the stretcher sockets – is there another way this can be done?

Thanks to your article, I've had a lot of questions answered, but since I'm having to make 'the whole chair', there's a few details missing.

I hope you can help in providing this additional information.

Thanks in advance, **Alan W. Estes**

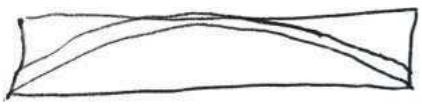

Fig.1 Design for the chair back (top)...

Fig.2 ... and an alternative design

Two 'formers' in which a back slat is held once out of the steamer

Fig.3 Back part (a)

Fig.4 Back part (b)

Fig.5 The bottom piece, dowelled and glued together

Hello Alan, and thank you for your letter regarding my article in the June issue of The Woodworker.

To answer your questions, the seat back top can be cut from a thicker piece and shaped at the same time. The alternative is to use a thinner piece, of the correct thickness, and steam this to shape afterwards. It's best to cut all the mortise holes while the seat back is still either in the block, before cutting out, or in the flat, before steaming.

The back slats are normally steamed into shape but, if no steamer is available, they can be cut in sequence from a larger slab of wood, as you suggest.

Turning the tops of those two outside back pieces can be tricky. It's probably best to start with a wider piece than required and centre this at each end. Mount it on the lathe and turn the spheres and round tenons. The piece mounted might wobble a little, but once the top ends are turned, you can then cut the rest of the shape out and finish the bottom joint.

A slightly curved adze will help shape the seat contours; try and make the seat so that the grain is rising from back to front and then cut, with the adze, in the same direction. Some excess waste could be cut out with a router and finished with the adze, or possibly a convex spokeshave. When you joint the seat, try to get the grain running in the same direction so that it helps the above process. If you don't, there is a chance that the grain, on one side, might pick up or break-out.

Best regards, **Peter Bishop**

WRITE & WIN!

We always love hearing about your projects, ideas, hints and tips, and/or like to receive feedback about the magazine's features, so do drop us a line – you never know, you might win our great 'Letter of the Month' prize, currently the new Trend ¼in 30-piece Router Cutter Set, worth over £100. Simply email **tegan.foley@mytimemedia.com** for a chance to get your hands on this fantastic prize – good luck!

TURNED SECRET APPLES

Dear Tegan,

Back in approximately 1998 there was a woodturning project titled 'Secret Drawer Apple'. I followed the project and made some great secret apples. Are the plans still available? I am sure it was in *Good Woodworking*. Any information you can offer would be much appreciated.

Regards, **Steve Wood**

Hi Steve, I've been busy doing some sleuthing but unfortunately no-one seems to remember this article, and, annoyingly, our archive doesn't stretch back that far. I wonder if any readers of the magazine remember it? If anyone does, please do get in touch with an issue number and author, so hopefully we can pass a copy/photocopy on to Steve. Many thanks in advance and fingers crossed we can get this query resolved with everyone's help!

Best wishes, **Tegan**

READERS' HINTS & TIPS

For the next eight issues, in conjunction with Veritas and BriMarc Tools & Machinery, we're giving one lucky reader per month the chance to get their hands on a fantastic low-angle jack plane, worth over £250! Ideal for shooting mitres, working end-grain and initial smoothing, this must-have hand tool also features a combined feed and lateral adjustment knob for fast, accurate changes to depth of cut. To be in with a chance of winning this fantastic piece of kit, just email your top workshop hint or tip to **tegan.foley@mytimemedia.com**, and if you can, please also attach a photo illustrating your tip in action. Good luck! To find out more about Veritas tools, see **www.brimarc.com**

USEFUL SETTING OUT TOOLS

As Ray shows, the steel roofing square is a very useful setting out tool

Hello Tegan, I started woodworking at the age of 12, during World War II. From a few scraps of wood and using an old set of tools, I made model boats and planes, which were sold to raise money for our 'Spitfire Fund'. I enjoyed working with wood so much that I decided to continue with it.

Now, nearly 90, and with a better set of tools, I am still working wood. I have been a subscriber since the first issue, and look forward to it arriving each month. In the past I have sent in a few tips, and the tip I enclose here is so simple.

The steel roofing square is a very useful setting out tool, the usefulness of which can be increased by the addition of a stock. This can be a length of hardwood of section 40 × 22mm with a deep groove to provide a snug fit over the tongue, and notched at one end to fit over the blade to prevent it twisting. The photo enclosed shows it in use, and I also enclose a few photos of things I have made.

Now I am teaching my grandson who has been quite keen and who, I'm pleased to say, is progressing very quickly. He has just finished fitting out a flat and the quality of the work is to a very professional standard.

Well, Tegan, I must thank you for all your hard work in continuing to put together an interesting magazine for us woodworkers. I usually find something in each issue, so I continue with my learning.

As Geoffrey Chaucer once wrote: "This life so short, the craft so long to lerne."

Here's to more happy reading, **Ray Willis**

Hello Ray, and may I just say what a delight it was to receive your letter – it very much brightened my day and put a spring in my step! I love hearing people's stories, and it gives me particular joy to hear that you're still enjoying woodworking after all these years. I'm thrilled to learn you've been an avid reader since the magazine first started and I trust you'll continue to enjoy it in its new incarnation. I hope you find the plane very useful and if he's lucky, perhaps your grandson will be able to give it a try!

Best wishes, **Tegan**

A beautiful music stand

A stool with handy under-seat storage

Sideboard with inlaid cross detailing

AROUND THE HOUSE WITH PHIL DAVY

We're probably getting used to the speed at which retail stores seem to come and go, although it can still be surprising. Sadly, we're used to seeing our high streets full of charity shops, coffee outlets and not much else. Recently, my local branch of Homebase announced a closing down sale and is due to shut within a few weeks. Whether this is actually a result of Australian owner Wesfarmers pulling out of the UK, who knows? There's uncertainty, however, about the future of Bunnings (some of the former Homebase stores now rebranded). I'm certainly no expert, but there's no doubt that retailing generally is changing, largely due to the huge growth in internet sales. Who can tell how this trend may affect the way we buy tools and materials in future, but perhaps more than ever we need to support our smaller specialist tool and hardware stores.

WORKSHOP: STICKY PROBLEM

It's quite common to need more than one adhesive on a woodwork project. Musical instruments can be especially demanding, though. On a recent acoustic guitar body repair I ended up using three different types of glue. The instrument had either been knocked over or dropped, resulting in a couple of serious splits to the ribs. Plastic edgebinding had also come adrift in places. This sits in rebates around upper and lower edges of the body and is both decorative and protects the soundboard and back timbers.

Most of the time I use an aliphatic resin PVA, either Alcolin Professional or Titebond, which are identical. You can work the glue into tricky joints with a brush or even your fingers and it generally does a great job. But sometimes you need a thinner adhesive that will flow into hard-to-reach cracks and crannies.

Hide glue

Luthiers traditionally used hide glue, sold either as granules or in pearl form. Still used today by violin makers and some guitar makers, it offers several benefits. Heated up in an electric glue pot or in a saucepan of hot water (after soaking), it's definitely not the easiest glue to prepare, though is great to use for certain tasks.

As long as it's sufficiently warm the glue will run off the brush, so getting it to flow into cracks and hard-to-reach areas is easier than PVA. It's also reversible, so joints can be opened up again for repairs with a palette knife and hot water, making it ideal for musical instruments.

Old Brown Glue

A more convenient product is Old Brown Glue, developed by a furniture restorer in California and now available in Britain. Similar to traditional hide glue, it comes in gel form. You place the bottle in a container of hot water (not boiling), so the glue becomes less viscous. After cleaning off old glue deposits, I brushed it into the damaged rib areas, working it in with my fingers. Clean up is easier than most other adhesives, as you simply wipe the surface with a damp cloth. Strong masking tape is sometimes the best method of holding everything together while the glue dries. After repairing the body splits, the binding was glued back with Everbuild Superglue, a small section at a time.

Old Brown Glue is available from Workshop Heaven (**www.workshopheaven.com**). A 5oz bottle costs £9.95, plus postage.

The guitar had either been knocked over or dropped, resulting in a couple of serious splits to the ribs

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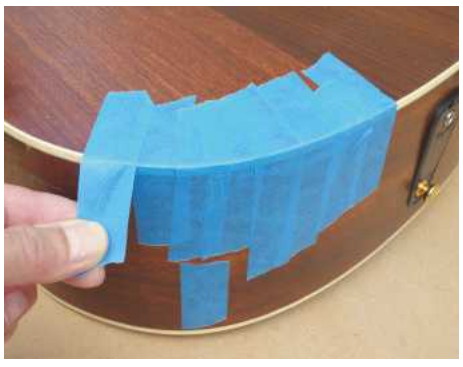

Strong masking tape is sometimes the best method of holding everything together while the glue dries

WORKSHOP:

MOULDING PLANES OR ROUTER?

When describing the Victorian church window renovation project in last month's issue, I mentioned the problem I'd had with the glazing bars. With four windows to rebuild, dismantling the bottom rail and adjoining stiles of each sash was quite a challenge. Rotten wood needed cutting away without damaging the vertical bars, which I didn't want to replace.

Work involved replacing bottom rails and splicing in new lower stile sections, but the trickiest part was replicating the moulding around inner edges. This obviously needed to match the existing glazing bars, which were slender and difficult to repair if split. The actual profile was not quite an ovolo, more a slimmed down version to suit the narrow bars.

Like many woodworkers, I'd acquired a handful of wooden moulding planes over the years. Rarely do mine see the light of day, though for this job there was no alternative. I found one similar to the profile needed, though not exact. After some work on the blade, which was rusted, slightly bent and had probably never been used for decades, I tried the tool on a suitable offcut. Not what you'd call perfect, but I reckoned it would be feasible to get a reasonable match.

After routing rebates for the glass along the outside faces of bottom rail and stile components, I returned to the moulding plane. It was hard going, and I had to do final shaping with a small shoulder plane and abrasive paper. Although quite pleased with the result, the thought of several more windows was daunting. Surely there must be a router bit that would match…

Fortunately, Trend came to the rescue with their Craft Pro range of cutters (**www.trend-uk.com**). In fact, their bearing-guided glazing bar set (CR/SSP2) was pretty close. Consisting of a pair of ¼in shank scribe and profile cutters, I only wish I'd found these sooner. Mounted in a router table, the profile bit made life that much easier, ensuring consistent results. My admiration for those woodworkers who regularly use traditional moulding planes has soared, though…

Router roulette

Talking of routers, I actually had four different machines set up for tackling separate stages of this project. My elderly Elu MOF96E stays permanently mounted in an Elu table and is great for smaller rebates and moulding.

A couple of sashes didn't actually need their entire bottom rails replacing. Instead, I cut part way through the tenons, then routed along their length to leave about two-thirds of each rail in place. My big DeWalt DW626 ½in router was ideal for this, running against a guide clamp. Then I glued and screwed new full-length pieces to these and cleaned them up.

Next, a Bosch POF1200 plunge router cut inner rebates, once stiles and bottom rails were glued together. This meant they lined up exactly with existing rebates in the original stiles. Finally, I used a Trend T4 router to cut hinge recesses at the top of each sash. Excessive perhaps, but several routers saved having to swap cutters and adjust fences, cutting down on time considerably.

The actual profile was not quite an ovolo, more a slimmed down version to suit the narrow bars

My moulding planes rarely see the light of day, though for this job there was no alternative

Using a moulding plane was hard going, and I had to do final shaping with a small shoulder plane and abrasive paper

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Consisting of a pair of ¼in shank scribe and profile cutters, I only wish I'd found them sooner

Mounted in a router table, the profile bit made life that much easier, ensuring consistent results

I glued and screwed new full-length pieces to the bottom rails, then cleaned them up

SUMMER PROJECT
MAILBOX

Takes: One weekend
Tools you'll need: Circular saw, sander, router, drill, bench and block planes, sliding bevel

STAMP OF APPROVAL

Your postie will appreciate **Phil Davy**'s outdoor mailbox

You'd think that soaring postal rates and the convenience of electronic mail would make the letterbox redundant. Funny that, as there still seems to be plenty of mail dropping on my doormat. Admittedly a good deal of it is junk mail, but there's a steady stream. We may use direct debits or pay household bills online, but thankfully magazines such as this one are not restricted solely to the virtual world yet. Think of all those tool catalogues, too. We need something to flick through while having a tea break.

I decided that a mailbox next to the garden gate would save the postman walking down the path to the front door. Over the course of a year I estimated that this would save several thousand metres of shoe leather. Of course, a mailbox will not suit everyone and it really depends on your home and circumstances. Location, as they say, is everything.

Safe & secure

There are several considerations before you start building. First, the box must be secure. Not only should it be difficult to steal the contents, but also the box itself. Don't make the letter opening too large or it will be possible to reach inside to nick the contents. If fixed to a post or garden fence, make sure the box cannot simply be yanked off. Alternatively, it could be attached to a wall, and unless the box is likely to be situated inside a porch or similar you'll need to fit a lock to the door.

When it comes to the weather, a sloping roof will obviously help shed water, but make sure you use a waterproof PVA glue such as Titebond III for the construction. When completed, check for any gaps around the box and fill where necessary. Use a suitable exterior finish such as Cuprinol Shades.

I fitted drawn brass butt hinges to the door, but it would be easier to use piano hinge. If you do this don't be tempted to use cheap, plated brass as this is likely to rust. Solid brass piano hinge is better for exterior use, but it's not cheap.

You can either use softwood or plywood for this project, but avoid MDF or chipboard. If using ply make sure it's exterior grade, otherwise it will start to delaminate when exposed to the weather. If using solid timber, you'll need to join boards together to make up the width of front and rear panels. You could also thickness PAR softwood down to about 15mm, which would help to reduce the overall weight.

This is quite a large mailbox, so if you don't anticipate large padded bags being delivered you could easily scale it down to suit your personal requirements. It's easy enough to adjust the dimensions shown (**Fig.1**) to suit the maximum size of mail delivered. No matter the size of the largest padded bag you can find, you can almost guarantee that at some stage the box won't be quite big enough...

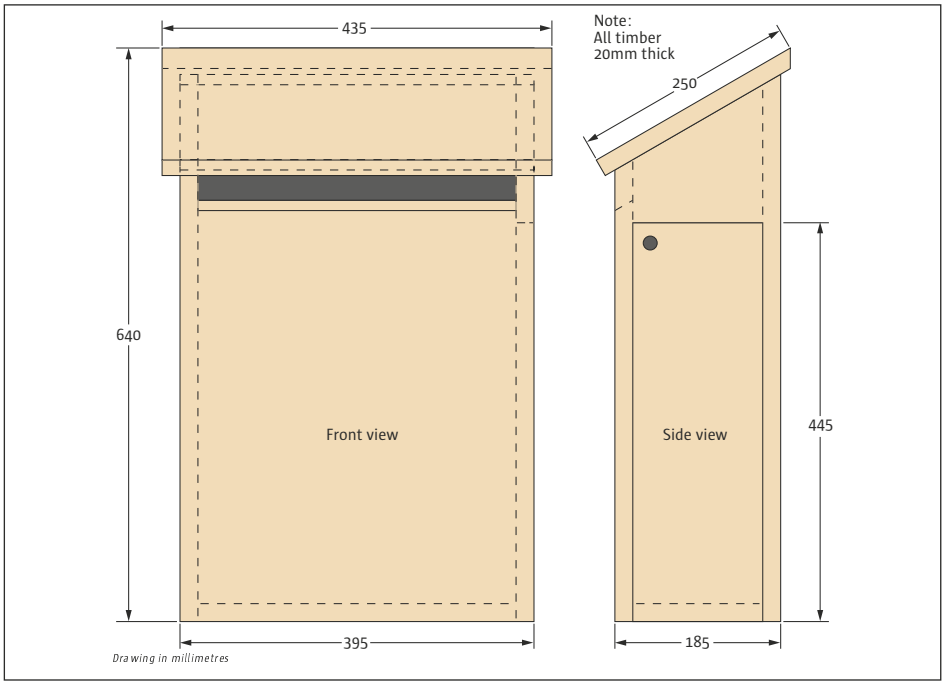
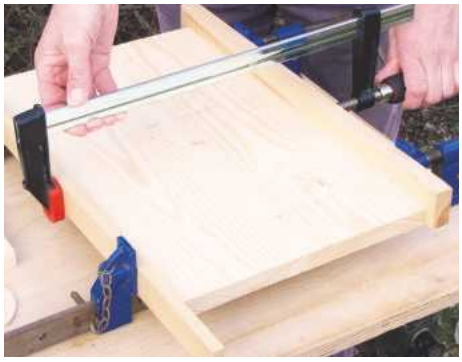


Fig.1 Mail box dimensions

1 Measure a large padded envelope to give an idea of overall dimensions for the box

2 If using softwood, front and rear panels will need jointing. Reinforce edge joints with biscuits



3 Glue and cramp boards together for front and rear panels. Plane the edges first if necessary

4 When the glue has dried, level the boards with a bench plane, checking them with a straightedge

5 Saw all panels to size and plane ends square using a shooting board for accuracy

6 Tilt the saw blade over to 30° and cut the top edges of both front and rear panels

7 Set a sliding bevel to 60° and mark the top edge of the side panels. Saw and plane the ends

8 Cut biscuit slots on all four panels. This fixed short end is above the hinged door

9 Glue the short end first with PVA, checking for square as you tighten the cramps. Allow this to dry

10 Assemble the rest of the box. The sides should be slightly proud of the front and rear panels

11 When the glue has dried, plane the edges flush on the sides and around the base

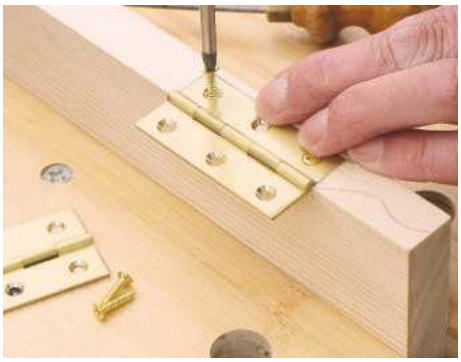
12 Carefully trim both sides flush, checking their angle with a sliding bevel

13 Cut the door to size, bevelling the leading edge so it doesn't bind against the front panel

14 Add angled blocks at each end of the letter opening to extend the sides. Glue and join

15 Cut the roof panel to size, bevelling the rear edge. Check for an even overhang all around

16 Biscuits help locate the roof in position, though it's best to add screws as well for security purposes

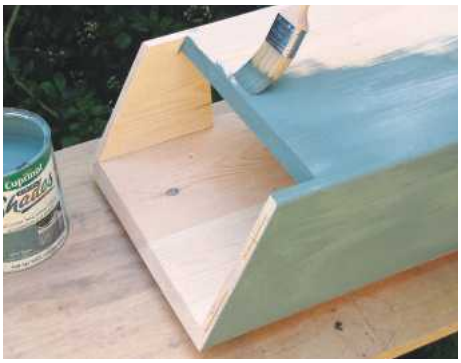


17 Mark out the positions of 65mm brass hinges and chisel recesses carefully. Drill and fit screws

18 Drill a hole in the top corner of the door to suit the barrel of a cam lock. Insert and fit the cam lever to the rear

19 Check the door closes and the lock operates correctly. Make adjustments if necessary

20 Using a bearing-guided router cutter, round over the edges of the box before sanding



21 It's easier to paint the box before attaching the roof. Use at least two coats of suitable exterior finish

22 You may need to add battens at the rear if mounting the box on a wall or fence

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ME AND MY WORKSHOP

John Creevy

This month we enter the workshop of retired engineer **John Creevy**, which is certainly his home from home

John in his workshop with his trusty JET jointer

1. What is it – and where is it?
It's a purpose-made timber structure that I designed and built five years ago, adjacent to my home in North Devon.

2. What's the best thing about it?
It's fully insulated – floor, walls and ceiling – and I don't have to share it with a car!

3. And what's the worst?
Despite having 50sq.m of floor space, I still have to assemble large pieces in my garage.

4. How important is it to you?
Now I'm retired and relocated in Devon, I have a space where I can go, seven days a week. I can design, make and finish anything I've dreamed up, whether there's a practical need for it or not.

5. What do you make in it?
Everything from freestanding and fitted furniture, to rocking horses, garden furniture, pergolas and now turned pieces.

6. What is your favourite workshop tip?
It's that old adage – first said to me 55 years ago at the start of my apprenticeship as a pipe fitter/welder – 'measure twice, cut once'. I'd add: make your cut on the waste side, as you can always take more off!

7. What's your best piece of kit?
My JET 8in jointer. We all take square stock for granted; this machine guarantees it.

8. If your workshop caught fire, what one thing would you rescue?
The photo of my wife, and a drawer from my filing cabinet, which contains details and invoices for all workshop purchases over the last 30 years, to enable replacement of materials and equipment.

9. What's your biggest workshop mistake?
Building an extension to my workshop for dust extraction and an air compressor, only to have my wife insist that all of her garden equipment had to be in there first, and with nothing dusty or noisy. So... my workshop is still dusty and noisy.

10. What's the nicest thing you've ever made?
A rocking horse from Brazilian mahogany, an Anthony Dew design finished in French polish, made for my first grandson Miles' third birthday. He's now 28 and still has it.

11. And what's the worst?
Also a rocking horse, made in English oak that over the years has split and cracked. It's unsaleable, and still resides unfinished in my workshop, in pieces. I am considering trying to repair and finish it.

12. What's the best lesson you've learned?
Ensure your wood is kilned to a moisture content suitable for modern living and – if practical – store it for at least three months in a climate similar to the one where it will live.

13. If you won the lottery, what would you buy for your workshop?
Probably a large stand-alone thicknesser, to complement my jointer!

NEXT MONTH
In the next issue, we step inside the workshop of Dorset-based furniture designer and maker, Alice Blogg. We'd love to hear about your workshops too, so do feel free to send in a photo of your beloved workspace, and please answer the same questions as shown here – just email **tegan.foley@mytimemedia.com**

TREVOR'S TREE

Les Thorne makes use of some gifted walnut to create an attractive natural-edge goblet, which he then returns to the owner of the tree as a memento

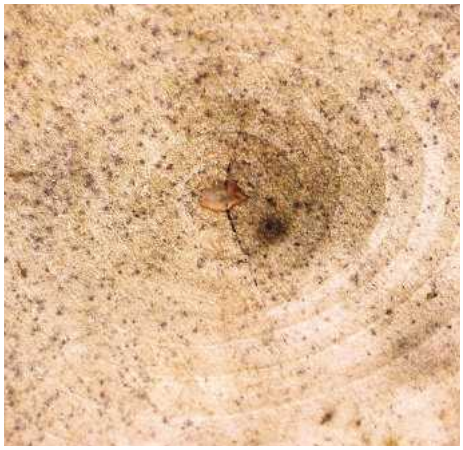
As a woodturner, I'm always being offered timber from people's gardens and when Trevor, a chap I play golf with, said he was having a walnut tree taken down, I jumped at the chance. I was expecting a tree of about 40ft high and 18in in diameter, but alas, it wasn't to be.

We believe this tree was given to Trevor by a friend around 25-30 years ago. What surprised me when I went around to look at the timber was the fact it was completely devoid of any dark heartwood; even in small trees like this there is normally something of that rich walnut colour showing. There are different methods of working with wet wood and the normal practice of drying it out first is my favourite. This is difficult to almost impossible to do while in tree form, however, so I would need to rough turn the required shape, seal it up and dry it carefully.

Trevor wanted to have a piece to remember the tree by, so I decided to turn a natural-edge goblet straight from the wet timber; this meant I would have to turn it thin, so it had every chance of not splitting.

1 If I was leaving this piece for any length of time, I would have sealed the end-grain, but as I intended to turn it quickly, I wrapped it up in pallet wrap, which stops the timber splitting too badly

2 Driving wet wood requires a larger than normal drive centre. Here I'm using a 30mm Steb centre. If the log was much larger, I may even go up to the Axminster Jumbo Drive



3 Spring cut timber is always going to be prone to splitting and even wrapping the log up hasn't prevented a small split occurring. All being well, I should be able to remove this in the turning process, and make sure that I don't mount the timber pith-to-pith, as this will weaken the stem

4 It's always a pleasure to use super sharp tools and the Tormek will give me the best possible edge on the 13mm bowl gouge. Wet wood is difficult to sand, so I want to get the best possible finish straight off the tool

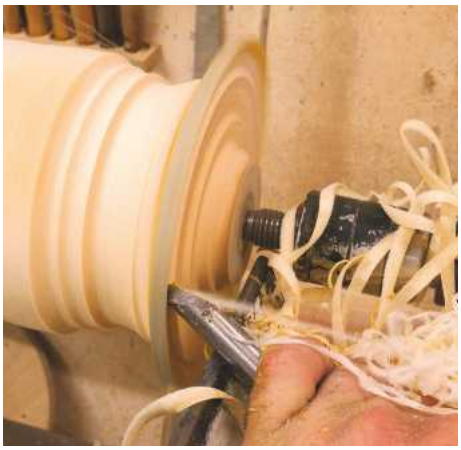
5 When working with uneven logs like this, take a strong stance with the tool locked into your side and wherever it's practical, I like to stand to one side so that if anything flies off the lathe, it will miss me

6 Turning wet wood is a joy and you can create some fantastic streamer shavings. I left around 25mm of natural-edge bark at the top, which allows for a margin of error when it comes to re-chucking the piece

7 The spigot to fit in the chuck needs to be cut accurately. The 10mm round skew is used in sizing mode to create the dovetail needed. You can see the great shavings hanging off the tailstock

8 I have always tightened every hole on my chuck – some turners say you shouldn't have to do it, but I do. Due to the orientation of the grain, I can really tighten it up hard without any risk of breaking the spigot

9 I have a set way of making natural-edge bowls: I start by defining the area underneath the bark edge, and use the gouge to create a curve to the point where the shape straightens out



10 I use a push cut on the top to get the bark down to about 10mm thick. Feeding the tool in from fresh air onto an uneven edge is something that takes a fair bit of practice – try to move the tool with your body

11 Keeping the bark intact is a top priority if you want the finished item to look as good as possible. I recommend soaking the bark section in thin CA adhesive; you need to do this before you take the edge down to its final thickness

12 I use different methods to hollow the end-grain depending on the depth and type of wood being worked. I always start with the signature spindle gouge using a pull cut with the flute pointing at around 10 o'clock

13 The other tool I would use is a Simon Hope 6mm carbide hollower. This is the best tool to use when you get deeper into the work and the tool overhang becomes an issue

14 Even a small cutting disc will remove wood quickly and with very little effort. Work the tool in sweeps from the centre outwards keeping the cutter slightly angled towards the left

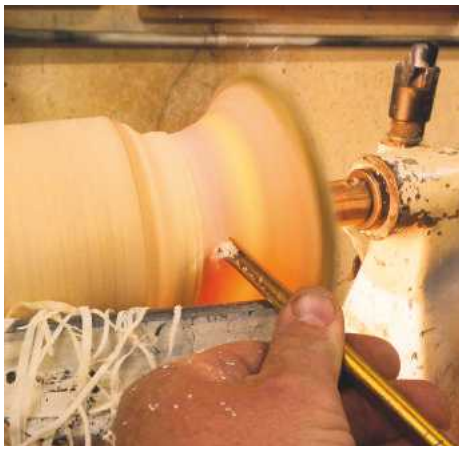
15 For the finishing cuts, I always try and go back to a push cut with a bowl gouge. I use a 10mm diameter bowl gouge with a traditional grind. Here, as the wood is so thin, I have backed the heel of the tool off to decrease the amount of bevel in contact

16 The secret of this cut is to look at the outside of the bowl as the tool advances through it. It does take a little practice but will make this type of thin turning much easier. With the small bevel in contact with the wood, a great finish can be achieved

17 As I have made so many of these bowls, I can turn the inside shape easily but I do keep stopping and checking it with my fingers, to ensure I have a good curve that is uninterrupted by any unwanted ridges

18 If you plan on leaving the work for any length of time, make sure that you wrap it up with some shavings to keep the moisture in. Any drying out at this stage will lead to the piece running out of true, making the turning much more difficult

19 The best way to judge the wall thickness when you get thin is to use a light. This is a 12V shop-built lamp holder with a very sensitive circuit breaker, just in case



20 The colours showing through the walls of the bowl let me know how thin I'm getting. I will keep stopping to check with my fingers, being careful not to touch the hot bulb with my hand

21 I am aiming for a nice consistent pale-yellow colour throughout the piece. You'll see I've now switched to using the signature gouge as I find it will fit into the detail better at the bottom of the bowl section

22 When I first made this type of work from wet wood, I would friction dry the bowl's surface with heat generated from the sanding process. Nowadays, however, I tend to wet sand the surface and I find this is more effective as well as enjoyable

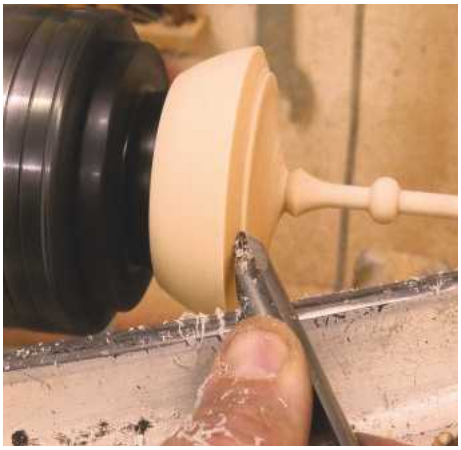
23 You need to make sure you present the abrasive to the natural-edge, so it cannot catch. I maintain a gap at the top edge and sand the inside and outside simultaneously

24 Detail is everything in hand turning. The small 'V' that I am cutting at the transition from bowl to stem will act as a punctuation point between the two different shapes

25 You don't want to make the stem too thin as the piece will not look balanced. The bevel of the spindle gouge must be in contact with the wood or the cutting edge will dig in and ruin all your hard work so far

26 You can see the pith in this photo; it's a good job I didn't have this running through the centre of the stem as I am sure that would have ended with me breaking it

27 I decided part way through turning the stem that including a small bead would add something to the design. I can always change my mind later and remove it



28 Fine crisp detail on the foot helps to break up the plain lines, especially with a base that needs to be quite big to allow for the warping that is going to occur in the drying process. I have left enough waste at the chuck end to make parting off easier

29 The 10mm skew is used to take away some of the waste near the chuck. I like to chamfer the edge of the base from right to left; this will create a small shadow where the edge of the base sits on a surface

30 This is my special parting tool; it's basically half a skew chisel. The benefit of using a tool like this is that the slicing action cuts the fibres of the timber rather than scraping them. The base does need to be super thin or it will dry unevenly and crack

31 You need to have your wits about you when using this tool: only have the long point in contact with the wood by keeping the tool tilted throughout the cut. If you drop the top of the tool into the wood, you will have a large catch and also break the base

32 When parting off you need to adopt a comfortable and safe stance. I am leaning over the headstock making sure that all my clothing is away from any spinning wood or chucks. The parting tool is presented one-handed and I am ready to catch the goblet

33 This tool leaves such a great finish, especially on wet wood requiring little or no sanding. As far as I'm aware, you cannot buy this tool but you can easily make your own version from a 3mm parting tool, as many of my students have done

34 Mrs Thorne is going to be busy cleaning this mess up. Don't leave the wet shavings on the lathe as everything will go rusty quite quickly and being walnut, they will react with anything steel and turn everything black

35 This is exactly what you want to see when you are oiling the finished work: the bowl is thin enough for the oil to soak right through the wood, meaning that any free moisture is replaced by lemon oil

36 The completed natural-edge goblet in walnut is now ready to be presented back to Trevor

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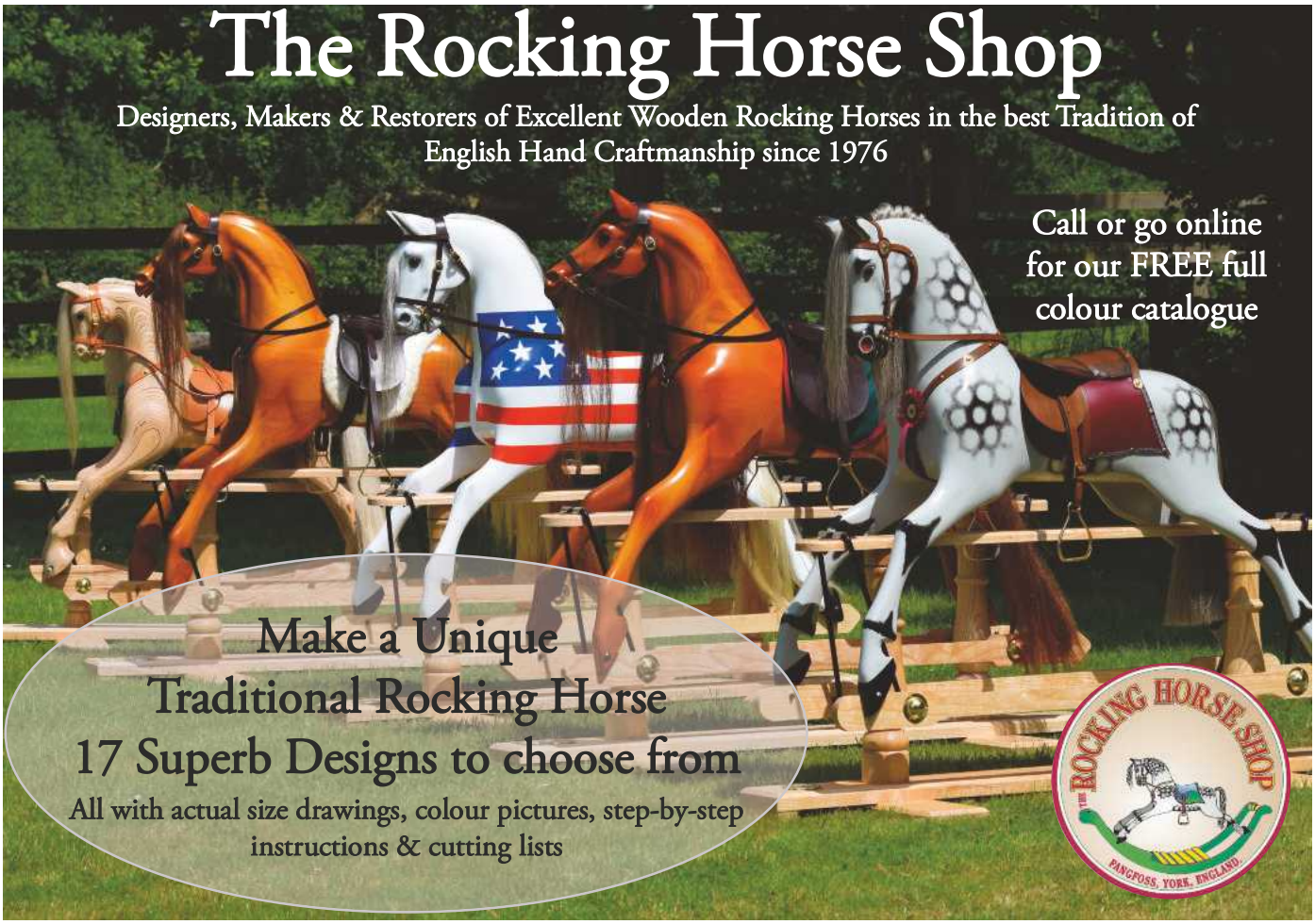

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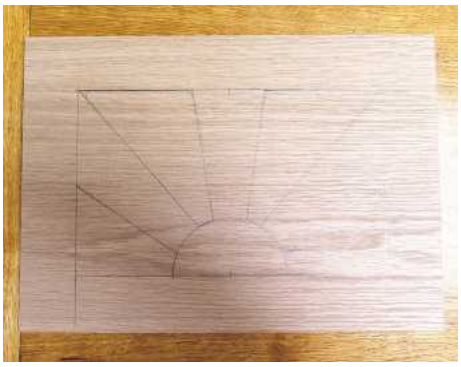
RECIPES AT THE READY

Ideal for making use of offcuts, **Glenn Perry** shows us a simple and stylish solution for holding a recipe book while you cook

When making an item of woodwork, there are two ways to proceed. The first is to draw a detailed sketch after considering the item's use, size and design; the second is to start out with a rough idea and work your way through the details as you make each part, adjusting accordingly. My latest project was achieved by the latter method. My daughter asked me to make a stand to enable her to follow recipes in her cookery books while preparing food in her kitchen. I decided to make a stand that could be folded flat for ease of storage. With no examples to study, I decided to make a back support for the book with a ledge, a T-shaped base, and a hinged prop.

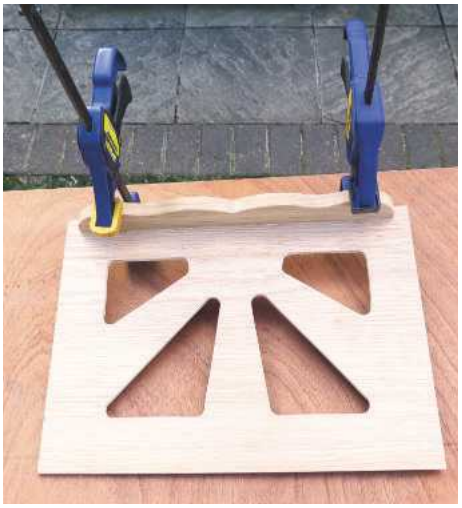


1 Pattern drawn on to veneered board

2 Carefully cutting the starburst pattern with a fine jigsaw blade

3 Creating a rebate

4 Rear section tenoned into front



5 Gluing shaped oak shelf

6 Small oak block glued to rear of front support

T-shaped base

I recently purchased some oak-faced 6mm thick MDF. Veneered on both sides with American white oak, this would support the recipe book (**photo 1**). I cut a rectangle of the board 350 × 250mm and drew a starburst pattern, then I carefully cut this out using a jigsaw fitted with a thin blade (**photo 2**). The corners of the internal cut-out were then rounded using a sawtooth bit in a pillar drill. When using veneered boards, you have to be very careful not to create a ragged edge as you're cutting and drilling, so ensure to use sharp blades and when drilling, support the reverse side with a block of scrap wood.

A small piece of oak was shaped and glued at the bottom of the board, which helps to offer support when positioning the book.

I then made a T-shaped base (390mm wide at front) from 30mm thick oak, before planing a 10mm wide rebate 15mm deep in the front piece (**photo 3**). The rear section, made from 15mm thick oak, 60mm wide, was attached at right angles with a 5mm wide mortise & tenon joint measuring 18mm deep (**photo 4**). This made up the T-shaped base.

Book support

The pierced front holding the book is hinged using 50mm flush hinges and requires an angled support. This is a prop, hinged on the rear section and made from 15mm thick oak. When lifted up, this supports – via a wooden block (**photo 6**) – the pierced front at an angle. When taken down, the prop lays flat in the rebated front. The 196mm prop is 45mm wide at the base and secured with a 40mm hinge. After shaping the various sections, I finished the components with medium oak coloured liquid wax. This turned out to be a useful project for making use of offcuts, and it can easily be completed in a weekend.

7 Hinged oak prop supporting front

8 Stand folded flat

9 The completed foldable recipe book stand

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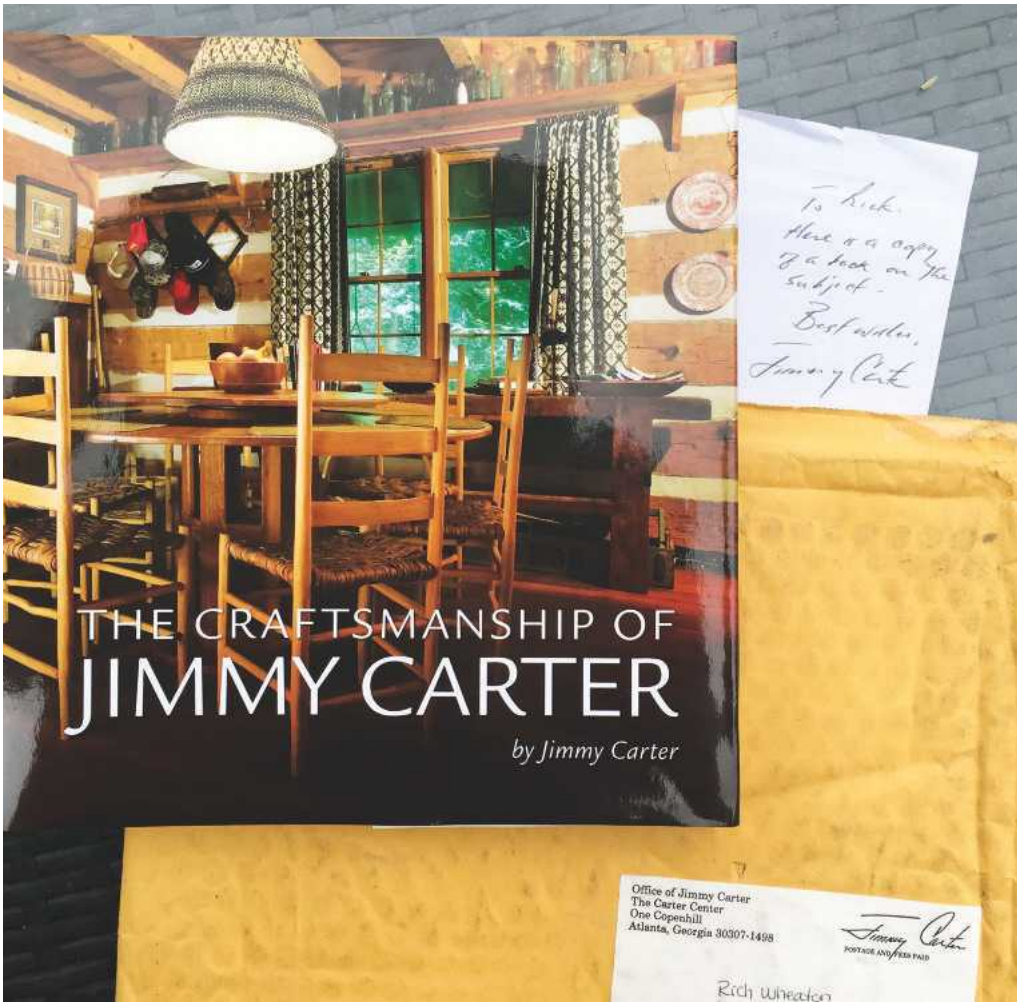
PRESIDENT JIMMY CARTER STUNS HOPEFUL WOODWORKER

Three months after writing to ex-President Jimmy Carter, **Rick Wheaton** is thrilled to receive a handwritten note plus a signed copy of his book



A copy of Jimmy Carter's latest book plus a hand-written, personalised note

One of the really nice things about being a keen woodworker is that we share our passion for making sawdust with people from all around the world, and in all walks of life. This could be someone as far-flung as a chairmaker from Poland, a woodturner in Auckland, or an ex-President of the USA in Georgia.

This last example might seem more far-fetched than far-flung, but... Some time ago I read that ex-President Jimmy Carter, elected to the White House in 1977 and serving to 1981, was bitten early by the woodwork bug, and has been a passionate carpenter all his long life. Born in 1924, he grew up on the family farm in the American south, where one of his jobs as a boy was – in his own words – "breaking land with a mule-drawn turning plow."

Best of all, though, he liked to help his father repair and make things in the farm workshop, and back in rural America in the '30s this might require skills as diverse as blacksmithing, welding, boot making, and needless to say: carpentry. Although he went on to study engineering, later becoming a naval officer and of course a politician at the highest level, his early delight in working with wood stayed with him his whole life. Happily, now aged 93, he's still actively involved with mallet and chisel, panel saw and jack plane, and – I think I can say "almost" – almost took part in our popular feature 'Me and My Workshop'.

A deep love of carpentry

Knowing of Jimmy Carter's deep love of carpentry, and the many practical applications of his woodworking skills, I took a bit of a punt and wrote to him back in January, enclosing the usual set of 13 questions, and respectfully saying the magazine would be honoured to receive his contribution.

Three months later, having all but forgotten my hopeful request, I was astonished to receive a large padded envelope, mailed in Atlanta, Georgia, containing a hand-written note from the man himself, plus a signed copy of his fine new book *The Craftsmanship of Jimmy Carter*.

FURTHER INFORMATION
The Craftsmanship of Jimmy Carter
Published by **Mercer University Press**
Available from Amazon UK – **www.amazon.co.uk**

Sadly not actually a list of answers, but as the note suggested, here was his book on the subject!

Unlike most ghost-written publications, supposedly the work of famous 'authors', this book is written entirely in his own words, and offers a fascinating insight into his early years, particularly his deep – almost spiritual – love of carpentry. In it we learn that his favourite timber is walnut, he particularly likes making things from green wood, and as soon as one of his four children gets married he makes each of them a beautiful rocking cradle "to encourage the birth of babies."

He takes pride in designing all of his pieces from first principles, and although he's made large amounts of furniture for his various family homes, he delights in making wooden gifts for friends, children, and even an occasional diplomat. He gives much of his work to be auctioned for charity, such as the beautiful chess set he carved from holly and purpleheart, the money helping to finance philanthropic projects at the Carter Centre.

The joy of woodworking

In this book he describes his life, his work and his continuing delight in carpentry, in simple straightforward language, free from exaggeration or pomposity, and with modesty and humour throughout. I was moved, as I guess most readers would be, to read this wonderful description of the joy of woodworking...

"The excitement of an original design, the meticulous detail of precise measurements, the characteristics of the chosen wood, the heft and beauty of the hand tools – some of them ancient in design – are all positive aspects of crafting a piece of furniture".

And he goes on to say: "I like to see what I have done, what I have made." And in words pretty much guaranteed to resonate with the older reader: "The pleasure does not fade as the years go by; in fact, with age my diminished physical strength... has made woodworking even more precious to me."

As I turned the pages I got a sense that all woodworkers, of whatever age, achievements, skill level or background, all belong to a common fellowship. And we could probably all share a mug of tea over a workbench, and swap yarns and hints and tips, whether it was with the bloke down the road, or someone who'd once been a leader of the free world.

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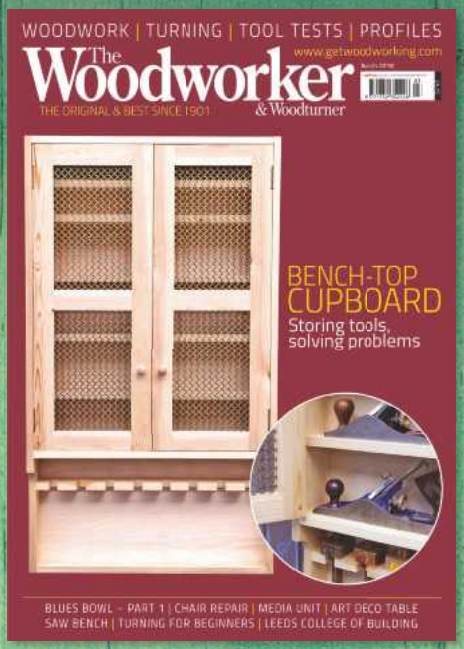

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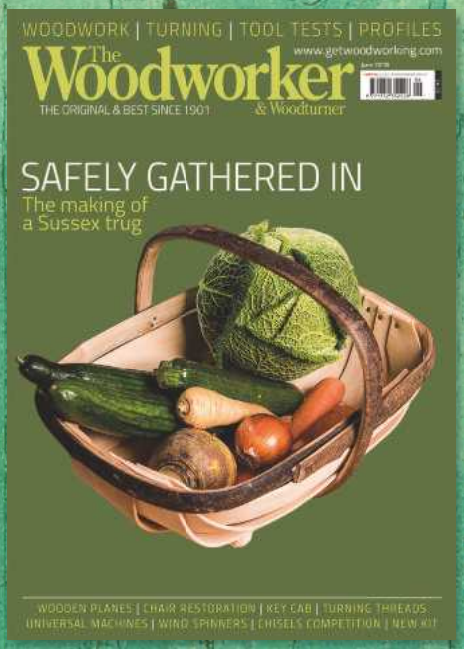

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Coming up in the next issue...

The September issue of *The Woodworker* incorporating *Good Woodworking* – on sale 20 July

A TOOL MADE TO INSPIRE

As part of a recent competition, Clint Rose of Timber Anew decided to make a wooden bevel gauge in order to inspire others to try their hand at woodworking

WORLD WOOD DAY 2018

World Wood Day, a cultural event celebrated annually, exists to remind us all of the importance and true value of wood and its responsible uses. Here, Mark Griffiths shares the story of his recent visit to the 2018 event in Siam Reap, Cambodia

SETTING UP A WORKSHOP – PART 1

As Peter Bishop shows in the first part of this series, setting up a workshop and buying the necessary kit involves a lot of thought and time, but importantly, it doesn't have to cost the earth

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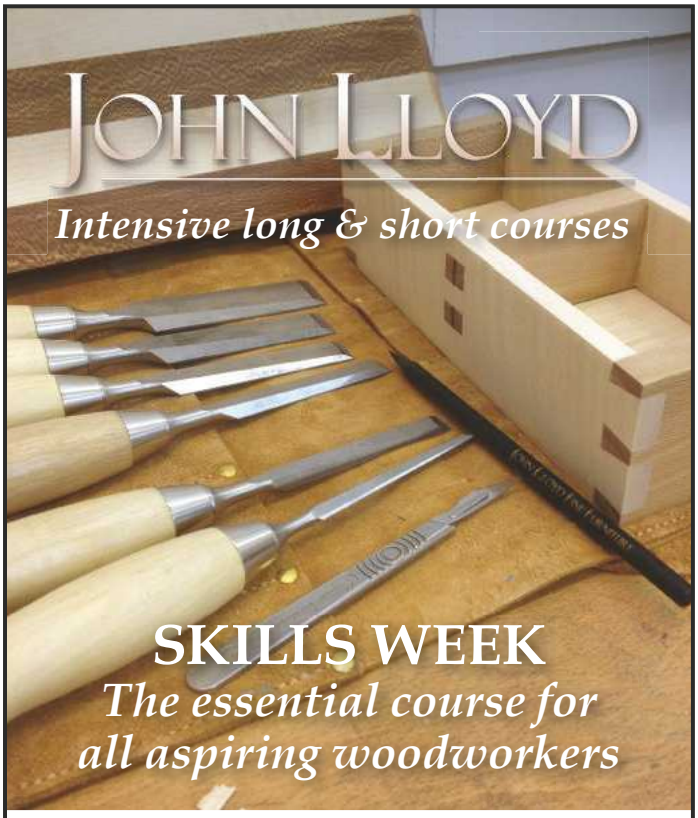

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MANTRAP

The lure of the double garage

If you're selling a house, you'll know the wisdom. Do up the kitchen and the bathroom because these rooms appeal typically to the female of the couple (most people travel in pairs), and it is the female who needs to be courted. This is an old-fashioned view of course, but it is old-fashioned for a reason. Just like the wheel, it makes sense and goes round; it doesn't need reinvention.

Well, I'm going to update it. Tidy up the kitchen and the bathroom by all means – you'll lose buyers with tat and mould – but don't go overboard because your taste might not be their taste and it'll all end up in a skip. Such necessary destruction might even put them off the purchase (it would me).

I'd appeal to the male of the couple. I'm making a gross speculative generalisation here, but most blokes see kitchens and bathrooms as functional rooms, and if they look nice, that's a bonus. There you have it. Function. Function comes first. If the gutters need cleaning, can I get to them without scaffolding, or being winched down from a helicopter? Where do the drains go? Where does the weather impinge? Which way is south? How hard is the water? The practical stuff you're going to have to deal with. From whither will you deal with it? Where will be your base of operations? If there isn't a double garage, is there space to build one? It won't be for cars. Cars are waterproof and don't need their own rooms. It's for the male. It doesn't matter what he does in there (within reason). The importance is that he can do it. He has somewhere to go. A super (all-weather, powered, plumbed) shed. A personal oasis, not because of the saucy postcard image of a harridan wife, rolling pin aloft driving him out, but for the joy of having a place to do it, whatever it is. I'm obviously talking about woodwork, but you could also do motorbikes, drumming, pottery, etc. You could in theory put sofas round a log burner and make it an alternative living space, but I bet you don't (except in a rough form). It's not a room for doing nothing.

If you have a workshop, you can make a house

I know what I'm talking about, though you might question my basis for knowing it. I shouldn't generalise from two incidents, and two incidents are all I have, but I could say this proves my point. Two couples looked round my property and both (all four of them) fell in love with it. Even without the double garage, they might have fallen in love, but the garage, nay workshop, nay wonderful workshop was, I think, the clincher. I was in there when the estate agent showed them round. The immediate reaction of each man? 'Wow!'

Better than a readymade house is a readymade workshop (for if you have a workshop, you can make a house – but not vice-versa). It's as if the sun comes out and buds reach for the light – 'I could do this..!'; 'I could do that..!'. A flowering takes place. This is not a building, it's a life-changing experience! It allows the male to express himself as a male, dealing with function and practicality. Realism. Nitty-gritty. The elements of life as we know it.

It isn't to do with the work itself. Just as many a cook will read recipe books in the living room, the creative male doesn't actually have to make anything; he just must be able to do so. A double garage lets you swing a 4.8m length, and swivel an 8 × 4 sheet. It says opportunity, possibility and a lack of restriction. It is the stuff of dreams and not just woodwork dreams. Creator, protector, sustainer, the unbridled male ego can assume god-like dimensions. Kept in check, that's not a bad thing. Dangle a big warm light workshop in front of the average practical male and your house will be as good as sold.

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