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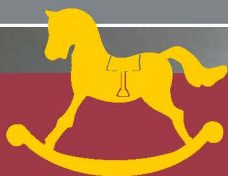


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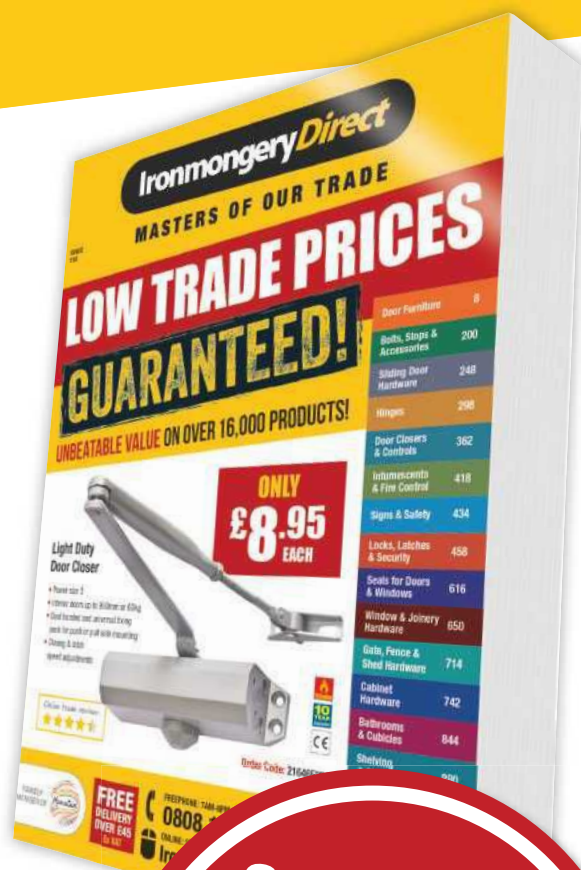
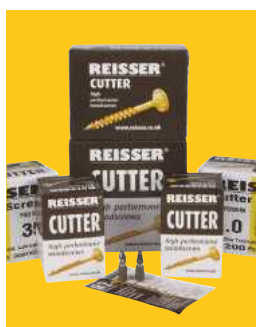
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Welcome

'Some of my favourite things from this issue'

I can't quite believe that we've already completed our March issue – I'm not sure where this year is going? But, as I learnt this month, 2018 is very important in the woodworking calendar, as it's Thomas Chippendale's 300th birthday. I was informed of this when I recently visited the Chippendale International School of Furniture, situated in the rolling countryside of East Lothian, Scotland. School Principal, Anselm Fraser, explained to me how Chippendale really was ahead of his time in terms of marketing himself and his furniture. Publishing his iconic book of designs back in 1745 really put his name out there, and upon which success he became internationally renowned. Although he didn't die a wealthy man, he is nonetheless justly described as the world's most famous cabinetmaker and craftsman. As well as discovering more about seminal furniture makers, I also went away with a completely transformed notion of what a furniture school should be and came to realise that being different is definitely better, so look out for the full feature in a few issues' time.

Woodworking in the South West

As well as a short trip to Scotland, I also visited Axminster Tools & Machinery's HQ in Somerset, where I learned more about what goes on behind the scenes at the company, and just how sophisticated their 'pick and pack' service really is. Brands Director, Martin Brown, conducted the tour and led us through a series of warehouses, all of which were piled floor to ceiling with top quality tools and machinery, all ready to be delivered to the customers. The process is largely mechanised, although there are of course skilled staff on hand to aid the process and make sure

that each customer is receiving the correct product. I was also treated to a bandsaw blade making demonstration, which clearly commanded an exceptionally high level of skill, as well as seeing how their range of Rider planes are constructed. This was followed by a tour of the on-site Skill Centre, where I met the man in charge, Craig Steele, as well as tutor and woodturner, Jason Breach. A group of school children were enjoying a woodturning lesson and they all seemed to be having a whale of a time making pens. It's fantastic to see young talent being nurtured – so well done, Axminster!

An exciting announcement

This leads me on to an exciting announcement: from the next issue onwards, readers will be encouraged to send in their top workshop tips, with the best being awarded the prize of a brand-new Veritas low angle jack plane, courtesy of Veritas and BriMarc Tools & Machinery. With a value of over £250, this is a fantastic opportunity to get your hands on a serious piece of kit! All you need to do is think of a unique hint or tip that you'd like to share with others, and just email it to me on the address below. If you'd like to include an illustrative photo too that would be great. The first winner will be announced in the next issue, so good luck to all those of you who enter and happy woodworking!

Enjoy!

Tegan

Email tegan.foley@mytimemedia.com



Tegan Foley
Group Editor



Phil Davy
Technical &
Consultant Editor



Dave Roberts
Consultant Editor

We endeavour to ensure all techniques shown in Good Woodworking are safe, but take no responsibility for readers' actions. Take care when woodworking and always use guards, goggles, masks, hold-down devices and ear protection, and above all, plenty of common sense. Do remember to enjoy yourself, though



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**1 OF 10 PAIRS OF
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Dickies Workwear is giving 10 lucky readers the chance to win a pair of its Liberty safety boots – one of the newest additions to its footwear range, offering greater flexibility than ever before – see **page 22** for details. Good luck!

74

WESTONBIRT WOODWORKS: CHAIRMAKING COURSE

Phil Davy visits Westonbirt Arboretum to find out how chairmaker Paul Hayden's courses are helping people of all ages and abilities to discover a love of woodworking

Good Woodworking

March – 329

• TOOLS • PROJECTS • TECHNIQUES • ADVICE

PROJECTS

20 Three-piece shoot

Phil Davy shows you how to make a nice and easy project that will certainly prove useful in the future

24 A classic in racing green

Geoff Gray adapts an existing design for a fall front wooden toolbox and applies his own personal twist, while overcoming a few problems along the way...

48 Sofa so good

Clint Rose of Timber Anew shares a simple project for a sofa arm table, which makes use of homemade contrasting dowels to finish it off perfectly



56 Rocking horse rebirth

Deciding to rejuvenate an old family friend, Shaun Newman rescues 'Caroline – a rocking horse – from the basement and proceeds to give her a new lease of life

80 Creative percussion

Les Thorne's idea for a pair of turned maracas not only makes for a fun project but is also a great exercise in copy turning and airbrushing

TECHNICAL

30 Building tables

In his next article, John Bullar looks at building tables and considers both the top itself and its supporting legs, as well as how they are joined together

34 The Mystery of Edwin Drood

Don't think of procrastination as the thief of time, says Dave Roberts, but more as an investment broker

52 Strengths & uses of wood

Peter Bishop takes an overview of wood's uses over time, as well as offering a peek at the future

66 Using the Trend Adjustable Trade Lock Jig

Allowing you to achieve fast, clean and accurate results on a multitude of doors, the Trend Adjustable Trade Lock Jig covers an entire range of locks without the need for a set of faceplate and case inserts

70 Fitting a multipoint security lock strip

Using the Trend Adjustable Trade Lock Jig and various cutters, multipoint lock strips can be added with ease to leave a neat and unobtrusive result

PEOPLE & PLACES

38 Linenfold panel

Edward Hopkins demonstrates the maximum anxiety method of making



46 Centrefold

Jonathan Walter and Lakshmi Bhaskaran of Bark Furniture share a stunning piece from their Acorn Collection, which aims to capture its own piece of '50s Americana

62 If only they could talk...

David Moody's observations of ancient Egyptian woodworking, as depicted by various museum artefacts, have given him much food for thought

90 Pass it on

Or how to live forever

KIT & TOOLS

14 Veritas mitre plane

16 Triton TWSS10 250mm wetstone grinder

43 Veritas Jointer Blade Sharpener

YOUR FAVOURITES

8 News

12 Courses

13 Readers' ads

74 Around the House

78 Letters & Makers

89 Next month



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BACK ISSUES & BINDERS

Contact: 01795 662 976
Website: www.mags-uk.com

EDITORIAL

Group Editor: Tegan Foley
Technical & Consultant Editor: Phil Davy
Consultant Editor: Dave Roberts

CONTRIBUTORS

Phil Davy, Mark Cass, Geoff Gray, John Bullar, Dave Roberts, Edward Hopkins, Clint Rose, Peter Bishop, Shaun Newman, David Moody, Les Thorne

PRODUCTION

Designer: Nik Harber
Retouching Manager: Brian Vickers

ADVERTISING

Group Advertising Manager: Rhona Bolger
Email: rhona.bolger@mytimemedia.com
Tel: 01689 869 891

SUBSCRIPTIONS

Subscriptions Manager: Kate Hall

MANAGEMENT

Group Advertising Manager: Rhona Bolger
Email: rhona.bolger@mytimemedia.com
Chief Executive: Owen Davies
Chairman: Peter Harkness

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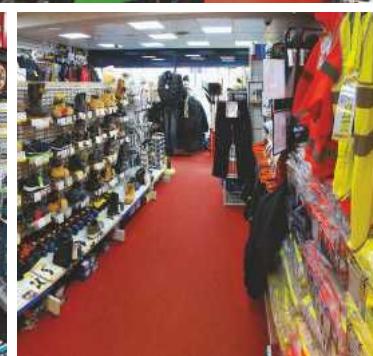
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NEW HAND TOOLS RANGE FROM TRITON TOOLS

Introducing the new hand tools range from Triton Tools. With a range of chisels in the most helpful sizes; clamps to hold that project in place and rasps for fast material removal, this new range from Triton is a must for the workshop.

Chisels

Boasting precision-ground, hardened Cr-V blades, Triton chisels strip away wood with ease, delivering a long-lasting, superior performance time and time again. The capabilities of the high-quality blades are augmented by large striking caps made from tough, nickel-plated steel. Able to weather repeated heavy blows, these caps channel power exactly where it's needed. This overall toughness is harmonised with an ergonomic handle design that uses thermoplastic rubber to create a soft but firm grip, thus minimising user fatigue. The commitment to quality in build and performance is matched by the attention paid to storage. A ballistic nylon pouch keeps the chisels safe and secure when they aren't required.

Clamps

Combining cutting-edge technology and ease of use, Triton's quick clamps are a vital addition to any workshop. Glass fibre-reinforced nylon frames and corrosion-resistant steel rails stand up to repeated use in all conditions, guaranteeing high-quality performance regardless of the task at hand. Tough, non-marring and non-marking jaw pads provide a secure hold while protecting the workpiece. Making effective use of the clamps is simple, as the lever-action handles can be quickly adjusted with one hand and the instant-release buttons used to reset the faces, allowing for precise control of grip pressure. Ease of use is matched by versatility of design; the quick-twist levers can be used to reverse the clamps in moments, turning them into effective spreaders.

Rasps

Putting their precision-cut Cr-V steel blades to good use, Triton's rasps deliver excellent removal of all hard- and softwoods with minimal effort. This single-minded pursuit of quality can also be seen in the handles, which make use of thermoplastic rubber to provide a durable but comfortable grip, limiting the strain on users.

Get your hands on them now by finding your local stockist at www.tritontools.com.



CHANGE OF TRADING NAME

As of 1 February, Hamilton Beverstock – the material cutting specialists – changed their trading name to Beverstock Ltd. This is due to the Hamiltons having retired from the company and their shares being acquired by Steve and Linda Beverstock. The move has gone extremely well and the changes will not affect the services provided by the company.

The location of the business and staff will all remain the same; however, emails will now be abbreviated to '@beverstocksaws.com' and the new website is www.beverstocksaws.com. All the delivery drivers are local and the company will continue to invest in the business, with their latest acquisition being a new ABM CNC TCT saw sharpening machine. Please note that all paperwork, which includes invoices, credit notes, statements, delivery notes and driver collection notes, will now be issued in the new name of 'Beverstock Ltd'.

Both Steve and Linda would like to thank customers for their past, present and ongoing business and look forward to developing the company further in 2018 and beyond.

THE MIDLANDS WOODWORKING AND POWER TOOL SHOW 2018

The Midlands Woodworking and Power Tool Show will be taking place from 23–24 March at the Newark Showground, Nottingham. A great day out full of demonstrations, personalities, trade stands, advice and fun, you can expect to see woodturners Jennie Starbuck, Andrew Hall and Mick Hanbury, as well as woodcarver Michael Painter, blacksmith Nic Westermann, plus fine furniture maker Peter Sefton. The event benefits from free parking, show guide and raffle and advanced tickets can be purchased by calling the ticket hotline – **01474 536 535** – or you can pay securely via PayPal at www.nelton.co.uk.

TRADESURE LAUNCHES NEW TOOLS & GOODS COVER

Commercial insurance specialist Tradesure has launched a new Tools and Goods in Transit policy for its customers. The new service means tradespeople can get their equipment protected when it is being loaded, carried, unloaded or stowed within a vehicle.

The company's brand-new policy covers loss or physical damage to tools and cargo, whether it is stolen or simply harmed in a collision – something that is often overlooked by policies.

Overnight protection is included as standard with the goods in transit policy, with theft covered at specified locations and up to 24 hours unattended protection available at any other locations.

Mark Wilkinson, Managing Director of Tradesure, comments: "We are delighted to be launching our new goods in transit policy. We know that tools and equipment are absolutely crucial to many of our customers and so providing them with low-cost and reliable cover is something we are very proud to have created. With low premiums and cover available for single and multi-vehicle customers, this is a great-value policy that gives you peace of mind that your tools are protected."

To find out more about the goods in transit policy, see www.tradesureinsurance.co.uk.





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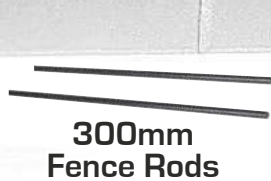
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FINGERNAIL PROFILER GETS MANICURE

Robert Sorby has released a new and improved version of the fingernail profiling arm for its popular sharpening systems. As the name suggests, the profiling arm allows woodturners to easily create a range of fingernail sweeps on bowl and spindle gouges. Ready to use straight out of the box, the new arm offers an elegant and purposeful design incorporated in a robust steel build. A large positive grip locking wheel delivers smooth and effortless tool positioning, with a precision engineered brass clamping bar ensuring tools are held securely without any damage to high speed steel fluting.

The aluminium locking wheel has the added feature of a machine knurled grip and is anodised in distinctive Robert Sorby burgundy colours. Notable features to the new design include a machined 'V' for positive and repeatable sharpening – the head machined after casting for a

precision fit – a steel thread insert into aluminium increasing lifetime and guarding against 'threading', and a shorter precision turned shank. The shank doesn't require any setting and slips easily into standard and long-grind jigs for Robert Sorby ProEdges and Universal sharpening systems.

The arm can be adjusted for personal sharpening angles and is easily returned to factory settings thanks to the alignment of three horizontal notched grooves on the front of the head and shank.

As with all Robert Sorby products it comes with their standard lifetime guarantee for peace of mind. The arm is available as a single unit or as part of a number of sharpening kit alternatives, including the ProEdge and Universal Sharpening systems. It is not yet available in the USA.

Priced at £50.77, see www.robert-sorby.co.uk.

TREND D/SKATE/A DOOR SKATE

The new Door Skate from Trend makes manoeuvring heavy sheet materials and doors a breeze. Two heavy-duty polyurethane wheels with ball-bearing races fitted to a robust moulded plastic body allows easy transportation of materials up to 45mm wide and 226kg in weight.

A single skate will allow a heavy fire door, kitchen worktop or sheet material up to 2,400 x 1,200mm to be moved around with ease. Ideal for the jobsite or workshop, it helps keep lifting to a minimum and with a skate used centrally as a single pivot point, it makes steering around tight spots far easier and can be easily achieved single-handed.

The D/SKATE/A Door Skate is priced at £35.94 inc VAT and is available from all Trend Routing Centres and stockists across the UK. To find out more, see www.trend-uk.com.



SCOTTISH CABINS WITHSTAND WINTER WEATHER WELL WITH TEKNOSINDUSTRY PRODUCTS

Log Cabins Scotland, which builds bespoke log cabins, offices, studios, workshops and garden rooms, protect wooden buildings with TeknosIndustry products. The Teknos products are made to withstand extreme Scottish weather conditions. Keith Garry from Log Cabins Scotland used Teknoseal 4000, Teknofill 5001, Antistain Aqua 5210, Antistain Aqua 2901 and Aquatop 2600 on a recent project (see photo opposite).

Keith and his team used the end-grain sealer, Teknoseal 4000, on the sanded down wood of the log cabins. The aqueous product is designed to seal the end of grain on new wood in exterior settings, which made it ideal for the log cabins. The acrylate filler, Teknofill 5001, was used to fill the knots of the wood. This product worked perfectly in conjunction with Antistain Aqua 5210, a knot inhibiting primer. The waterborne industrial primer is designed to reduce staining from knots and softwood and was used by Log Cabins

Scotland on top of Teknofill 5001. To create a barrier effect against extreme weather and to minimise staining, two coats of Antistain Aqua 5201 primer were then applied to the wood and left to dry to reveal an antique white finish. The final Teknos product used on this project was the Aquatop 2600. Two coatings of the joinery topcoat were applied to the wood to create the finished look. Aquatop 2600 has a microporous protective film and is resistant to bacteria, mould and UV attack, ensuring the log cabin remains strong and sturdy even in the harsh Scottish weather.

On this particular project, a fashionable, pale grey shade was used. However, the TeknosIndustry colour range also includes a variety of shades, such as blues, reds, neutrals, darks, yellows and greens. Proving popular across the market, Teknos' colour range remains on-trend offering shades that are loved by contractors and end-users. To find out more, see www.teknos.co.uk.

FESTOOL GROWS THE TEAM IN PREPARATION FOR A BUSY 2018

Power tool manufacturer Festool has grown its UK team as a response to increased sales over the past year – and to prepare for an even busier year in 2018. Seven new team members have recently joined its HQ in Bury St Edmunds, Suffolk.



Jamie Bunting is now Logistics Team Leader and joins the Festool team after 13 years at Kuehne + Nagle where he ran a logistics team that supported the servicing of the MOD's fleet of Apache helicopters.

Holly Hyde-Smith is the Marketing Communications Executive and brings with her a wealth of experience having been the Marketing Manager for global SaaS company EMEA and part of the marketing team for the retail sector of a technology consultancy. Two new starters have been taken on in the sales team: Martin Ive and Daryl Herbert-Smith are new Territory Sales Managers.

Daryl gained several years of experience at various flooring businesses including his last role as Contracts Area Sales Manager at SIG Group Carpet and Flooring, where he supplied flooring to contractors and end users including Bovis Homes and Vinci and Bam.

Three new positions have been created in the finance team too: Business Administrator Elaine Phillips, Olga Snitsarenko, Management Accountant Assistant, and Emma Butler, General Administration Assistant.

Festool's Marketing Manager, Jon Burcham, said: "The quality and innovation of Festool's products is renowned and the team that support the cutting-edge technology is also second to none. We are thrilled that our ranks have been increased by top-notch experts in their fields. This is as a response to a brilliant year that we've seen – we expect that 2018 is going to be just as buoyant. Festool has been experiencing incredible growth in the UK market. The new recruits each bring impressive expertise and we're excited to continue expanding our market presence." For more info, see www.festool.co.uk.



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 8–9 & 13–14 Introduction to the small engineering lathe
 8–9* & 27–28 Routing
 12–13, 26* & 27* Wood machining
 12–16 Five-day woodturning course
 13–14* Bowls & platters
 15 Bird, bee & bat boxes
 16* Scrollsawing
 19–23 Windsor chairmaking
 27 Introduction to turned boxes
 27–28 Introduction to milling
 29 Wood finishes
 * Course held in Sittingbourne, Kent
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9–11 Woodcarving for beginners
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 27–5 Classical or steel strung guitars
 27–5 Renaissance or Baroque viols
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West Dean College, West Dean, near Chichester, West Sussex PO18 0QZ
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Web: www.westdean.org.uk

9–12 Beginners' four-day course – ladies only
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Chris Tribe, The Cornmill, Railway Road Ilkley, West Yorkshire LS29 8HT
Tel: 01943 602 836
Web: www.christribefurniturecourses.com

10 Pyrography with Lisa Shackleton
 13 Pen turning
 14–15 Woodturning
Turners Retreat, Faraday Close Harworth, Nottinghamshire DN11 8RU
Tel: 01302 744 344
Web: www.turners-retreat.co.uk

3–4 Sussex Trug making workshop
 24 Willow garden supports
 25 Archeological evidence for woodmanship practices and the wildwood in Southern England; Stone Age to C.100
Weald & Downland Living Museum
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BOSCH PROCORE 18V 7.0AH HIGH-PERFORMANCE BATTERY



More power than ever before, in an especially compact size: Bosch Professional is bringing a new dimension to the use of cordless tools with the ProCore 18V 7.0Ah high-performance battery, which offers approximately 90% more power than the previous 18V 6.0Ah battery, thus improving efficiency.

This significant power increase is thanks to an improved cell design and measures taken to minimise internal resistances. At the same time, the ProCore 18V 7.0Ah is impressively compact, with approximately 30% smaller dimensions than comparable high-performance batteries. These qualities mean it offers the highest energy density in its class.

Bosch has optimised its proven CoolPack technology even further, meaning that this high-performance battery can handle higher power demand over a longer period. This quality places the ProCore 18V 7.0Ah miles ahead of comparable rival models.

Overall, the CoolPack technology also helps to substantially prolong the battery's lifetime compared to a conventional battery. Heat dissipation from the inside out is maximised in this technology by the synergy between several components; the housing and the heat sinks in the interior, which completely encases each individual cell, are manufactured from high-density polyethylene. Both the material and the special design, aimed at maximising the surface area, facilitate better heat dissipation. In addition, the battery is designed without any internal spacing, which ensures the heat it produces is not caught in the interior. Improved cell connectors made from copper provides lower resistances and more power as a result. The battery pack has special openings for heat dissipation during the charging process as well. This cooling feature means that the battery can be charged very quickly. The five-level LED display allows tradespeople to keep the charge level of the ProCore 18V 7.0Ah under control at all times.

Fully compatible with the existing 18V range

The ProCore 18V 7.0Ah battery is part of the 'Flexible Power System' from Bosch, meaning tradespeople who buy a battery from Bosch can use it immediately without having to worry about whether it is compatible. The 'Flexible Power System' guarantees compatibility with all new and existing professional power tools and chargers within the same voltage class. That means greater productivity for professionals in everyday working situations.

The new battery is now available at the RRP of £217.85 inc VAT; to find out more, see www.bosch-professional.com.

NEW EVOLUTION WOODTURNING SMOCK IS JUST THE BIZ

Axminster's latest Evolution Series woodturning smock is perfect for professional and passionate amateur turners.

Paying heed to the experience of tutors in the Axminster Skill Centre and listening to feedback from customers, Axminster has incorporated details, insights and features direct from the lathe. This smock could be a woodturner's ultimate protective garment.

This is a comfortable and practical smock for wearing all day long while working at your lathe. The 35/65 cotton/polyester twill is hard-wearing, neither too heavy nor too light and easily washable. The smock has a full-length nylon YKK front zip making it easy to put on and take off. A flap, held in place with hook-and-loop tabs, covers the zip and keeps out the dust.

At the collar, a zip cover prevents the zip slider from scratching your neck. The high collar has a hook-and-loop tab at the side to adjust the fit, keeping shavings out without adding extra material bulk under your chin. The back of the collar is made of soft stretch knitted fabric, adding to your comfort and allowing complete freedom of movement. A great deal of thought went into the collar design to ensure it does not compromise safety when wearing a powered respirator. The short sleeves mean there is no loose material near the moving workpiece. Tabs on the sleeves allow you to adjust the fit on the upper arm. There is a small breast pocket to keep your pencil handy and two large pockets at the rear where they won't fill with shavings and sawdust, which are useful for tools or snacks.

For more info and current pricing, see www.axminster.co.uk.



NEWS IN BRIEF

Gayle Mill's Hands-on Heritage Woodworking Experience Day will take place on Saturday 17 March where you will receive expert tuition and learn how to use some of the Victorian machinery on the premises. You will also receive one-to-one guidance throughout the day in how to turn wood on a lathe, use a circular saw, process wood on the planer/thicknesser, operate the bandsaw and at the end of the day produce some stunning bespoke items of woodwork to take home and keep. All tuition, materials, lunch and other refreshments are included in the price of £195. For further details, see www.gaylemill.org.uk

Peter Lanyon will be running several courses in March, including the Introduction to Green Wood Furniture Making on 3-4 and 24-25, the Shave Horse Course on 10 and Tool Sharpening and Maintenance on 11. Peter has been making furniture for over 20 years in hardwoods, softwoods and reclaimed woods, as well as championing the use of coppiced wood to make contemporary, high quality bespoke pieces of furniture. As well as running green woodworking courses for adults and children, he is also actively involved in a number of community projects. For more info, see www.peterlanyonfurniture.co.uk

Trend Routing & Machinery will be appearing at Toolfair Manchester on Thursday 15 and Friday 16 March, at Eventcity, Urmston. The Trend team will be appearing in partnership with Anglia Tool Centre to bring you some great deals and demonstrations over the two days. You can expect to see diamond sharpening, Trend Snappy and Lock and Hinge jig demonstrations as well as many new products for you to buy. To find out more, see www.trend-uk.com

NEW WEEKEND WORKSHOP DATES ANNOUNCED FOR LOW FAT ROUBO

Join Derek Jones – @lowfatroubo – for a variety of weekend woodworking classes this year at Robinson House Studio in Newhaven, East Sussex. Topics include an unbelievably simple and effective method for French polishing, a Japanese-style toolbox with an Arts & Crafts twist, and a classic six-board chest. The course dates are as follows:

24-25 March & 8-9 September – French polishing
28-29 April & 6-7 October – Japanese-style toolbox
12-13 May & 17-18 November – Six-board chest

Expect more dates and venues to be announced later in the year. For more info, visit: www.lowfatroubo.co.uk



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Elektra Beckum HC260

planer/thicknesser – includes extractor, hood & wheels; £120 **01934 732 451** (Somerset)

Kress routers mounted on Powermate workstation, plus user guides; £65 **01628 628 147** (Maidenhead)

Record 405 Multiplane

in original box with extra cutters, hollow and round bases, plus instruction booklet and screwdriver – excellent

condition; £150 OVNO – postage extra or collect **020 8524 9173** (Chingford)

Stanley toolbox – 670 × 330 × 100mm – to include Stanley No.3 plane, ratchet brace, tri-square, auger bits, Surform & marking gauge – as new; £65 OVNO – postage extra or collection preferable **020 8524 9173** (Chingford)

Ward & Payne drawknife with 9in blade & beech handles – a beautiful old tool; £30 – postage extra or collect **020 8524 9173** (Chingford)

Union Jubilee woodturning lathe – 42in bed; three-jaw chuck; plus turning tools; £400 **020 833 0813** (Surrey)

Record 080 scraper plane – as new, in box, never used. Includes 2¾in cutter plus instructions; £35 plus postage, or collect **020 8524 9173** (Chingford)

Triton bevel riding guide – model BRA200 – hardly used; £50 – buyer collects **01202 248 684** (Dorset)

Jet table saw; £40; Trend router table plus DeWalt 625 router with various bits; £200 **01444 24692** (Sussex)

Selection of wood for turning & a shelving unit; £100 – buyer collects. Phone for details **01539 442 478** (Cumbria)

Record side rabbet plane No.25-65 – in original box & in superb condition, circa 1970s with depth stop. Also includes left- & right-hand cutters; £45 plus postage, or collect **020 8524 9173** (Chingford)

Threading jig; £90; Record & Nova chucks; £50 each; Robert Sorby modular rests; £50; toolrests – 10 & 2in – Oneway & Woodcut hollowers; £30 – buyer collects **01209 211 522** (Cornwall)

CoMatic AF32 power feeder complete with base & manual. Bought from Axminster Tools & Machinery 5 years ago but not used; £300 ONO – buyer collects **01584 841 331** (Shropshire)

Hegner Polycut 3 universal saw – with blades & in good condition; £250 **01635 48402** (Berks)

Pen kit mandrel, bush press, drill, etc. – call for details **01276 38406** (Berks)

Record T5 shooting plane with side handle; £30 **01922 455 592** (West Midlands)

Luna L17 saw bench with sliding carriage – in good working order; £250 – buyer collects **01225 332 251** (Bath)

Record CL2 woodturning lathe and accessories; £150 **07763 466 490** (Scotland)

SERIOUSLY SWISH

Although costly, this beautifully-made mitre plane from Veritas performs fantastically on meaty end-grain and features precise adjustments

Canadian tool company Veritas is renowned for its innovative features, and this new mitre plane is no exception. Resembling an oversize block plane, this model is much bigger and heavier, though it can still just about be gripped with one hand. Primarily designed for end-grain work and trimming mitres, I reckon that owners will find far more uses for this low-angle tool. It's one of the few planes specifically built for use with a shooting board, but more on that later.

Beautifully machined, the body is heavy, stress-relieved ductile iron. Upper surfaces are finished with a matt black coating, while the sole and sides are finely ground and arrises finely relieved. Each side is scalloped to provide large thumb and finger grips, which is almost essential for good control on a plane of this size.

Weighing 2.2kg, the plane measures 267mm in length and is 68mm wide. Sides are 5mm thick and neatly swept back, giving an almost retro feel. These flow elegantly into the toe and heel to create a handsome tool, topped off with contrasting, polished cherry knobs.

Norris-style adjuster

With the bed precisely machined at 12°, this



gives an overall angle of 37° with blade inserted. There's no cap iron, the blade secured with a lever cap and brass screw. Blade choice is PM-V11, a powdered metal alloy, or the more expensive O1 tool steel. I tested the cheaper option, which is virtually ready for use without honing, though I did run it across a fine diamond stone at 25°. Blade width is 50mm while thickness is 5mm, with a choice of two holes enabling it to locate securely on the Norris-style adjuster. As the cutting edge is eventually ground down over the years and the blade

becomes shorter, the second hole comes into play.

Blade advance is particularly smooth and positive via the Norris-style adjuster, with no backlash whatsoever. Accurate lateral adjustment is a cinch, simply by moving the knurled brass screw sideways.

A unique feature of many Veritas bench planes is the pair of guide screws set into the sides. These are adjusted so there's no side play with the blade in position. An extra pair of threaded holes along each side suggests that an optional side fence will be available.



Primarily designed for end-grain work and trimming mitres, it's likely that owners will find far more uses for this low-angle tool



There's no cap iron, the blade secured with a lever cap and brass screw



Blade width is 50mm while thickness is 5mm, with a choice of two holes enabling it to locate securely on the Norris-style adjuster



As the cutting edge is eventually ground down over the years and the blade becomes shorter, the second hole comes into play



Accurate lateral adjustment is a cinch, simply by moving the knurled brass screw sideways



Screw guides are adjusted so there's no side play with the blade in position



What sets this Veritas tool apart is the detachable side handle...



... which is definitely easier to use than awkwardly grasping the side of the plane



Slackening off the front knob enables you to slide the front shoe back, with up to 7mm of travel

Adjustable mouth

Any plane used for shooting mitres accurately must obviously have its sides dead square to the sole. I checked these with an engineer's square just to be sure and they were spot on, as you'd expect with any Veritas product.

For occasional shooting work most long bench planes will do the trick if they're accurate, but they're generally not the most comfortable tools for this task. What sets this Veritas tool apart is the detachable side handle. Also made from cherry, it can be screwed to either side of the body and enables you to wrap your hand around it nicely. Definitely easier to use than awkwardly grasping the side of the plane.

Like most low-angle block planes this tool has an adjustable mouth. Slackening off the front knob enables you to slide the front shoe back, with up to 7mm of travel. To prevent this piece hitting the edge of the blade, a small thumbscrew acts as a stop and fine adjuster. Veritas recommend that you set depth of cut first, then close up the mouth and tweak the stop. For tricky grain it's possible to close up the mouth so the shoe is almost touching the blade.

Conclusion

This is a seriously expensive plane, so will probably only appeal to a limited number of woodworkers, especially as it's also rather

specialised. It's perhaps too big and heavy for smaller dimensional timber, but for meatier end-grain work it's fantastic. Used with a shooting board, it's far easier to use than a regular bench plane. Adjustments are precise on what is a beautifully-made tool. No doubt plenty of woodworkers will start saving... **GW**

SPECIFICATION:

- ▶ **Weight:** 2.27kg
- ▶ **Plane blade width:** 50mm
- ▶ **Plane sole length:** 267mm
- ▶ **Sole length:** 267mm
- ▶ Bevel-up with low 12° bed angle
- ▶ Sides machined flat and square to the sole
- ▶ Norris-style adjuster for easy, fine control adjustment

- ▶ **Typical price:** £308.36 (with PM-V11 blade)
- ▶ **Web:** www.brimarc.com



Veritas recommend that you set depth of cut first, then close up the mouth and tweak the stop



Used with a shooting board, it's far easier to use than a regular bench plane

THE GW VERDICT

- ▶ **PROS:**
Precise adjustments;
heavy & beautifully machined
- ▶ **CONS:**
Specialist tool with limited appeal; cost
- ▶ **RATING:** 5 out of 5

A REAL WORKSHOP ASSET

Ideal for cabinetmakers, joiners, turners and carvers, this wetstone grinder from Triton would prove to be a great addition to any workshop

Since the invention and development of the original Tormek wetstone grinder in early 1970s Sweden, the popularity of the slow-running, water-cooled grinding method has steadily increased around the world. Frequently to be found in the workshops of cabinetmakers and joiners, turners and carvers, when it comes to edge tools, there is little that can't be sharpened on this type of machine.

Useful machine

The last few years have seen the release onto the market of similar grinders from a number of different manufacturers, the latest of which is this one from rugged Australian company, Triton. While not quite in the Tormek class (as indeed few imitators are), the TWSS10 is without doubt a useful machine and a great addition to any workshop. One of the main attractions of wetstone grinding for me is the design, which enables even a complete novice to obtain consistent results. By the employment of a simple positional frame (known as the support arm and assisted by various jigs and clamps), a blade can be positioned and ground at the correct angle, and remains square to the wheel throughout the grinding process.

Box clever

On opening the box I was immediately impressed with the secure packaging of the machine, and especially the 250mm diameter diamond stone itself, which was protected in a separate padded carton. The grinder requires little in the way of assembly other than attaching the wheels and hooking on the water trough. I was momentarily nonplussed by a lack of rotation when I first powered the machine up, but on investigation soon discovered that the drive shaft wasn't fully in contact with the inside edge of the hollow

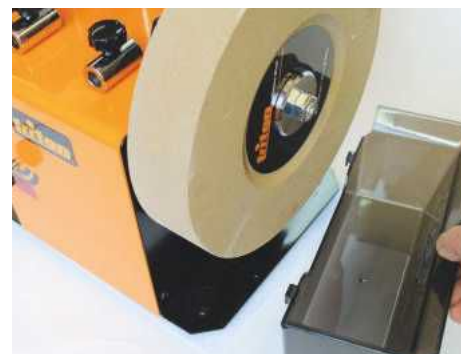
leather-faced stropping wheel. A simple but effective system, it's a friction drive and by adjusting the torque switch, the tip of the motor shaft presses more firmly against the inside of the wheel and ensures that the wheel will turn no matter what amount of grinding pressure is being asked of it.



Safe and secure packaging makes for a confident start



The leather stropping wheel to the fore; the support arm will fit in either orientation for maximum range



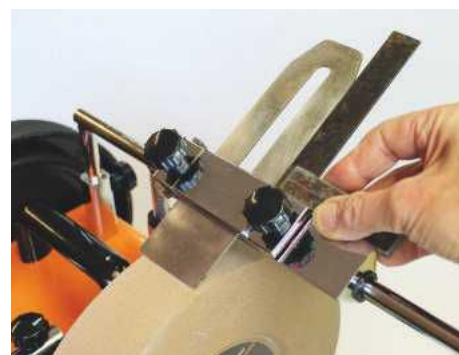
The non-brittle plastic water trough clips easily into place



The support arm is fully adjustable and locks into position



Checking the correct grinding angle



All that remains is to check your blade is securely locked and square, then it's all systems go

In use

With the wheels now turning, the water trough can be filled to the line. Make sure you stand by with some extra, though, as the stone is surprisingly porous and soon sucks up an unlikely amount of water, necessitating another refill or two and provoking a feeling of 'where's it all going?'. When it's all filled up and steadily running, there's something very pleasing about the sight and sound of the stone emerging from the water pool, and you could forgive yourself for just zoning out for a minute or two.

When you're ready to make a start, fit the aforementioned support arm into one of its two positions, and set your blade, chisel or gouge into the square edge jig, loosely tightened. With the blade and jig now attached to the support arm, you can employ the angle set-up jig to ensure your bevel will be as you want it. I set mine to 25° and was puzzled when the jig seemed way off; on closer inspection it became apparent that an inner plate on the jig has to be set to the wheel diameter first. So, with everything fixed up as required, sharpening can begin. Unlike the frenzied spark-filled process that is grinding on a regular dry wheel bench grinder, sharpening on a wetstone grinder is a much more leisureed affair. Once everything is in place, it's a simple case of gentle pressure and slow, repetitive movements.

I found it was easy to let my attention drift,

however, and it was only the water puddles here and there that brought me back.

Conclusion

There's no denying that it can be a wet and watery business, and if you've got a purpose built corner of the workshop for wet stuff,



A little concentration is required, plus a lack of care about spillages

then this is where you'll want to site the grinder. I've seen rubber tray mats, which will keep everything nice and contained, and this is certainly one solution to a potential problem. Using the leather-faced stropping wheel is a nice way of finishing the sharpening job and, with a dab of honing paste (or chrome cleaner as it is known in the motor trade), you can soon achieve the sort of polished edge to a tool that every carver covets. All in all, an asset for every workshop, albeit a slightly wet one... **GW**

SPECIFICATION:

- ▶ **Power:** 20W
- ▶ **Diamond stone:** 250mm dia. × 50mm
- ▶ **Speed:** 2,800rpm motor; 125rpm wheel
- ▶ **Weight:** 14kg
- ▶ **Bore:** 12mm
- ▶ **Typical price:** £204.97
- ▶ **Web:** www.tritontools.com

THE GW VERDICT

- ▶ **PROS:**
Accurate and reliably repeatable results
- ▶ **CONS:**
Slow and wet
- ▶ **RATING:** 4 out of 5

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T-8



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Photographs courtesy of Mattias Flander

Luthier David Sundberg builds guitars for celebrities

David Sundberg is one of Sweden's most talented luthiers. He has supplied handmade guitars for world-famous artists such as Keith Richards, Ryan Adams and Swedish folk duo, First Aid Kit. Every guitar he makes is unique and specifically designed to fit the requirements of individual customers. Always having sharp tools to hand is crucial for his work.

Precise craftsmanship

David, a Tormek friend for many years, is known for his impressive craftsmanship and quality guitars. All the guitars are made from the highest grade of wood and each takes from 60-100 hours to make. As a luthier, every millimetre counts and determines the result of the guitar. For example, depending on how the braces are formed and placed, the instrument will react in different ways and produce different results. This is the part where David can influence the voice of the guitar.

For this level of precise craftsmanship, it is highly important to have tools with a perfect edge. One of those David most commonly uses is the chisel, which helps him to carve the bracing inside a guitar. Another is the small plane, with which he can scrape down a piece of wood and remove excess material. Common to all of these tools is their need to be razor-sharp. David has tried different ways to sharpen his tools before he discovered Tormek's sharpening machines. He comments: "I had seen these machines here and there but clung to my Japanese whetstones as I was convinced they were unbeatable. One day, this gentleman called Stig came into my workshop and put a Tormek in front of me. I then sharpened my favourite chisel and since then, my old whetstones have remained dry. Not only does the Tormek give me more time for my craftsmanship, but it has also really saved my hands and elbows. Filling the trough with water then hitting the button to start sharpening – that's a special moment for me!" **ww**



The chisel is one of David's most commonly used tools



Sharp tools are essential to David's work

FURTHER INFORMATION

If you want to find out more about David, watch the video footage of Tormek's visit to his workshop, available at www.tormek.com. You can also see more of his work here: www.sundbergguitars.com, and for more information about Tormek products, visit www.brimarc.com

THREE-PIECE SHOOT

Phil Davy shows you how to make this nice and easy project that will certainly prove useful in the future

Needing to joint some book-matched timber for a guitar front and back recently, I discovered my old chipboard shooting board was rather worse for wear. It had become damp and swollen, and was fit only for the woodburner, so I decided to make a new jig from birch ply, which is nicer to work and arguably more durable than MDF, though stability is similar. I got lucky, managing to find some cheap plywood so I could afford not to think about cost too much – but this is by no means an expensive project in any case.

Multi-purpose

I decided to make a multi-purpose jig that would also trim mitres. This is really easy to do with an extra piece of ply cut to a right-angled triangle. Accuracy is vital, so keep checking angles as you work – don't assume the corner of any new board is exactly 90°. For occasional mitre trimming with this jig you can use a single pivot screw that enables you to align the board against a 45° square. Clamps are sufficient to hold it securely, though you may want to add Bristol levers or locating pins for a more sophisticated jig.

Nice & easy

This is one of the easiest workshop jigs to build, simply consisting of two pieces of 18mm board screwed together. I didn't bother with glue in case I need to replace the lower board. You could line the track (which supports the plane) with plastic laminate, which would increase lifespan. Jig length

really depends on the plane you'll be using. I made mine 770mm long and 330mm wide overall, which suits a No.6 fore plane. The upper board is 240mm wide, leaving a 90mm track for the plane to move along. I made the upper planing stop and lower bench stop from 30mm square oak – the size isn't important. When gluing the stop in place, make sure that it's square to the shooting edge. Even better, check it's square to the plane's sole. Cramp the stop and re-check, then insert the screws once the glue's dried.

Also, you should either cut a chamfer along the lower edge of the top board or rout a groove in the lower board. This enables you to clear sawdust more easily when shooting a plane. No matter what size plane you use, the blade edge should be honed straight, rather than curved. **GW**



1 Start by sawing the ply to size using a guide rail. The top board is about 90mm narrower than the lower one



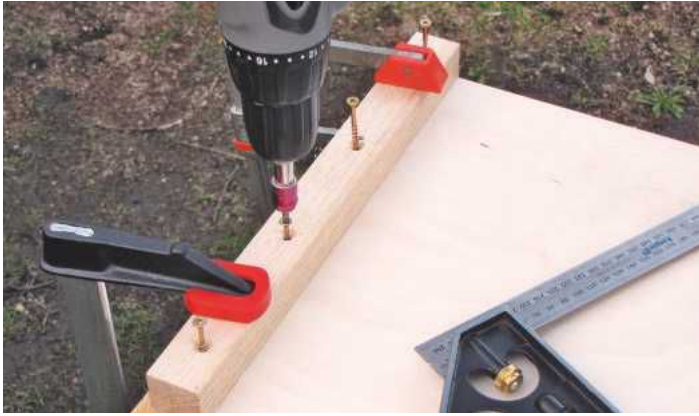
2 Rout a chamfer on the underside of the top board to give clearance for shavings and dust when planing



3 Drill and countersink the upper surface. Align both of the boards, then cramp and screw them together



4 With the plane tight against the top, align the stop with a square. Glue and cramp before screwing



5 Screw and glue a similar hardwood batten underneath the jig to act as a bench stop



6 Cut a right-angled triangle to form the mitre shooting board. Plane up the sawn edge



7 Ensure that the mitre board pivots slightly. Insert extra screws for accuracy, or cramp when shooting



8 Before use, trim the end of the planing stop. Cramp a backing piece to this in order to prevent splching



9 It's important that the sole of the plane is square to the top board. Check with a square



10 To shoot an edge just hold the board against the stop and move the plane



11 You should adjust the plane for a very fine cut when trimming end-grain square



12 This is a multi-purpose jig, as trimming 45° mitres precisely is frequently necessary when making picture frames

New to the Dickies Workwear range, you could be in with the chance of winning 1 of 10 pairs of Liberty safety boots



Dickies Workwear is giving 10 lucky readers the chance to win a pair of its Liberty safety boots – one of the newest additions to its footwear range, offering greater flexibility than ever before

Global workwear brand Dickies has launched the Liberty boots, using its latest innovative outsole designs. Ideal for carpenters working in an indoor environment, the style is particularly suitable for anyone who is often required to kneel or bend, while offering a high level of comfort for those who are on their feet all day.

Footwear innovation

The Liberty boots feature the DTc sole, designed by Dickies' footwear experts to achieve the highest grip performance on smoother surfaces, with ergonomic flex lines and geometric tread patterns for maximum ground contact.

The midsole is made from EVA (ethyl vinyl acetate), which is especially lightweight and flexible. This material provides cushioning and rebound, which helps absorb shock from the ground, while the outer sole is moulded with the high-performance rubber for abrasion resistance and durability.

To maximise the lightweight feel of the footwear, the Liberty boots have a composite toe-cap (lighter than steel alternatives) and are anti-static with a breathable textile lining.

HOW TO ENTER

To be in with a chance of winning 1 of 10 pairs of Liberty safety boots, just visit www.getwoodworking.com/competitions and answer this simple question:

Question: **What kind of sole do the Liberty safety boots feature?**

Winners will be randomly drawn from all correct entries.
The closing date is **30 March 2018**

Only one entry per person; multiple entries will be discarded. Employees of MyTimeMedia Ltd, saintnicks and Dickies Workwear are not eligible to enter this competition

WIN
1 of 10 pairs of
Dickies Workwear
Liberty safety boots
- worth **£72.50!**



The details

Available in two colour-ways (black with red detailing or grey with blue detailing), the boots are easy to coordinate with items from the Dickies clothing range.

To celebrate the launch of the Liberty footwear style, Dickies is giving readers the chance to win 1 of 10 pairs of the boots in the colour and size of their choice. To find out more about the Dickies' footwear range, visit www.dickiesworkwear.com.



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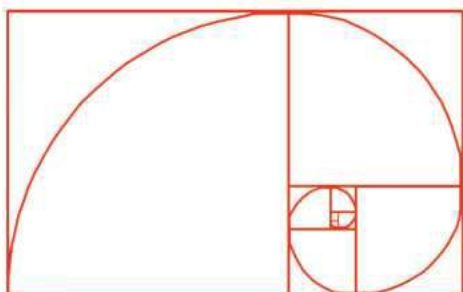
A CLASSIC IN RACING GREEN

Geoff Gray adapts an existing design for a fall front wooden toolbox and applies his own personal twist, while overcoming a few problems along the way...

I had actually started this build before I made my bench bull work surface, and I soon realised that I needed something better than a Workmate for this project! As well as a safe place to keep my tools, the aim was to try new techniques and practise existing skills.

As with most projects like this, there's an overwhelming number of design options out there. My requirements were that the toolbox needed to be:

1. Big enough to fit all my hand tools. I don't have a huge amount, but there's enough to get in the way if not stored properly: saws, chisels, planes, marking tools, mallet, etc.



Although the toolbox uses a simple design, I used the Golden Ratio (1.618) to get the front face measurements

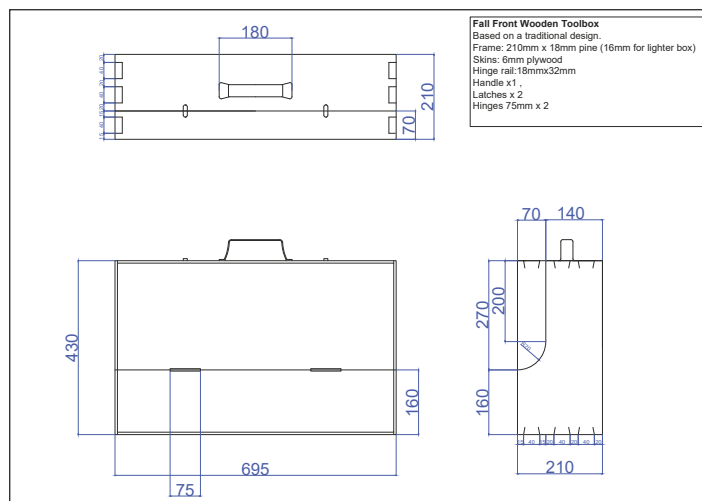


FIG 1. Toolbox design

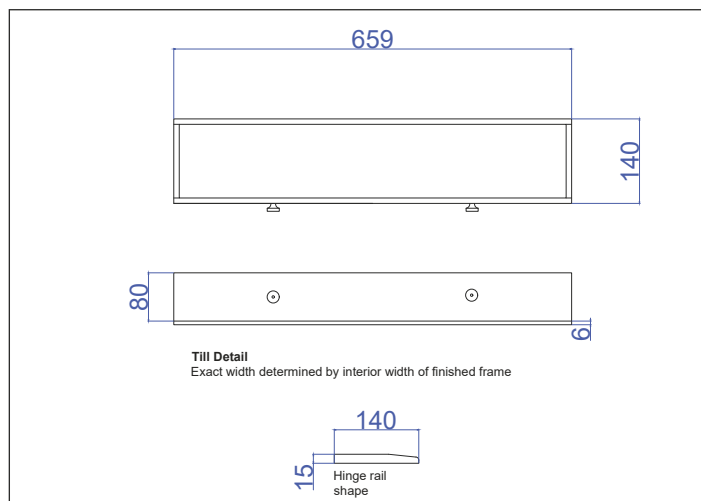


FIG 2. Till detail



1 Showing the rebate required to accept the plywood skin



2 A quick test fit with dovetails – with one end cut and no pins



3 Here you can see the gap where the rebated grooves meet; this will need filling in the next step

- 2.** Small enough to be portable so I could move it around and keep it out of the way. It was going to have to be a bit nomadic due to general space limitations.
- 3.** (Reasonably) pleasing to the eye. I wasn't attempting fine cabinetmaking, but it would be nice to end up with something decent to look at.
- 4.** Achievable. Complicated enough to be challenging without being impossible to finish at my current skill level.

After looking around, I settled on a slightly modified version of the old fashioned joiner's box, based on a Paul Sellers design. These were originally portable wooden tool boxes with a fall front lid and one or more drawers inside. They were designed to accompany full-sized workshop tool chests for when work had to be done away on site. Traditionally painted matte black, they were built to various standards of construction, from glue and nails to fine dovetails.

My version would simply be slightly larger than normal, being built to hold almost all my tool collection instead of being a carrier accessory for a larger stationary toolbox.

Paul Sellers describes building his version of this style of box on www.getwoodworking.com (search for 'Mint & boxed' by Paul Sellers) and covers some useful techniques. I was also fortunate enough to be able to get a good look at an original in the flesh to see how it was put together. I found the final design was straightforward while at the same time containing some challenging elements – dovetailing, rebating, resawing, hardware installation and finishing.

Spoiler alert: I made a good number of classic beginners mistakes along the way with this project, all of which I will share in this article. At least they ended up being good learning experiences – there's nothing like wasting a few hours of work to help you remember to do it right next time!

MATERIALS & DESIGN Design

Having settled on the form, I measured out and selected materials. The finished article is essentially just a basic rectangular box skinned with plywood.

I did get a bit fancy and used the Golden Ratio (1.618) to get the front face measurements. Based on a height selection of 430mm, the width was supposed to be 695mm or so, which would be pleasing to the eye. Depth is 210mm, dictated by the width of the board used. Unfortunately things went a bit wrong further on, so actual final dimensions ended up being 430mm high × 675mm wide × 210mm dia. Please note that in **Figs.1 & 2**, measurements are as originally intended before the dovetailing incident!

Materials

Materials are a pretty short list. I bought 2.4m of 210 × 18mm planed pine for the frame to allow for some loss from cutting



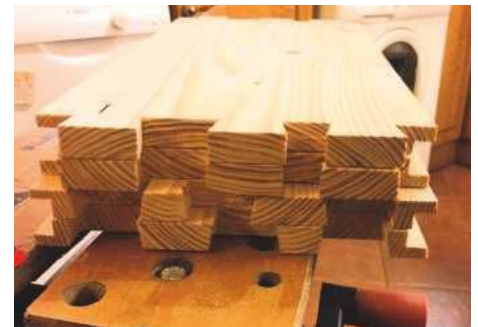
4 On the left-hand side you can see the rebate. All looks OK this end...



6 The only thing to do was to suck it up, cut them both back and try again!



7 Everything glued up and clamped together



5 ... oops! Here you can see where the dovetail went wrong



8 Here the dovetails have been trimmed flush

and squaring. I used a spare piece of floorboard offcut for the till, which I then resawed to a thinner size; it ended up around 9mm-thick, with the base being 6mm.

The frame size is thick as I was going for a larger and less portable version.

For a smaller or more portable version, 16mm or less would probably be better.

The skin is 6mm plywood, and as I intended to paint the finished article, I bought a fairly low grade of ply. I would have used a nicer faced Baltic birch if I'd been going for a natural looking finish. Two panels of slightly less than 430 × 695mm were all that was required. Two strips of wood are also needed for the hinge rails. I used a strip of 18 × 32mm white pine, and two offcuts for the till rails.

Hardware

I chose to use brass for its looks – 2 × 75mm hinges, and 2 × latches. I couldn't find a comfortable brass carry handle, so I ended up using a black pressed steel gate handle instead, which was strong, comfortable and very affordable. The finished box is big enough for lifting handles either end and is quite heavy when full, so I might end up adding them at a later date.

Tools

Aside from standard basic tools, I used an old Record 048 rebate plane and a homemade shooting board. Making a rebate for the plywood skin to sit into is optional – it could simply be surface mounted to the edge of the pine board. The boards for carcass construction needed to be square for dovetailing, so I put together a basic shooting board using an offcut of IKEA



9 The curved lid edge is cut with a coping saw, matched on both sides, and the dovetails are spaced to allow the lid to be cut free

counter top and a spare MDF shelf, which was rescued from a skip.

I use hand tools for noise and dust considerations (I do most of my work at our kitchen table) but mainly because I just like the feel of doing it that way. Any or all of this can of course be completed using power tools if desired.

- Cross-cut saw
- Rip saw
- No.4 Stanley plane
- Rebate plane (optional)
- Tape measure
- Chisels
- Marking knife & pencils
- Coping saw
- Paint and brushes, etc
- Hammer
- Pins
- Filler
- Wood glue

The frame

The frame of the toolbox is just four boards cut to the selected length, which are then dovetailed together. There is a rebate cut into the edge of each board to accept the plywood skin when the frame is complete, but this is optional: the skins could just be pinned and glued on. I bought the wood a few weeks before starting and let it acclimatise before getting going.

The first step is to cut the board into the four pieces that make up the frame – in this case 430mm long × 695mm long. I marked and cut a few millimetres longer to allow them to be squared up to the correct



10 Half a sheet of plywood was used for skinning the frame

size. I also marked up each board where it was going to go and which face would be pointing where, e.g. bottom outer face, top inner face, etc. This is important to make sure the rebates and dovetails go in the right places and match up.

Next, flatten and remove any twist with the Stanley plane. There are lots of good guides on how to do this that can be found online, which give a very clear explanation, so I won't repeat it here. A sharp plane and possibly winding sticks are needed. I was starting with fairly smooth, straight stock so there wasn't much to do. You can then square up the ends with the shooting board if necessary. The ends will be planed flush so a rough finish is OK, but everything needs to be square.

The next step is to cut the rebate into the edge to accept the skin when the frame is assembled. Paul Sellers recommends cutting the rebate in one go on the board before it's cut up into the four sections, but I didn't have the space for that so I just did them individually. I cut each one down



11 The plywood skin, roughly cut to size



12 Hammer, punch, pins and glue – ready to attach the lid



13 Here you can see the corner gap, which needed to be filled in, the plywood lip that needed to be planed down, and the pin holes, which were still to be filled



14 A slightly wider pin was needed to accommodate the lid



15 The box is cut to release the lid



16 The bottom hinge rail, cut and glued in

to about two-thirds the thickness of the 18mm-thick boards.

The plywood is glued and pinned into place so the depth of the rebate needs to expose enough of the board edge to accept the pins without splitting. The lip left behind is mainly to hide the edge of the plywood, so doesn't need to be very thick. The width of the rebate is determined by the thickness of the plywood, e.g. 6mm plywood needs at least a 6mm width to make sure it's down flush with the frame. I went a few millimetres wider again to 8mm with the intention of flattening the resulting 2mm pine lip down to the plywood level. The rebates also create a gap where the boards meet that will need to be filled later.

It's now time to dovetail the boards. Again, a great many excellent guides exist on how to do this by hand, so I won't go into great detail except to say I used the Paul Sellers' method from his book. This is also where I made my first big mistake, which resulted in shortening the frame width from 695mm to 675mm. Again, the boards could simply be butt jointed or screwed together to make things easier, but I wanted to have a go at creating dovetails. I spaced the dovetails slightly differently so that there would be one large dovetail in the centre of the lid edge

and two spaced evenly in the body. The cut for the lid passes in between these two sets.

My mistake was getting the front and back of one of the long pieces mixed up while cutting the pins, despite having marked them. I didn't discover the problem until I went to test fit everything and found that I had cut the pins backwards on one end of a long edge – meaning they wouldn't accept the dovetails (the fat end of the dovetail was trying to squeeze into the thin part of the pins, if that makes it clearer). The only thing to do was to cut off the faulty pins along with the corresponding set of perfectly good pins on the other long edge, in order to keep them the same length. This took extra work to correct and of course meant I lost about 20mm width from the final product. Definitely a mistake I won't make again!

You're then ready to glue everything together and clamp up. I did one corner as a test run then applied glue and clamped up the rest in one go. I made sure that the frame was square by checking that the diagonal measurement was equal across all four corners and kept it on a flat level surface while the glue dried. I gave it a few days to dry completely and avoided disturbing it, and once dry, I trimmed and planed the joints flush.

The next step is then to cut the lid curve. Once the skin is on it would be much harder to cut the curve for the fall front lid, so I drew on the lid dimensions and cut a 90° curve for the lid in both short ends using a coping saw. Of course, this could also be a straight line but the curve looks good.

Skinning the frame & cutting the lid

The first step is to size the skins. I cut the plywood roughly to size and planed it down to fit closely. I still managed to end up with some small gaps, but these would be filled so weren't a problem.

For attaching the skins, I used glue and 10mm panel pins to attach them and sank the pins below the level of the plywood with a punch. Once everything was dry, I planed down the pine lip to the level of the plywood and filled in the pin holes with wood filler. I also filled any gaps between the plywood and pine lip, of which there were a few. As I was going to paint everything afterwards, I wasn't worried about using filler.

I was then ready to fill the rebate gaps, so I cut small scraps and glued them into the eight rebate gaps where the boards meet on the corners. Once dried, I cut them close with a saw then pared them flush with a chisel.

Finally, I marked the lid by joining the curves cut at either end with a long steel ruler. I then cut along the top, down the sides and along the plywood front to release the lid. I smoothed the cut surfaces down a little to remove saw marks but not too much as I didn't want to create gaps.

When installing the hinge rails, I realised the plywood alone wouldn't be strong enough for the lid hinges so a hinge rail was needed. I cut two lengths of the 18 × 32mm strip



17 Clamping the lid hinge rail



18 The hinges installed



19 With all the hardware in place, the toolbox is now ready to paint



20 The sides ready cut for the till



21 Loose joints due to sawing on the wrong side of the line



22 The sides and ends are then clamped up



23 Gluing up the base for the till after squaring both edges



24 Gluing on and clamping the base



25 Well attached but the base is protruding

slightly oversize then used the shooting board to square the ends and bring them down to a tight fit. They were then glued flush with the edges on both sides of the hinge join.

Hardware

Hardware installation was straightforward. I drilled pilot holes for everything and waxed the screws before driving them – splitting something at this point would certainly have been disastrous!

Positions for the brass hinges were marked onto the rails and rebates cut to the thickness of the flanges with a chisel, then the lid was installed and everything checked for level. It was slightly out on one end as the rebate on one of the rails wasn't quite deep enough, although this was easily corrected.

Bolts for the handle couldn't protrude down as they would interfere with the till, so bolt heads were countersunk into the inside of the top surface, the handle attached to them on the outside and the nuts tightened. I was going to trim off the bolts but they didn't cause an obstruction, so I just left them. Then, with the lid fitted, it was just a case of marking and then screwing on the catches.

Till & saw holders

I decided on a single till in the end. I had a piece of leftover pine floorboard, which I resawed down to two thinner boards. I measured the interior of the frame to get the actual dimensions required, then cut and squared the four pieces for the till.

For the base, I resawed a thinner piece and bookmatched it together. It wouldn't really be seen on the finished article but it was good practice with thinner pieces, and I like knowing it's there!

I dovetailed the till walls together and made my next mistake by not marking my waste. I accidentally cut on the wrong side of the line for one set of pins, which resulted in a loose fitting joint. I didn't discover this until I came to assemble, however. Luckily, I had been using a thin kerf saw and was able to get it together with plenty of glue – the white glue swells the joint together a little as well, which helped matters – even a bad dovetail is still very strong! After the outside was together I glued on the base, and once it was all dry, I trimmed off the excess base with a saw leaving about a 3mm lip before planing everything flush.

I cut and glued in two small rails for

the till using offcuts from the hinge rails. The front of each is slightly sloped to help when locating the till back in after taking it out. I sanded and waxed the rails and ends of the till to smooth things out.

The test fit looked good and no major adjustments were needed, so the final step was to fit two small brass pulls to the front. I got a spare pair of pulls to match the ones I installed, just in case I ever add a second till below the first.

For the saw holders, I experimented with a few options but ended up using magnetic holders paired with a wooden locating slot. The magnets were glued into holes drilled into strips, which were glued onto the lid with the magnets placed face down, so no chance of them escaping or marking the saws and still plenty of pull to hold everything in place.

Painting & finishing

This type of toolbox was traditionally painted matte black but since mine was going to have an easier life than its ancestors, I went with a different option.

I took off the hardware and after sanding down the outside and easing the edges and corners a little, I painted on a coat of Rustoleum All Surface racing green, which promises paint and primer in one. I was pleasantly surprised by the coverage and colour saturation – one coat was indeed all that was needed. I still have half a tin left so may add a second coat at some point, but it's not really needed. Other than the rail and the ends of the till, I didn't add any finish to the interior in order to let the bare wood surfaces breathe. It's likely to get a bit grimy over time, but I shall consider that to be development of character.

And that's it! The finished article holds all my hand tools together in one place (well, almost; I still have a few planes which are never going to fit) and seems to keep everything nice and dry. It looks good and was a great learning experience; the only downside is the extra weight that comes with the extra size, especially with the amount of iron kept in it. **GW**



26 The completed fall front tool box, painted using Rustoleum All Surface racing green

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BUILDING TABLES

In his next article, **John Bullar** looks at building tables and considers both the top itself and the supporting legs, as well as how they are joined together

Making a one-off table for a special use, or to fit a particular room, is a frequent request to those with furniture-making skills. It might range from a little chair-side table to a massive dining table with extensions to take guests or extended family on special occasions. Here we will consider both the top itself and its supporting legs, as well as how they are joined together.

Because each table is different in dimensions and geometry, even though it may be based on an existing pattern, it provides a chance to apply some design ingenuity.

Back in GW325 while looking at small-scale timber conversion, I briefly described making a table top from the wood of an apple tree. Here we will look further at the construction of some of the different types of tables. This is not a step-by-step procedure, but more broadly a look at what to consider at each stage when you plan to build a table.

Solid wood table tops

Veneered table tops can be beautiful; great for exhibitions but they are often delicate, needing lipped edges and heavy coats of sealant to protect the surface. In the long term, users tend to prefer the natural durability of a solid wood table top.

A solid wood top needs to take account of seasonal wood movement, which can be several millimetres over a large table. The top is normally built up from a series of edge-jointed boards. This avoids the need for a top frame with panels and expansion gaps where dirt collects.

There are effectively three stages to making the top flat and smooth, as I will describe here. Firstly, the boards must be accurately planed; secondly, they must be



2 The biscuit jointer cutting a series of slots is a great tool to help edge joint boards

1 A flat, solid wood table top is made up from carefully edged boards



3 Wooden 'biscuits' are glued into each slot as the boards are brought together edgewise

joined in precise alignment; and thirdly, the assembled top must be planed and sanded smooth.

Jointing a table top

If the wood is even and straight-grained the boards may simply be butt-jointed edge to edge after carefully planing the matching edges in pairs (**Pic.1**).

However, any imperfections in planing the edges or a tendency for the boards to twist could result in a plain butt-joint failing. To avoid this, most makers prefer to reinforce an edge joint, either by shaping profiles such as tongues & grooves or by adding loose joints - for example, biscuits.

Another advantage of using biscuits (small oval strips of wood pressed into short slots) is that they make assembly of a series of accurately aligned boards much quicker and easier. Biscuit slots can be cut with a router, although a dedicated 'biscuit jointer' makes the job easier (**Pic.2**).

Gluing up a large number of joints in one operation, as when assembling a table top, is always a time of organised panic before the glue starts to set or the wood starts to swell with water absorbed from the glue. Using standard sized proprietary biscuits to hold the board aligned in accurately positioned slots brings a welcome extra control to this procedure (**Pic.3**).

The boards must be pressed together firmly (as opposed to tightly), which means applying hand pressure rather than shoulder weight to the clamps (**Pic.4**).

Clamps (or cramps) positioned alternately above and below prevent the top buckling as they press the boards together while the glue sets.



4 Sash clamps alternately above and below prevent buckling as they press the boards together while the glue sets



5 Planing diagonally across the grain flattens out any irregularities in the top

Flattening & smoothing

However flat the boards are and however carefully we align them before edge jointing, there always seems to be ridges and ripples in the surface of a newly assembled table top. There will also be glue lines to remove. To check the flatness, simply hold a long straightedge against the top with a desk lamp positioned low on the far side. A good builders' spirit level works as a straightedge.

Planing at this stage is best done with a small razor-sharp bench plane. It is unlikely that grain runs in a uniform direction so there is a danger of the cutter picking up fibres and tearing them out of the surface. Avoid this by planing across the grain with the tool angled, which will allow you to achieve a slicing action (**Pic.5**).

Sanding by hand may be possible with a small table although an orbital sander (preferably the random orbit kind) is best for this. Keep the sander sweeping side to side across the surface in a series of passes from one end to the other, that way it won't dig in and create a hollow. (**Pic.6**)



6 A random orbital sander smooths away any tracks or roughness left by planing

Supporting structures

Table legs can be simple enough - what could be more straightforward than a rectangular top with a leg near each corner? But even this simple design must take account of the need to brace the table legs and stop them splaying apart. At the same time, the rails beneath the top must not get in the way of a sitter's knees as they slide their seat underneath (**Pic.7**).

When it comes to minimal furniture designs, it pays to look at work of the Shakers - a religious group led by women starting in England and moving to the USA about two centuries ago. They were the originators of some highly functional and very beautiful furniture (**Pics.8 & 9**).

As a rule of thumb, the top of a dining table needs to be large enough to provide 600mm for each diner and supported 740mm above the floor. If the bracing rails between the legs are near the floor rather than beneath the top, they can double as footrests as in the ingenious hayrake table design (**Pic.10**).

Extending flaps

Flaps to increase the length or width of a table can be supported in several ways: for example, they may fold up in the middle while the ends slide out, or they may sit on the ends supported by slide out rails. Alternatively, hinged flaps can be supported on 'gate legs' or swing brackets.

One of my favourite folding table designs uses a rotating top on a rectangular frame. In one position the hinged flaps fall vertically on either side of the frame. However, when you rotate the top through 90° the ends of the frame work to support the flaps horizontally (**Pic.11**). >



7 The simplest of straight leg support structures is braced by a hidden diagonal frame beneath the table top



8 A round-topped tripod stand side table assembled from carefully jointed components



10 The traditional hayrake table design has substantial bracing between the legs, which can also be used as foot rails



11 This folding round table top rotates on a central disc screwed to the underside



9 The Shaker style dates back nearly 200 years but the minimal design is timeless

The classic design of a Pembroke table uses swing brackets to support the flaps on either side of the top. The extra depth of skirt needed for the brackets is used to house a drawer beneath the top (**Pics.12 & 13**).

Knock-down supports

Tables are large items of furniture and difficult to fit through doorways – a problem you might encounter when taking a new table out of your workshop! Tables also sometimes need to be stored flat when not in use.

A challenge is to build a table that packs flat, but when assembled is robust enough to be the centrepiece of a family kitchen. One solution to this is the trestle table – a seriously heavy-duty design that again owes some of its best examples to the Shaker movement. The construction is all-wooden, including wedges used to lock the supporting trestles in place (**Pics.14 & 15**).

Screws beneath the table top provide another way of fixing the supports so

they can be removed. It is important again here to remember seasonal wood movement. In raised humidity this will expand the top across the grain while leaving the length of rails beneath little changed. To avoid the top straining or buckling, the screws are fitted with wax in elongated slots and not tightened too firmly to slide (**Pic.16**).

Conclusions

Tables that were stored small and folded out to several times their size were popular in previous centuries but these mechanisms tend to be cumbersome or complex and prone to problems. In these less formal times, many people prefer a sturdy table that takes little or no preparation for use. Simple designs are generally best. **GW**

NEXT TIME

In *GW330*, John will look at methods for coping with shavings and wood dust in the furniture-making workshop



12 The extending flaps of a drop leaf table are supported on swing brackets pivoted on hinges cut in the wood



13 Another small side table, the Pembroke, has extending flaps and integral drawers



15 Again in the shaker style, this small trestle table is locked together with wedges



14 Ideal for serious use such as in a working kitchen, the trestle table is supported by a heavy-duty framework



16 Looking up at the underside, the support frame of this table is loosely screwed to the top, allowing for seasonal wood movement



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has more than a touch of the Gothic about it. The crypt of Cloisterham cathedral, where the murder at the centre of the book is set, is a literary device typical of the genre, in which subterranean settings and goings-on are often ciphers for the processes of our sub-conscious. And it is upon the workings of precisely this hidden realm that David Savage – in a ritual of deliberate procrastination that would probably delight Adam the psychologist – draws when designing furniture.

Talking to GW back in 2013, David explained that, by the time he sets pencil to paper, “I’ll have had the brief from the client for at least two weeks,” during which time he’ll have been in the company of the task, so to speak, but without addressing it directly. All the while, however, in the darkness behind conscious thought, the task will have been acting as a nucleus, drawing together and creating new connections between ideas – ideas, David suggested, such as memories of shapes, knowledge of timbers, understanding of function – that float in the almost bottomless well of experience that is the unconscious mind.

The Mystery of Edwin Drood

Don’t think of procrastination as the thief of time, says Dave Roberts, but more as an investment broker

ABOVE: David Savage: “The ideas that come from the back of the head come from way out in left field”

According to Adam Grant, an organisational psychologist and author, ‘putting things off’ can be an aid to creativity. First thoughts (ones that come from immediate, logical responses) aren’t necessarily the most original, he maintains; to foster creativity you need to give your ideas time to develop. “Procrastination,” Adam says, “gives you time to consider divergent ideas, to think in non-linear ways, to make unexpected leaps.” The trick, of course, is to leave yourself enough time to translate these leaps and ideas into action and actually complete the job – which, the unkind might suggest, is where Dickens went wrong with his final and unfinished novel, *The Mystery of Edwin Drood*.

While it seems a little heartless to describe as ‘procrastination’ the long hiatus that has followed the writer’s death, there’s no doubt that it has added an extra twist of black crepe to a novel which already

After this period of fermentation, he says, you can, “sit down and just doodle,” letting all those divergent ideas and unexpected leaps come straight down the arm to the pencil and onto the paper, bypassing any front-of-head thinking: “The ideas that come from the back of the head come from way out in left field,” says David, and are far more innovative than the evolutionary ones produced by straight-line, conscious thought. More than that, they’re the knitted-up bundles of experiences that are unique to you, which is why without access to this imaginative process, David believes, you’ll never create anything that’s truly original.

Perhaps, then, we shouldn’t be thinking of procrastination as the thief in the old adage, but more as a broker: lend the sub-conscious process your time, and the investment can pay dividends – providing you’ve put your time into the right sort of thinking, of course.

Good. That almost makes me feel better about the long gestation period that seems to precede anything I do, not to mention the still-to-do and still-to-finish lists that now stretch back – despite a year’s dogged progress – all the way around The Old Vic, where it has been a case of soil pipes before soft furnishings, I’m afraid – at least, until the latest ‘What if?’ woodworking wheeze...



The jobs list grows très longue

As far as my reading goes, the difference between a chaise longue and a sofa – the practical difference, anyway – is that the first always has a back and may have one or two arms, while the second has two arms, but may or may not have a back. Really, though, I’ve no more idea than I have about upholstery, all of which is why I thought it’d be an interesting exercise to spend a (very) few pounds on what were collectively advertised as a ‘chaise longue’, but which appear to be the mortal remains of a scroll-ended sofa.

I use the word ‘remains’ advisedly: the sofa’s mahogany frame, and wool and horsehair-stuffed moquette, are uncannily reminiscent of an old British Rail slam-door train compartment, and belong to an age of brown furniture whose dimensions and colour are, on the one hand, impractical in modern homes and, on the other, unsuited to present tastes. That said, its tidy proportions are typical of the sort of pieces that are beginning to be bought and refurbished. And while this one’s far from being a valuable antique-in-the-rough, it is (I’m thinking) a well-made example of its time, which is to say that it uses the pragmatic furniture-making approach in which rough-sawn and robustly jointed framing does its job beneath neatly tacked cotton or hessian, while the show wood and the fabric provide the polish – though it has mostly worn off this piece, mind.

Why bother with upholstery?

When I first chatted to a local upholsterer about my idea for resurrecting a sofa, he suggested that I bought one already covered with a fabric we liked, which struck me as both rather unenterprising, and unadventurous. After all, there’s a long tradition of co-operation between woodworkers and upholsterers: starting with the need to make wooden seats more comfortable, it was formalised during the golden age of English furniture, in the late 17th and 18th centuries, by the establishment of the Society of Upholsterers and Cabinet-Makers. A large proportion of Chippendale’s business income came from upholstery, and Sheraton, Hepplewhite and others devoted a good deal of catalogue space to upholstery. And today, there’s every reason for ordinary woodworkers like me to think of fabric as a complementary medium.

For a start, the variety of fabric in terms of colour and texture is greater than that of wood, and its use might be likened to that of exotic show woods or decorative veneers: you need the judgement to avoid clashes (mixing red upholstery and mahogany, I note with a sidelong glance at my project, is a classic combination requiring caution); more subtly, different fabrics also

have their own light-reflecting properties that contribute to their unique character.

There are plenty of roles for more humble fabrics, of course: baize is used on the tops of card tables, or as protective padding on the underside of boxes or the tops of bureau sliders, and velvet is the usual covering for the writing slope of a knee-desk. As well as being decorative, fabric can also be functional: hinges can be made from muslin, lifting or pulling tabs from ribbon; linen, meanwhile, may be used to articulate the slats of a tambour, or make good the splits in drawer bottoms and cabinet backs.

Down to brass tacks & beyond

As a project, then, the sofa has a lot to offer. First, there’s the stripping down which calls, according to advice offered by Stephen Simmons back in 2010, for four basic tools: a craft knife or scissors to cut fabric, and pincers for removing nails, pins and staples. A tack lifter, meanwhile, is used to remove decorative nails, not tacks; to avoid bruising the wood when prying them free, use a thin piece of plywood under the lifter, and work with the tool parallel to the grain rather than perpendicular to it. If any nail heads shear off, use the pincers to extract the shank, again working with the grain. Removing tacks, meanwhile, calls for careful use of a cranked ripping chisel: again, work with the grain to avoid splitting the wood, and use repeated gentle taps with your hand rather than a few heavy blows.

In putting the tools to work, Stephen’s recommendation was to remove the upholstery in the reverse order of assembly, starting with decorative nails, and any braid and cord (which held in place with gimp pins), followed by the material on the underside of the furniture, the main cover, and then the lining and filling; this will leave just the springing and the webbing. “This careful dissection,” said Stephen, “will reveal the various stages of the upholsterer’s work – together with increasing amounts of dust!”

Then comes the repair to the frame, whose joints are sure to put to work the recent lessons learned about hide glue (Dombey & Son, GW322) and, in all probability, more of Stephen’s advice: “Once you’ve removed all the upholstery,” he said, “you’ll almost need to repair the damage its fixings will have done to the framework before you can begin on any restoration.” In his experience, the holes created by traditional tacks can perforate the wood so much – especially if the piece has been reupholstered several times – that either sections of it just fall away, or the framework is too weak to withstand the tensions applied by new upholstery. If this is the case, it’ll mean cutting out the frail wood and splicing in fresh timber; a belt-and-braces >

ABOVE LEFT: Carved detail disguises the joint in the centre of the crest rail

ABOVE MIDDLE: Moquette: reminds me of an old British Rail slam-door train

ABOVE RIGHT: Rough-sawn and robustly jointed framing is hidden by the upholsterer’s art

BELOW: “Careful dissection will reveal the various stages of the upholsterer’s work – together with increasing amounts of dust!”



approach could include pinning the repair sections with dowels running perpendicular to the forces that will be applied by fresh webbing. Screws, which can obstruct new fixings, should be avoided.

In addition, my particular piece offers an interesting challenge in the shape of what I'm calling a shake in the mahogany of the crest rail, which makes me wonder if the sofa hasn't spent too long standing against a radiator at some time during its life? I don't know just how much can be done to close this and then secure it, but it may involve the gentle application of steam; received wisdom, however, suggests that, generally, mahogany doesn't lend itself to steam-bending, and this particular piece is so dry I'm not sure how susceptible the lignin – that part of the timber made malleable by steaming – will be to the process. However, I'm sure a little 'constructive procrastination' will turn up an answer of one sort or another.

If the frame comes up to scratch, the final stage will be re-upholstering, though I don't plan to tackle this myself; refurbishing an old stool or a simple chair would be a project more suited to a beginner learning the basics of the craft. And if that's something that you fancy experimenting with, you might find David James' *Upholstery: a beginner's guide* and Carole Thomerson's *The Complete Upholsterer: a practical guide to upholstering traditional furniture* useful references. For upholstery supplies, Glover Bros. (www.gloverbros.co.uk) should have all you need.

While we're talking about mixing disciplines and media, I hadn't realised 'til I read Bill Bryson's *More Notes from a Small Island*, but, if I was looking for encouragement to dabble, I need to go no farther than the next county, and Shropshire's Iron Bridge. The bridge, the symbol of Coalbrookdale, the home of the industrial revolution, was designed by a joiner-turned-architect, Thomas Farnolls Pritchard. With apologies to Bill, what's much more interesting, I thought – and I'm indebted to Engineering Timelines (www.engineering-timelines.com) for this little insight – is that the, "drawings for the detailed design of bridge members were made at the Coalbrookdale foundry by Thomas Gregory, a foreman pattern-maker who usually worked with wood. This is probably why the bridge uses carpentry jointing details such as mortises & tenons, and dovetails and wedges, despite the change of materials from timber to iron."

The Engineering Timelines' strapline – 'With a few tools and practical principles engineers travel to the unmapped country of the future' – expresses an admirable outlook and, as these chapters about everyday adventures in woodworking come to a close, it's one that I might try to modify. With a few tools and practical principles – and some constructive procrastination, of course – perhaps I'll be able to navigate The Old Vic's uncharted future. And with a bit of luck (and a following editorial wind), I'll see you there, too: for while *Edwin Drood* may have been Dickens' unfinished story, my work here at The Old Vic' has only just begun... **GW**



While tacks are pulled with a cranked ripping chisel...

... a tack lifter is used to remove decorative nails



ABOVE: Was this shake(?) in the crest rail caused by central heating? Can it be cured by steam?

LEFT: To learn the basics of upholstery, an old stool or a simple chair makes the perfect project



LEFT: All hail Thomas Gregory, the foreman pattern-maker who brought carpentry jointing to the world's first iron bridge

LONG GESTATION

Back in *GW219*, I think it was, this tired little table was the subject of another 'I wonder if...' doodle. The maquette that I made at the time outlined an idea for setting a chest-of-drawers within the legs of the table; the drawers and plinth haven't materialised yet, but the table has been repaired and tidied, and its top decorated with an experiment with inlay...



It still isn't finished, but...



... it's feeling better



A curious thing: battered and oddly proportioned...

Jennie Starbuck



Andrew Hall



Mick Hanbury



Wayne Mack



Michael Painter



Rick Dobney



Peter Sefton



Nic Westermann



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Linenfold panel

Edward Hopkins demonstrates the maximum anxiety method of making

I can't decide if I've done this well or not very well at all. Maybe that's not a valid question: I've done it in the only way I'm able. It has been a particularly difficult job, not so much in the making but in the designing. After many days, much of which has been taken standing around thinking, I have a mixture of excitement and exhaustion. Excitement because as I write this, the thing isn't finished. It's not even assembled. I have yet to be surprised, one way or the other.

About 10 days ago

It's a bit convoluted, so I'll keep it brief. **1)** I like chests. **2)** I've wanted to make a coffer for a long time now. **3)** I have oak ready to go. **4)** I'd like to make Imogen a present. I've done so much work for/with James over the past couple of years, and little for her, that she'd be within her rights to be miffed. I'm going to head her off. **5)** I've also kept wondering about linenfold panelling and how I could effectively machine it. **6)** I have thin square section oak that has been indoors for years. **7)** I'd like to kill six birds with one stone.

Normally you'd start with a carcass and fit doors to it, having a little leeway if they need adjusting. Here, though, I couldn't easily change the size of the panel because my strips were already machined and I didn't want to dimension them again (and even if I did, their priority would remain). I couldn't surround the panel in a conventional frame because my oak stock was thinner than the panel. **8)** I had a router cutter just the right size to flute the strips. **9)** I'd press my mortiser into being a milling machine just as I've done a hundred times before, fitting it with a heavy cutter, and with this cut out the ends of the linen folds.

The milling of the ends is not a happy business. The mortiser is not built for such sideways action. Over the years I've worn ridges in the Morse taper spigot as it rotates against the bush, and the drill press mechanism chatters a little. I touched up the cutter (which is only operating at its tip) and took many slight passes, skimming rather than routing. The resultant surface was a bit rough. I couldn't see any way of cleaning it up apart from hours of scraping, so I decided **10)** to accept a mediaeval finish on a mediaeval chest. >



1 My version is not real linenfold. The best linenfold attempts a three-dimensional impression, showing the cloth folding under and back on itself. This 19th century carving is more realistic than mine. It is also scruffier. Some modern makers produce immaculately carved panels, but I'm not one of them



2 The cutting of the ends came before the scalloping. I tried it the other way round but it was not as neat. I use the mortiser as a milling machine. It's not designed for this sideways cutting and the bush is becoming a little sloppy, giving rise to chatter. Each pass was minimal: I made 15 or 20 passes for each cut, touching in the very end first to avoid fraying





3 The ends cut. Some feathery ends need to be knifed or chiselled back



4 Scalloping. Again, several fine cuts are better than one hefty pass. I set up the ply stop so that I could always arrive at the same finish. Back in the right angle frame (shown in **Pic.3**) I glued the strips together and lightly cramped them

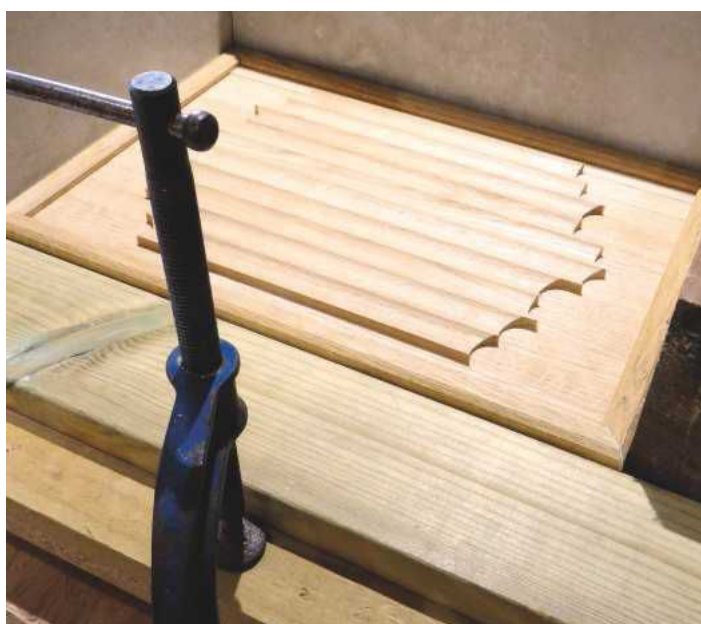
11) Chests aren't useful. They look as if they should be but they take up a lot of room, and Imogen, Pjay and Jaya presently live in a small flat. I'd make a diminutive version that would double as a seat. **12)** I'd make it a toy box, accessible by Jaya. For this the front panels would be doors! Aha! Haven't seen that before. Could be fun.

13) Panels, even beefy ones like this have to be kept flat while being allowed to move (that's the whole point of a panel). Initially I thought I'd run a loose tongue all around. Mmm. Not good. Then what about cleated ends? They don't really allow for movement, and you always end up in time with a little step at the end. By now, with the panels glued and trimmed, I liked the look of them and didn't want to overshadow them with too much extra construction. A lot more thinking went on but eventually I boxed them into a frame and thought I'd worry about the hinging later.

14) Worried about the hinging. A lot. Couldn't see it working on a chest, not a 17th century type anyway,

and that's what I had envisaged. **15)** What about a chest on a stand? Would that help? I suddenly went Art Deco. Stark clean lines on the outside leading the eye into the linenfold. Contrast. Dynamics. Went as far as to mark out the sides but was beset by a problem: as the two doors met, the deep stiles would have to be sloped back to prevent them fouling each other. This was technically possible but inelegant. **16)** Considered one fat hinge in the bottom outside corners to allow the doors to wheel over and down. Clever this because the linenfold would still be visible. Also worrying. Could be good but might just be clumsy and weird (and might not work). I'll save that for another day. **16, 17 and 18)** Kick it all round the houses this way and that never settling on one solution.

19) Forget about a chest on a stand. What about a cupboard? Oh, the joy of flexibility! (Don't call it indecision, call it the design process.) One panel on top of the other. Still Deco. This removed my internal logjam. Yes! Takes up less space, but can still be a statement.



5 My kitchen-worktop-right-angle-corner in play once more. Heavy cramping is neither required nor feasible. The frame components have been routed with a groove to accept the panel. The fit is slightly loose so that the frame will definitely join snugly. The panel is free to move, but these mitres won't be strong enough to form a door. Splines are needed



6 How to cut for a spline? I thought of a cradle to run over the table saw. It needs to be made accurately. Here I'm using polyurethane glue to bind the two wings of the jig at a definite 90°...



7 ... so how come when everything looked right and I was so careful, the cradle ended up 90+°? It was usable, but one day I'll remake it because it works well. It is disturbing not knowing where you've gone wrong



8 Gluing splines. Allowed to dry, then trimmed with a fine saw, planed flush and sanded

What is my statement by the way? What am I saying to Imogen? I'm saying quality, originality, style, indulgence, heritage, love. She is outstanding, and therefore deserves the same.

Wednesday

At some point you just have to go for it. So I did. I have. Today I've cut the through tenons, pierced them for wedges, cut the wedges, dry assembled the frame, rebated for the back panels, sanded components and finally assembled. I've used folding wedges because the two middle shelves (two are necessary for the hinging, which I did finally resolve) wouldn't work with a single wedge and anyway, there's something satisfying about a folding wedge. Apart from its neatness, it exerts considerable purchase, thus keeping the frame square. I was feeling pleased about this but noticed, as assembly progressed, that the carcass was indeed out of square. Aargh! This isn't meant to happen. I finished all the

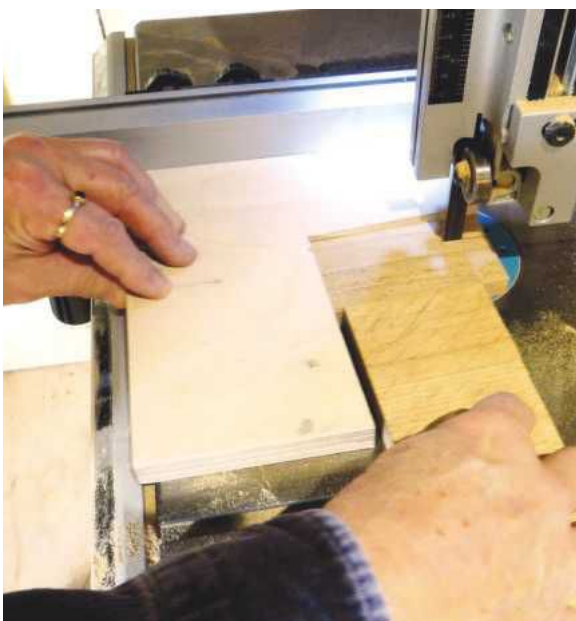
wedges, then fitted the back panels. They should sort it out. They didn't. Grrr. I sat a long sash cramp across the longer diagonal and forced the frame to comply. It uttered one short chiropractic crack, something gave, and perpendicularity was restored. You don't do woodwork because it's peaceful.

I'm not out of the woods yet. Tomorrow I'll hinge the doors, then I can stand the cupboard upright, walk away, turn round and pretend I've never seen it before. But I have. Even lying prone on the bench, I know it's, um, unusual. It might be awful. It could conceivably be irretrievable. I have decreasing room for movement – really just the top and bottom. But I have one card up my sleeve. Faith. It's not blind faith. I don't think I can turn this into a masterpiece, but I can rescue it. Surely? Hopefully. I think a big top might do it. Maybe a big bottom too. For once I have enough timber to hand. **20)** Relax. Get changed. Think about something else. Or better still, don't think about anything at all except, perhaps, supper.

Thursday

I remembered (at 5:30am this morning – a storm kept me awake) point **15)** Stark outside, leading the eye to the linenfold. An elaborate top would be a third element (linenfold and wedged through-tenons being the other two) and might be distracting. And unless it spoke to the other two elements, it would dilute the overall impact. The top and the bottom then should be as stark as the sides. The first thing was to hinge the doors. Several slip-ups. The carcass was still ever so slightly out of square, but more significantly, the doors were a tad wide. I'd taken care to leave a clearance gap between them, and now, being a strong shadow line, it had to be parallel. It took a while, adjusting, compromising and resigning myself. I'll finish screwing the hinges in tomorrow when I can work with it the right way up, lest gravity interferes.

With the doors on, I could at last, and for the first time, stand the cupboard upright and assess it. I walked away and turned round. Involuntarily, I laughed! This, I thought, was a good sign. I liked it! It was fun. Now even more fun could be had doing the technically non-demanding hat and boots (the boots are important for stability). I did what I did and enjoyed every moment of it. There must be many possible solutions, but I only >



9 A simple jig to cut identical wedges. I ran a chamfer around the inner edges of the folding pair to visually separate them: without it, they looked like one bulky rectangle

needed one. It still took a while to get there. I tried several shapes for the pediment, electing for understated simplicity. It does the job lifting the eye up over and down the other side and, of course, it'll stop objects falling down the back. There was no rebate in the top 'shelf' to house this pediment, so I masked an inevitably imperfect join with a little chamfered strip. That shape is an echo of the feet. I began with an idea of lion's paws, and feet four thicknesses wide, but this was overkill and too heavy. Two strips were enough. They echoed the twin middle shelves. And they gave the piece some poise – literally some standing.

The cupboard is back on the bench, lying down for the night. The back panels were a fingers-width too short to fill the allotted gap. This, after all the twist and turns and changes of plan, was nothing to get upset about. Instead it spawned a concave moulding, and the inside panel became, to my eye, that bit better.

How to catch the door? Return to the idiom. Though 100 miles from the panelled chest I first imagined, this is nevertheless some sort of homage to 17th century oak furniture via 1920s revamping. Brass hooks and

eyes would be in keeping with its rough rustic nature. I didn't have any. What I did have were fat brass hasps and staples. These were preferable because of their scale. They are reminiscent of the heavy ironwork often found on old chests, and the careful metalwork of Arts and Crafts furniture. Because the staple invites a padlock (whether or not it is ever used), it suggests heavy, solid usage, and I liked that too. The bigger the scale of the basic carcass, the more refined, in contrast, would be the linenfold.

I am hugely relieved. The cupboard is not without hiccups here and there, but nothing major. I could be criticised on finish. The background of the linenfold is a bit rough, and the sides of the tenons are straight from the bandsaw because I couldn't see how to clean up either of these. I don't expect any more of myself than this. I cannot embark on such a speculative mystery-trip as this insisting on perfection, for if I did, I would never finish anything. Surely the boldness of design excuses minor blemishes? Look at **Pic.1**: how many blemishes do you see there?

Imogen, Pjay and Jaya are coming for the weekend. By lunchtime tomorrow I should have the cupboard completed, if not finished (hard wax oil inside and out, I expect). She doesn't know I've been making her a present. I'm going to put it somewhere visible and wait for her reaction. The reaction I'd really like is the same as mine – laughter, for it is certainly comic. And laughter should be added to that list of endorsements above for wherever Imogen goes, she brings it with her ('strange' and 'unusual' may be reserved for my list, not hers). Whatever, I hope she likes it. Then I can tell her that I've made it for her. **GW**



10 If you found yourself in this predicament – having constructed something a bit strange without knowing how it would end up – and were faced with this: a quite pretty frontage and a rather heavy-handed carcass, how would you proceed? You only have the top and bottom to play with. What could tie the front and the sides together?



11 Imogen is left-handed. Pjay is right-handed. No, that's not the reason. I hung the doors this way because strangely they are more symmetric. But really it was just because I could. Steel screws should be replaced by brass screws... one day

USEFUL ADDITION FOR MINOR HONING

This useful tool from Veritas is designed to restore blades dulled from normal use, even if they contain minor nicks

What a pleasure it is to set up a planer with fresh, surgically sharp knives. What a pain it is to be as careful as you can be and to find nonetheless little nicks appearing, resulting in ridges in the timber. You don't have to hit a nail or barbed wire for this to happen. A tough knot will do. Sometimes it appears that nothing at all will also cause the damage. Small nicks/ridges can be tolerated if the work is large scale and to be sanded, but it always worries me that larger ridges will throw the timber out of parallel as it is thickened. You spend the subsequent weeks choosing that bit of the block that doesn't have nicks for preparing smaller stuff, but you know that the days of those knives are numbered.

Nothing beats taking damaged (or simply blunted) knives to a saw doctor and having them professionally retouched. If you want to keep the operation in-house, the best solution would be a water-cooled sharpening system with a knife jig, such as the Tormek T8. My Sedgwick planer takes 12in knives. I had these sharpened by an expert on the Tormek and could measure a discrepancy of only 1,000th of an inch. He volunteered that good though this device was, it was not as precise as a saw doctor. The action of the grinding wheel produces a hollow bevel rather than a flat one, which gives, I suppose, a slightly weaker edge, but I don't think this is significant.

Helpful solution

Where next (if you don't want to spend around £600?) Well, I've had some idle moments imagining home-made plywood jigs and sliding diamond blocks, but imagining is as far as that has gone. Then I was introduced to the Veritas Jointer ('planer' to you and me) Sharpener. I was immediately disappointed. It is designed for blades up to 8in long. Rats! But then, looking at it, I thought how so? A 12in knife overhangs, that's all, so I gave it a go.

All praise to Veritas for coming straight out with it: 'A commercial sharpening service or a sophisticated home grinder is necessary

for badly nicked blades. The Veritas Jointer Blade Sharpener is designed to restore blades dulled from normal use, even if they contain minor nicks.' It comes with a sheet of 15 micron (1,200 grit) adhesive-backed abrasive film. 1,200 is far too fine for anything but polishing, so I acquired a sheet of 400 and a sheet of 1,000 grit adhesive film. Being only 8in wide, I cut them down the middle and stuck them side-by-side on an offcut of kitchen worktop. Veritas recommends plate glass because it is flatter. Bizarrely they also suggest sticking it to the feed table of your planer! Plate glass would have been a better bet as I found to my cost that my piece of worktop wasn't perfectly flat.

Simple & elegant

As you'd expect from Veritas, the jig is a beautiful thing. Made of cast aluminium and finely machined brass and steel, it is simple and elegant. Three knurled bosses clamp the knife in place. Two more provide backstops for accurate positioning of subsequent blades as pairs (or triplets) of knives should be cut identically. With my all but new knives, these two positioning bosses did not come into play, but were I to eat away the metal, eventually they would.

The long back screw with locking collar adjusts the angle. There is no calibration offered or needed here as it is sufficient to copy the existing angle of the bevel. A micro bevel can be achieved by turning the screw (half a turn equals a quarter of a degree), thus removing metal where it matters – on the very edge – that much faster.

The 400 grit diamond film is ferociously sharp when new. Nevertheless (and with an overlong knife) it took a while to cover the ground and achieve a burr on the flat side.

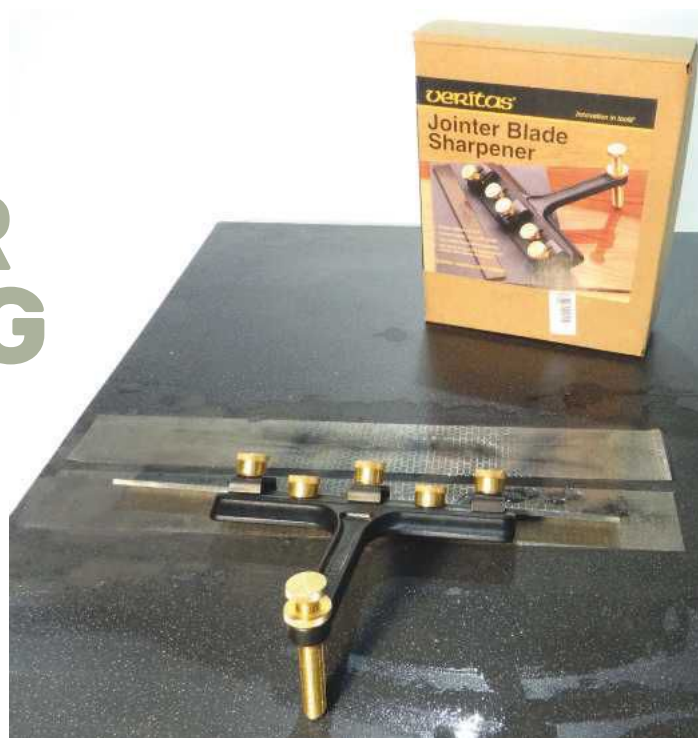
The bottom of the long adjusting screw has a rubber pad as a foot: this wore a tiny flat on its first outing, so I'm not sure how long that will last (not that, on an offcut of worktop, it matters much). I played with various patterns of movement and found the (reshaped) abrasive sheets plenty big enough. The 1,000 grit film produced a finer edge – so fine that the 1,200 grit sheet remained unused.

Conclusion

The jig is good and obvious but it is not sufficient. I'm sure that when I bought my planer (quite a few years ago) knives were relatively much more expensive than they are now. For £15 or so I can buy a brand-new pair, and have done so several times. Now, of course, I have a collection, and it seems profligate to keep buying more. I used to know a local saw doctor, but presently I don't. Until I do, the Veritas jig is a useful tool, which, with a spare 10 minutes or so (and another 10 to refit the knives), could easily save the day. And was it less effective over 12in than it would have been over 8? I couldn't see that it was. **GW**

SPECIFICATION:

- ▶ Designed to restore blades dulled from normal use
- ▶ Clamps blades up to 200mm wide
- ▶ Two position stops ensure successive blades are honed identically
- ▶ Cast aluminium with brass and steel fittings
- ▶ Includes a half sheet of 15 micron 3M micro-abrasive film
- ▶ **Typical prices:** Veritas Jointer Blade Sharpener – £52.69; Veritas Glass Lapping Plate – £12.16
- ▶ **Web:** www.brimarc.com



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ACORN COLLECTION SIDEBOARD

Jonathan Walter and Lakshmi Bhaskaran of Bark Furniture share a stunning piece from their Acorn Collection, which aims to capture its own piece of '50s Americana

From the word go, Bark was always going to be about 'family' – a husband-and-wife team coming together to create a collection of pieces united and bound together by a set of key visual characteristics.

"The focus of our initial range, The Acorn Collection, was tables and chairs and included a dining chair, lounge chair, sofa, dining table, coffee table and side table," says Jonathan Walter. In terms of design attributes, all the table tops were designed with curved, chamfered edges, while the legs on all six pieces were angled the same, relative to each other. "On this occasion we used just one wood – black walnut – though we always encourage our clients to experiment with the wood types and colours that suit their own individual environment." All the timber used in Bark furniture comes from sustainable sources.

An unashamed tip of the hat

The Acorn Collection harks back to a bold period in furniture design, offering an unashamed tip of the hat to the wonderful forms that appeared in Europe and America during the middle period of the 20th century when designs had a confidence in proportion, modesty in detail and simplicity of construction. There are unmistakable hints of Japanese architecture and furniture for the exact same reasons.

Jonathan says they always knew that a sideboard and chest of drawers would eventually form part of the collection, but it wasn't until after they had created the original six pieces that they knew what form they would take. As a result, the designs for the sideboard and chest of drawers had begun to take shape long before they were ever committed to paper.

"The sideboard was designed alongside the chest of drawers," says Jonathan, "so every time one was drawn, so was the other. Every detail was thought through on the basis that it would appear in some guise on both pieces. The first sketches were basically square boxes on inclined legs (see photo below) – nice, safe, and a bit boring. We knew we wanted something more, something defining, something confident. By inclining the sides just a few degrees, we began to capture a bit of '50s Americana, something about the period's architecture, Detroit's car styling, *The Jetsons!*" **GW**

BARK FURNITURE

Established in 2010, Bark is a collaboration between Jonathan Walter and Lakshmi Bhaskaran. Jonathan began designing furniture in 2002, while studying cabinetmaking at a school in São Paulo. In 2006 he moved to Devon to continue his studies at the David Savage School of Fine Furniture and has been making bespoke pieces ever since.

Lakshmi has been heavily involved in the design industry for over 15 years. An established writer and the author of five design titles, in 2008 her passion for design saw her embark on a new career as a designer-maker in Devon, where she met Jonathan. The pair married in 2011 and set up a workshop in Cornwall from where they are now based. So that's it: Mid-Century, *The Jetsons*, General Motors, Japanese – and a little Cornish! To find out more, see www.barkfurniture.com



The first sketches were basically square boxes on inclined legs



"The first sketches were basically square boxes on inclined legs - nice, safe, and a bit boring"

Jonathan Walter of Bark Furniture



Curved leading edge adds a nice dynamic quality to the piece



Chamfers into 93° mitre and curved lower leading edge



Close to finished, Lakshmi and Jonathan fitting the sliding doors at their workshop in North Cornwall



Strong design continuity between Bark's sideboard and chest of drawers are evident during construction

SOFA SO GOOD

Clint Rose of Timber Anew shares a simple project for a sofa arm table, which makes use of homemade contrasting dowels to finish it off perfectly

TOOLS & MATERIALS REQUIRED

MATERIALS

- Pencil and rule
- Combination square
- Knife
- Tenon saw
- Smoothing plane
- Clamps
- Mallet
- Chisel
- Flush cut saw
- Brace and 6mm bit (or drill)
- Pein hammer

TOOLS

- Around 800mm of your chosen wood
- A small piece of wood to make dowels
- Wood glue
- Range of abrasives
- Painter's/masking tape
- Varnish (or your chosen finish)

My good friends needed something to keep drinks on while at the sofa and so asked me to build them a dedicated arm table. The arm of their sofa certainly isn't orthodox, so this wasn't as straightforward as it first seemed, but adding a small piece on the side proved to be the simple solution. I made it from reclaimed pine (**Pic.2**) with sapele dowels and finished it with a hard-wearing varnish, so hopefully it'll cope with the various spills and scrapes it's likely to encounter. I hope you enjoy this project and the accompanying video can be viewed on my YouTube channel, details of which can be found at the end of this article.

Making the prototype & cutting the wood

I decided to make a prototype for this build as the sofa arm was such an odd shape (**Pic.1**). I wanted to make sure it fitted before I began making the final product.

When working the pine I decided to cut all the lines deeply with a knife (**Pic.3**). This was not only to mark them clearly but also to try and stop the pine breaking out when I started sawing it – a problem I regularly encounter with softwoods. There's only four pieces to this product (besides the dowels) and it can quite easily be made from scraps you have lying around.



1 The sofa arm table prototype



2 I chose to use old pine shelves as the main material for this project



3 When working the pine, I decided to cut all the lines deeply with a knife



4 Cutting the old pine shelving to size



5 I set up a plank on my workbench to push against; this would allow me to work each piece down with a smoothing plane



6 After putting glue on the ends of the boards and the faces of other boards...

After I cut all the pieces, I set up a plank on my workbench to push against; this would allow me to work each piece down with a smoothing plane (**Pic.5**). I also made sure to clamp each piece in the vice and make very slight adjustments with the plane to ensure all the ends were square. As this table is made with butt joints, the ends of the boards, as well as the faces, need to be square.

The first glue-up

This initial glue-up allowed me to get all the pieces in place and solid enough to drill and insert the dowels. Gluing end-grain onto anything is not really a strong enough bond to ensure years of use. After putting glue on the ends of the boards and the faces of other boards, I began to clamp them all into place (**Pics.6 & 7**). It's important to check that each piece is being clamped squarely to another piece. Sometimes I had to adjust the positions of the clamps to make a board angle one way or another to ensure it was all square. I also

made sure to keep checking with the appropriate tool. I waited a day for the glue to dry before moving on to the next step.

Drilling the dowel holes

To get the dowels in the correct place, I measured half the width of the boards with a combination square (**Pic.8**). I then stuck some painter's tape down on the edges and marked a line down the length of the tape with the combination square. I set the two end dowels in 15mm from each side and then one in the centre between them.

I added the painter's tape for two reasons: firstly, I didn't want to put any extra pencil marks on the table and also the tape seems to help stop too much breakout when drilling the holes. It certainly required some creative clamping when drilling into the unsupported side (**Pic.10**)! I used a 6mm drill bit and went down to a depth of about 45mm; to ensure accuracy I added a piece of tape to the drill bit to show where I had to stop for each hole.

Making & inserting the dowels

Using the drill bit where it was marked with the tape, I held it against the saple and made a mark just a little bit longer than the depth of the holes (**Pic.11**). After cutting that section off, I could then chisel down it to split pieces off and then chisel it again to split those pieces in half (**Pic.12**). It was then just a case of whittling the dowels down with a chisel or knife until they were slightly thicker than the 6mm hole.

The satisfying part is tapping the dowels through the dowel plate (**Pic.13**) – a process you'll miss if you buy the dowels ready-made rather than making them yourself, as I've done here. After tapping a dowel through the hole, I then just used another dowel to hit the top of it, which aided removal.

Next, I squirted a little glue into each of the holes and then put a small amount on the end of each dowel before tapping them in place firmly but carefully with the help of a peain hammer.

>

Finishing touches

When the glue had dried a day later, I used a flush cut saw to trim off the dowels (**Pic.16**). As there were some small breakouts around the dowels, I mixed up some sawdust with glue and rubbed it into the gaps (**Pic.17**). When all was dry, I used a plane and pieces of abrasives to smooth it all down and chamfer the edges (**Pic.18**).



7 ... I began to clamp them all into place



8 To correctly place the dowels, I measured half the width of the boards with a combination square



9 Ready for drilling



10 Some creative clamping was needed



11 Holding the drill bit up to the sapele, I marked a little bit longer than the depth of the holes



12 Using a chisel to split pieces off the sapele



13 The satisfying part is tapping the dowels through the dowel plate



14 A small amount of glue is added to each of the holes with the dowel put a little way in



15 All nine dowels tapped in and glued



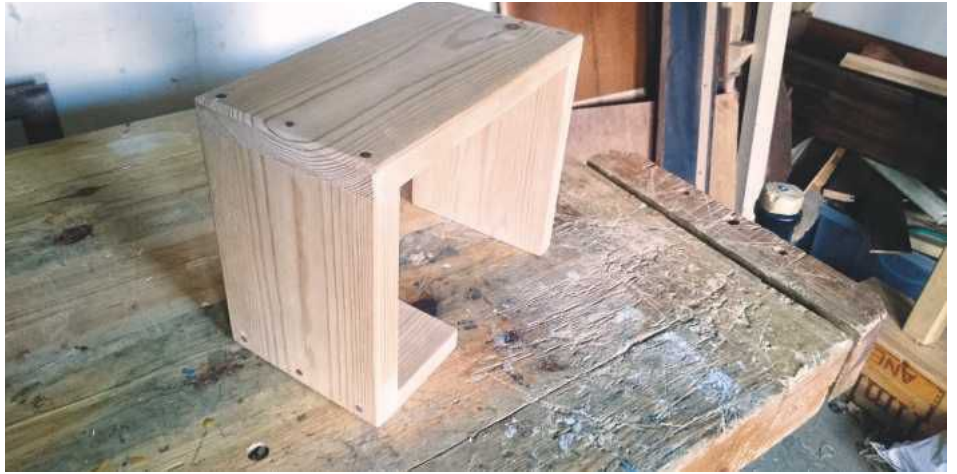
16 Using a flush cut saw to trim off the dowels



17 I mixed up some sawdust with glue and rubbed it into the gaps



18 Using a plane to chamfer the edges



19 All edges chamfered and sanded



20 The sofa arm table once finished with three coats of a hard-wearing varnish



21 The completed project is very stable in use



22 Once the adjustment was made to the inside edge, the sofa arm table was ready to go

Applying a finish

I applied three coats of a hard-wearing varnish to the sofa arm table in order to try and combat the amount of spills and scrapes it is likely to encounter during use (**Pic.20**). As the recipients have a two-year-old boy who seems to love using it as a car platform, I'm guessing it's going to need that varnish!

It was a fairly simple build and required a very slight adjustment when placing onto the sofa arm; I had to add more of a chamfer to the inside edge to make sure it didn't scrape the sofa arm material too much. Overall, I'm really pleased with how the project turned out and I hope you have a go at making your own version. **GW**

FURTHER INFO

If you'd like to see extra photos and videos of my projects as well as what happens in and around my shed, then give the Timber Anew Facebook page a like, and to see a video of this project being made as well as others, visit my YouTube channel: www.youtube.com/timberanew



Mendocino Lumber
Company woods circa
1870s, California
Photograph courtesy of
www.krisweb.com

Strengths & uses of wood

Peter Bishop takes an overview of wood's uses over time, as well as offering a peek at the future

Wood is a wonderful material that has been utilised since antiquity. The Egyptians valued the artefacts produced so much that they were buried with their owners for prosperity. They had little natural forest growth so the bulk of their timber was imported. These highly prized woods included cedar, cypress and box. Local woods, such as acacia and carob, were cut and used as the groundwork for exotic veneer facings. Apparently ebony was one of the most valued of these and was combined with ivory to create intricate decorations. The Egyptians had obviously mastered the skills of furniture making, and many examples of the use of the mortise & tenon joint can be found. Wood was also employed for sarcophagi, although the type of wood was dependent upon the wealth of the family involved, but most would be carved from softwood and then lavishly over-decorated with a multitude of figurative scenes.

Wooden structures

Use of wood in furniture, buildings and shipping progressed. In medieval times, a simple plank and panel structure emerged for furniture. Chests were hewn directly from logs and reinforced with iron, and as these developed they became more intricate with locking and pegged joints. Wall panelling was fixed to cover over rough brick or stone work, for example, and some, in oak, had plain framing with highly figured panels. Flooring developed to produce highly



An example of cruck framing in Leigh Court Barn, Worcester, England



An wooden Egyptian sarcophagus from around -1069 - 945 BC

decorative patterns, and timber-framed building took advantage of the natural shapes of the growing tree. Some of the oldest examples can be found in the European cruck frame buildings. A series of inverted 'V's are made from curved lengths of timber and these form the main, structural parts of the building. As techniques improved, timber-framed houses turned into an art form with many different shapes and panels contributing to the overall beauty of the building.

Out of necessity some structures were made entirely from wood. In Scandinavia, walls, floors and ceilings were, and still are, constructed in wood. Both because of availability and natural thermal properties. On other continents, where timber was abundant, different cultures developed a range of wooden houses on stilts. Some magnificent structures have been built. In Indonesia, for example, houses shaped like boats represent how important a role the boat plays within that culture for its survival. Other stilt houses enable the occupiers to build over water and marsh, thus making better use of the available materials and bringing them closer to their sources of food.

Wooden water vessels

The origins of international shipping are based on wood. Without trees to build boats, trading and migrations would not have occurred and, as an ultimate result, warships were built. Logs with their cores burnt out and shaped into dug-outs are still used in Africa. Simple North American canoes stretched birch bark over a wooden frame. In other cultures, bamboo formed the basis of simple crafts. Poles of bamboo laid over a sub-frame were joined by shaping and binding them in place. The Vikings developed clinker-built crafts using scarfed joints and planks to produce their slender, gracefully curved vessels.

Wood in engineering & transportation

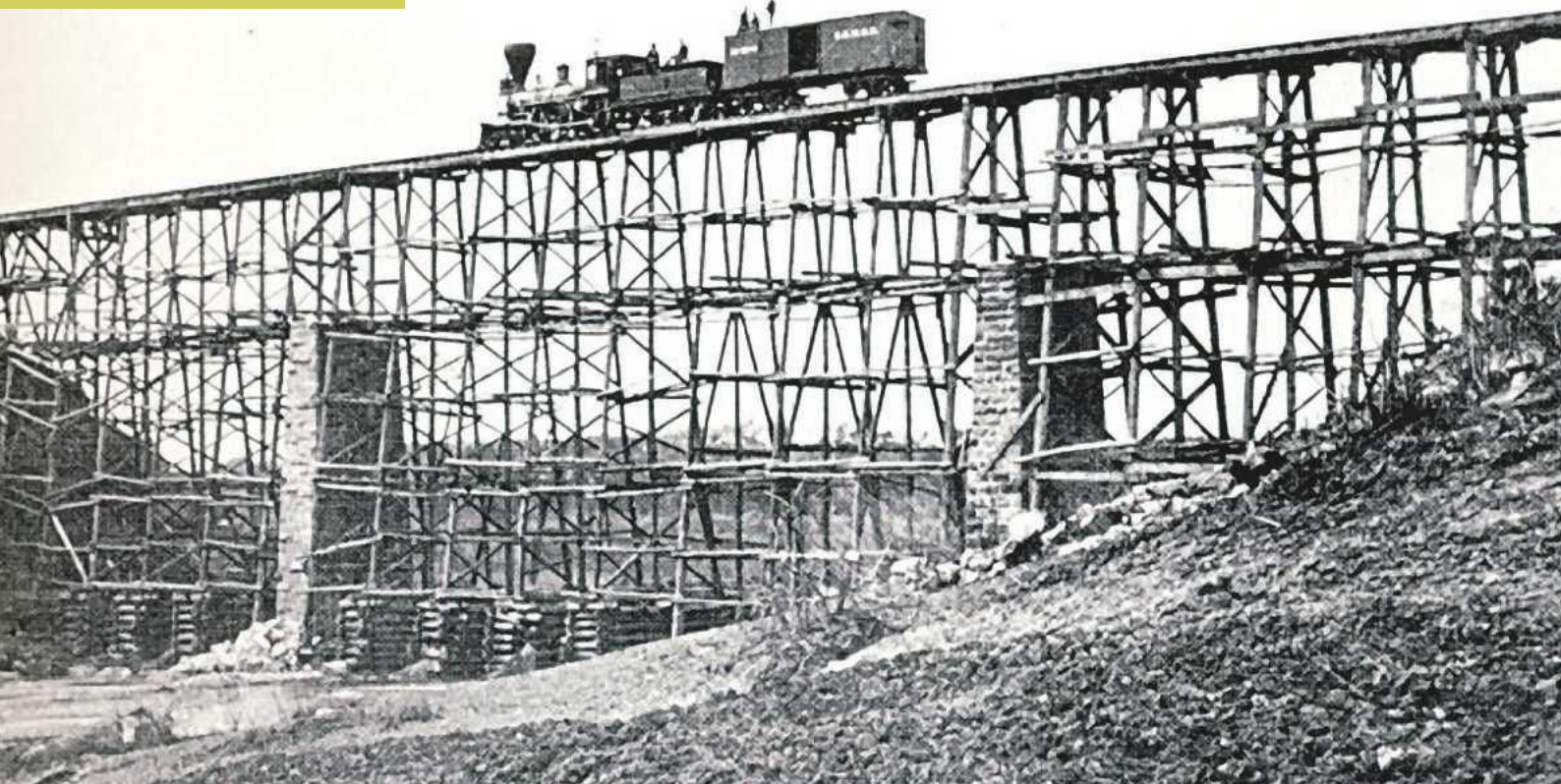
Wood has also been used in engineering to harness natural resources and exploit opportunities for development. Wind and watermills may have started out as simple structures but these developed into sophisticated production units for grinding, cutting and generating energy for other processes. Cogs and gears were first made from tight-grained woods such as apple, beech, holly or hickory, and as time moved



Examples of early plank boxes



An ancient Viking longboat



A wooden rail bridge



A stilt house in Indonesia



Burning out the core of a wooden canoe

on these were replaced with iron gears and shafts. With the introduction of steam power during the industrial revolution, wood-based designs slowly became redundant.

Wood has figured as a key structure associated with transportation: wooden lock gates in canals enable links to be made at different levels, and huge frames and door structures resisted the weight of both water and impact from canal boats. Oak was the favourite timber for this use with some more exotic ones like greenheart favoured when it became available. Engineers have utilised wood for the construction of bridges since first dropping a log over a stream, and gigantic log structures were built in North America during the expansion of the rail networks. They utilised the naturally available resources, building tiered log developments locked together up to eight levels high. Other engineers designed cantilever structures to bridge gaps across rivers and ravines. Simply put, if there was wood available and a job to be done, it could be used for it.

The future of wood use

Today we are challenged to ensure that our timber supplies are sustainable. In most cases, this objective is being met; however, in some countries the bludgeoning populations and demand for land to farm lowers the value of the natural forest products. When this occurs there is often a 'slash and burn' policy adopted, which we looked at earlier in this series. We must make sure that wood is valued and then it will be cut and used to its best advantage and, the key, it will then be replanted. The demand for wood and wood products

is huge, and our utilisation is becoming more efficient. This is demonstrated by the availability of laminated, solid wood products in both hardwoods and softwoods. There has also been a significant increase in the use of sheet materials, which use timber that would otherwise be wasted. MDF, sterling board and chipboard are fine examples. While we might not fully appreciate the aesthetic value of these products, we should try to use them in preference of solid wood if we can. Our ancestors have shown us how they used the best stuff as 'show wood' and any old stuff where it can't be seen. As long as the product is fit for purpose, this is a great approach.

I suspect you can tell I'm a bit of a wood enthusiast! The only limiting factor associated with its use is your imagination. Timber is so tactile; it feels good to work with, touch and look at. Let's try to use it as best we can and pass something on for the next generations to cherish. **GW**



Examples of laminated timber

NEXT MONTH

Peter takes a look at using veneers, the art of which has been refined over many centuries

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ROCKING HORSE REBIRTH

Deciding to rejuvenate an old family friend, **Shaun Newman** rescues 'Caroline' – an old rocking horse – from the basement and proceeds to give her a new lease of life

It was 1985 and I had recently started a new job in Bebington on the Wirral peninsula. I was returning home one evening and spotted a rubbish skip on the side of the road. As a keen woodworker, and I am sure I'm not alone among lovers of wood here, I could not help but peep in to see if there were any nice scraps of timber that may be useful. To my surprise there was what remained of a rather well-made rocking horse with its frame and some old bits of leather, a mane and some tail scraps, albeit in a dilapidated state. It was clear from the very first look that the horse had been expertly carved and the face had real charm, and just a touch of attitude. How could I resist?

I did not feel quite able to lift it all out and make off with stealth, so I nervously approached the front door of the house outside of which the skip was parked and knocked. A rather well dressed and elderly

lady answered the door, so I popped the question: could I take the rocking horse home to repair it, as our daughter had just passed the age of three and I felt sure she would love it.

The owner was truly delighted that I had taken such an interest, and that I felt confident I could do something to restore what had been an old favourite of hers. She told me she'd had the horse since childhood, and that she was pretty sure it had been made in Liverpool, although she was not sure when or by whom.

So, I loaded the bits and pieces into the car and went home. After a few weeks and a few coats of paint, and quite frankly quite a lot of bodging, the rocking horse was ready for use, and did it get some... it was hammered! Our first daughter was followed by another and then a son, and they all played and played with 'Caroline' as the



1 Caroline after 25 years in the basement



horse became nicknamed. Then, as Caroline, somewhat battered, fell out of use, she spent nearly a quarter of a century in the basement of our house without anyone giving her a second thought (Pic.1).

Back to basics

Then a couple of years ago our first grandchild was born, and when he became two I felt it was time to give Caroline a second chance. By now the internet was available so I began some research and found out a great deal about Caroline. It turns out that she was made in the early 1950s by a Liverpool firm named Collinson. This firm had a proud history, beginning trading in 1836 and only closing in 1993. Luckily, although the company no longer makes rocking horses,



they still respond to enquiries about their former products and have a website which explains something of their history, not least, for example, that Queen Victoria once visited their workshop and was very impressed. Their response to my enquiries was extremely encouraging and informative.

Having taken a long look at the state that Caroline was now in, I decided to start virtually from scratch this time and to restore every single part. In a copy of *GW* I spotted an advertisement for rocking horse parts from The Rocking Horse Shop in Fangfoss, Yorkshire. What I needed most was a new mane and tail and some daisy head upholstery nails, all of which they were able to supply promptly, and with helpful instructions on how to fit the mane.



> 2 Sanding the frame and cleaning up



3 Polyurethane varnish provides a tough finish



4 A dovetail saw is used to cut a flat part to the broken ear



5 The back edge is cut with a small hacksaw

Undercarriage, body & tail

I began work with the undercarriage, which was made from pine, and had flat-sided pillars that taper from the base upwards, characteristic of Collinson horses. The job required a complete rub down with coarse, then fine abrasives (Pic.2) and three coats of polyurethane varnish. The varnish brought the colour out beautifully and made me feel I was on track to recreate something really quite special (Pic.3).

The body of the horse itself was in quite a good state, but one ear had been almost completely broken off. This needed to be sawn down to offer a flat area to which a block could be glued to make a new one. This was first done with a dovetail saw (Pic.4), then a small hacksaw (Pic.5). Once the glue had cured, the ear could be re-shaped (Pic.6), first with a Japanese carving knife (Pic.7) and then smoothed with fine abrasive (Pic.8).

The next task was to prepare a channel into which the mane could be pushed, which seemingly is the approach favoured by The Rocking Horse Shop, and was explained in a leaflet that was sent with the parts. The mane arrived with a strip of thick linen

tape sewn along the middle and it is this tape that needed to be pushed into the channel later. The channel is around 12mm deep and wide and was first prepared with a dovetail saw (Pic.9) before being finished with a sharp paring chisel (Pic.10).

In similar fashion, a hole was prepared into which the tail hank had to be put. The operation is not as painful as it looks (Pic.11)! The hank is bound at one end and cut off square, with a diameter of around 19mm. The hole to receive it was cut to a depth of around 25mm. When the tail was dry fitted, I could gain a good idea of how things would begin to shape up later on (Pic.12).

Painting the body & hooves & creating the eyes

Before any of the hair or hardware were fitted, the body of the horse had to be well prepared and painted. I chose to use satin cupboard paint as it is extremely durable and gave a pleasant, even glow to the whole of the carcass (Pic.13).

The dappling presented me with more of a challenge, but luckily my wife is a competent artist and undertook the task



6 A small pine block is glued into place



7 The ear is carved with a Japanese marking knife



8 Once smooth the new ear blends in well



9 The channel for the mane is first sawn out



10 A 12mm paring chisel is used to hollow the channel to the correct depth



11 Ouch!!

for me. The first thing to do was to prepare a dappling stick, which is a length of 22mm dowel with a flat disc of sponge attached to one end. This sponge was then covered with a piece of thick cotton gauze and dipped into the paint. The dappling is created by making circles that link together in a rondel-like pattern (**Pic.14**).

The eyes represented a challenge as well, but a fine brush and a steady hand created a very realistic looking shape, which added enormously to the appeal of the face of Caroline (**Pic.15**). At the opposite end, the hooves were painted in satin enamel by Blackfriars, which seemed to be a good choice (**Pic.16**).

Making a new saddle

Once the mane had been pushed into the channel, it had to be pinned with gimps to ensure it would remain in place. I also added a thin film of glue as I recall from my first attempts to attach one, it pulled off very easily as our young daughter lost her balance and grasped it for support (**Pic.17**).

Luckily the original leather work had survived not only the time of the original owner, but also the extensive use it had endured from our three children. A tin of shoe polish and a bit of elbow grease brought the bridle and reins back to life (**Pic.18**), but sadly the saddle was too worn to use.

I therefore set about finding enough leather to create a new one. An old handbag left by my late mother came to the rescue! It was two tone, and made from two different thicknesses, which was ideal. I was able to use the thinner material to make the underpart of the saddle and the thicker part for the seat (**Pic.19**). The daisy head



12 A dry fit of the tail looks a little more comfortable



13 The cupboard paint is applied



14 The dappling begins



15 Establishing the shape of the eye is tricky



16 The hooves are added



17 Pushing the mane into place



18 The leathers are cleaned up and enhanced with shoe polish



19 Cutting the saddle parts from an old leather handbag



20 Daisy head upholstery nails add a touch of authenticity

nails from The Rocking Horse Shop (Pic.20) helped to create an authentic look when the saddle was pinned into place (Pic.21), but to get the fully upholstered look a piece of firm foam around 6mm-thick was placed under the seat. To get an even appearance all over, opposite sides were alternately nailed into place – a task that reminded me of replacing the cylinder head on my 1952 Morris Minor after a gasket had blown...

The bridle and other leather strips were put into place with screws and extra-large

drugget pins (Pic.22). The central pin in the breastbone is 30mm long and has a 16mm head.

Completing the makeover

When I did the first makeover of Caroline, I found some steel stirrups in a junk shop but they proved too heavy and chipped paint off the inside edges of the legs and frame, so I decided to make my own from 17mm ply cut out by means of a jigsaw (Pic.23) and then a bandsaw (Pic.24), before spraying

with antique gold paint. The stirrups proved to be easily strong enough and did not produce the damage made by the steel ones.

Once the stirrups were completed, it was then time to consider putting the horse onto the underframe. Before this could be done I stripped and repainted the swing irons with satin black enamel (Pic.25) and once everything was assembled, the restoration was complete (Pic.26), then our young grandson Elliot could finally have a go – as you can see, he loves Caroline (Pic.27)! GW



21 The leather must be kept firmly in contact with the contours of the body while nailed down



22 The bridle is screwed into place



23 The inside shape of the stirrups is cut out with a jigsaw



24 The bandsaw copes with the outer profile



25 The swing irons are painted with satin black enamel paint

MATERIALS & SUPPLIES

All restoration materials for a project similar to this one can be obtained from The Rocking Horse Shop – www.rockinghorse.co.uk

Further information on Collinson rocking horses can be found here – www.collinson-rocking-horses.co.uk



26 The restoration is complete



27 Elliot enjoying his first ride

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"The Mafell MT55 18M bl plunge saw has so many brilliant features including some that are yet to be seen on other competitor models. It makes this saw not only one of the best on the market, but shows the thought and process that has gone into designing this product which is really a step above the rest. The best feature on this saw is the scribe setting. This is common to others....but Mafell have taken this to another level....(allowing) the cleanest cut possible on the top surface as well as underneath. The premium quality plunge saw....is a joy to use. (It) is one of the best you can buy and I would highly recommend it to professionals especially, due to it's unique features and versatility."

Jamie Smith. Test Report. Good Woodworking. February 2018.



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statue of Ptah-Sokar-Osiris.



Hornedjitef's cartonnage chest.
Photo: Rijksmuseum van
Oudheden, Leiden.

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If only they could talk...

David Moody's observations of ancient Egyptian woodworking, as depicted by various museum artefacts, have given him much food for thought

It is easy to think that in this day and age, our ability to turn out quality woodworking has never been better. We have all sorts of power tools for cutting, jointing, trimming, turning, moulding, not to mention all of the new-fangled CNC machines, which have opened up a wide range of new possibilities.

If you read my 'Woodworking Adventures' series last year, then you'll know that I don't possess most of those fancy tools, but even what I do have must be better than what my counterparts might have had, say, 2,500 years ago. Or, is it?

Ancient Egyptian craftsmanship

My wife and I, with my parents, recently enjoyed a two and a half week holiday to the UK, during which time we paid a visit to the British Museum. Talk about dreams fulfilled. To be able to see so many examples of ancient craft left me gobsmacked, especially the section on ancient Egypt. The first thing that grabbed my attention was the stool shown in **Pic.1**, which probably dates from around 1300-1500 years BC.

I stopped, in awe of the workmanship that went into this piece, and tried to imagine how I would try and reproduce it today with my current set-up. I might be able to make the stool, but would I be able to reproduce it to that quality standard? A close-up view of the top of the piece gives some idea of the joinery that was used, which appears to be a lapped tongue with a dowel pin, and I'm guessing that something similar was used for the sides. However, when you examine their sarcophagi and statues, the jointing methods used become clearer, and appear to be consistent.



1 A stool, which probably dates from around 1300-1500 BC



2 Other examples of Egyptian furniture from around the same period, which include a folding stool (left) and a beautiful chair (right)



3 & 4 Textbook examples of Egyptian joinery. Some of the 'dominos' are broken on top; this is perhaps due to the dowel pins not giving way and tearing to 'dominos' when opened, perhaps by force. At least that's my non-expert interpretation of what I see!



5 Detail of the holes that dowel pins would have been driven through to lock down the lid



6 Two of the wooden statues on display. Notice how the arm (not present) was joined to the body



7 Dowel pins appear to have been used to attach the separately carved hands to the lid

Joining methods

One of the first things you notice is that they were nested. Typically there is the large outer sarcophagus made of very heavy wood, then an inner one made of much thinner, though still quite heavy, wood. Finally, the innermost part is what we all think of as a sarcophagus: the part that is beautifully decorated with hieroglyphs and suchlike, and which contains the mummy.

The second thing that can be noticed is the joinery. The lid of each nesting is joined to its base using pieces of wood, similar to detached tenons. Matching 'mortises' have been carefully cut into both the base and lid, and there is one final detail that binds it all together: dowel pins (**Pics.3&4**). Doesn't this remind you of the modern technique of domino joinery? Here we are, 3,500 years down the road, and we are still using joinery methods that were developed by people in ancient times, with who knows what kind of ancient tools, or more to the point, people who did not have all the fancy power tools that we enjoy today to do the same job. Quite sobering, I think!

You might be thinking now that this is fine for joining lids onto caskets, but how did they actually join all the pieces of wood together to make the lid, and the base? Well, that I cannot tell you for sure, but if we hold onto the thought that consistency is better than mix-matching methods, then have a look at **Pic.6**. The same basic domino joinery method was used to attach the arm to the body. I think it is fair to assume that this was standard practice in ancient Egypt, and that quite a lot of their joinery was carried out in the same fashion.

Dowel pins

They appear to have made good use of dowel pins in other situations as well. The lid of a sarcophagus must have been made of many separate individually carved components, as **Pic.7** illustrates by the fact that the hands are missing. Close observation shows that

dowel pins appear to have been used to attach the hands. Maybe there is hope yet for IKEA flat-pack furniture!

Carved figurines

The ancient Egyptians clearly had a passion for making figurines and toys of just about anything that was around them. I am only going to feature here one example of their work: a farmer ploughing a field behind two oxen (**Pic.8**), and this is one of many examples of funerary models portraying everyday Egyptian life. When you look closely you can see how the legs of the oxen are neatly cut into the body, and then pinned with dowels. Perhaps this is the base standard of Egyptian joinery, and that half-laps, or dominos (as we call them now), extend the usage of dowel pins in their most practical application as needed?

Egyptian methods through the ages

As we travelled around the UK we saw many buildings constructed in the Tudor style, and as I was taking photos of some beautiful examples in Stratford-upon-Avon, I couldn't resist a detail shot of one of the buildings, which showed – guess what – dowel pins being used to lock together what appear to be mortise & tenon joints in the framework of the buildings (**Pic.10**). 3,000 years after the Egyptians perfected the technique it was still being used in late Medieval and Tudor times in England, and most likely elsewhere, too.

Those ancient people might not have had all the fancy tools that grace our workshops today, but what they did have was creative and inventive thinking, which enabled them to turn out some truly stunning work. In my 'Woodworking Adventures' series, I challenged you not to allow yourselves to be restricted by what you do or do not have, but to let what you do have open your minds to inventive and creative thinking. My casual, non-expert observations of ancient Egyptian woodworking, which I offer to you here, have given me much to think about, and I hope they do the same for you. **GW**



8 One of many stunning examples of ancient Egyptian woodcarving



9 That's me, standing in front of Shakespeare's Tudor-style house



10 An example of Tudor joinery – I wonder if they perhaps asked the ancient Egyptians for advice?

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USING THE TREND ADJUSTABLE TRADE LOCK JIG

Allowing you to achieve fast, clean and accurate results on a multitude of doors, the Trend Adjustable Trade Lock Jig covers an entire range of locks without the need for a set of faceplate and case inserts

Fitting locks can be a time-consuming job and some of the high priced doors available require care to ensure the fit of the lock case, as well as the faceplate, are uniform and match squarely and true to the face for perfect operation.

A lock jig will not only speed up the task but also ensures consistency, whether as a one-off or on a run of doors. The Trend LOCK/JIG/B, also known as the "Trade" jig, will cover an entire range of locks without the need for a set of faceplate and case inserts. It has adjustable plates and stops for both the length and width

of the lock case as well as the faceplate, so it can be adjusted for not only common locks but also more obscure ones.

The jig is used with a 30mm guide bush and long reach 12mm cutter; the long reach cutter is required to rout out the waste for the lock case so a bigger router such as the Trend T10 with 1/2in collet capacity and 80mm plunge depth is required.

The faceplate can be created using a smaller router but all the cuts are achieved using the same 30mm guide bush and 12mm cutter combination, so it's easier to keep the setup to one router.

Setting up the jig is simple to achieve: there's a long aluminium clamping angle bar on the underside of the jig that has two positions to cover doors from 30mm to 80mm thick while retaining a central position on the door edge. **GW**



1 To set up the jig you first need to determine the centreline for the door edge. This can be done in two ways: a centreline can be marked on the door and the jig adjusted to this line. This is achieved by slackening the two retention screws in the top jig plate, which allows the jig to slide back and forth on the aluminium clamping bar. The jig can then be centralised by aligning the centre marks on the jig plate to the marked line on the door



2 Alternatively, you can also measure the thickness of the door and slide the clamping bar along to a series of metric incremental scribe lines on the underside of the jig. As well as the metric increments, there is a series of scribe positions indicating common door thicknesses, which allow for fast setting of the centre position



3 The lock case and faceplate thickness are set with a pair of stepped setting blocks that are supplied with the jig. The blocks have four incremental steps, with each step covering two common lock case thicknesses of 16mm and 19mm, and common faceplate widths of 22.5mm and 25.4mm. The blocks are very handy for making quick checks on the lock case thickness...



4 ... and they can also be used to check the faceplate width. If the block tallies up with the lock, they can then be used for fast setting up of the jig



5 The blocks are pushed into the slot openings in the jig, sliding down until the correct width on the block is in line with the white sliding jig inserts. The inserts are then slid up to the blocks to set the width of cut to be made



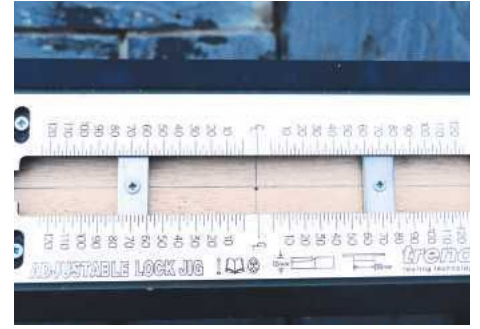
6 With the plates tight to the blocks, tighten off with a screwdriver. The white sliding inserts are designed to allow for the offset ratio between the cutter and guide bush, so there is no need for any maths or measuring to get the fit correct when using the setting blocks



7 To set the lock length, the adjustable length stops are positioned against the etched scale on the white sliding inserts. Measure the lock case and allow an additional 10mm overall to account for the radius ends of the mortise once routed. This prevents the lock case from being too tight for length. This lock is 110mm long so the stops are set to 120mm overall



8 Slide the stops up to the correct position and tighten off. The scale on the insert allows for the guide bush and cutter ratio, so the length stops are simply positioned to the correct mark and secured – in this case, each stop is set to 60mm to give a 120mm overall cut once routed



9 Determine the position on the door for the lock, ensuring that it aligns with the lock block on a hollow door and doesn't remove a structural tenon on a solid door. Mark the centrelines as reference, then secure the jig to the door with a couple of clamps



10 The router is set up with a 30mm guide bush and 12mm diameter cutter. The Trend TR37X1/2TC cutter is designed to rout deeply enough to remove the waste for a standard 2½in sash mortise lock



11 Position the router onto the jig, plunging until the cutter touches the surface of the door, then lock the plunge. Using the lock as a template, position the lock onto a turret post and adjust the turret stop to the depth of the lock case and back off the post by a few millimetres to allow for clearance; this will ensure the lock case doesn't foul on the bottom of the mortise once it is fitted



12 Make sure the door is held securely before starting work and then make a series of plunge cuts to remove the bulk of the waste



13 Next, run the router along to clean out the slot in a series of passes to ensure the router and cutter aren't overly strained. The lock case mortise is now complete, so the jig can be removed and set up for the faceplate



14 Adjust the insert plates to the correct width to suit the faceplate width. If the faceplate matches the setting blocks, these are positioned into the jig as before and the white insert plates slid up to the blocks before being tightened off



15 To set the length, measure the faceplate of the lock accurately and proceed to halve the measurement



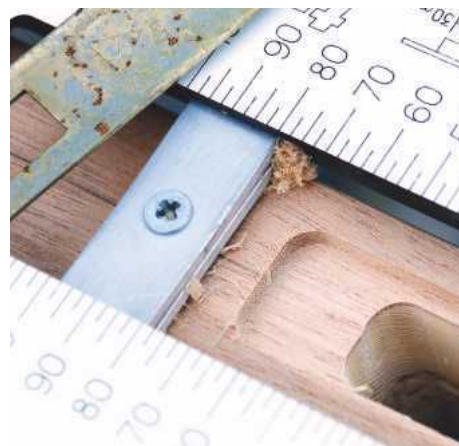
16 Move the stops up to the corresponding position on the inserts and tighten off, then reposition the jig back on the door and align it with the centreline marks



17 Place the router on the jig and plunge the cutter to the surface of the door, then use the lock as a gauge to set the turret stop to the faceplate thickness



18 Rout the faceplate to remove the waste, ensuring the guide bush runs around all the set positions in order to clean out all the waste



19 Once routed, the corners will be left rounded from the router cutter



20 Remove the jig and square up the corners with a chisel. The Trend Corner Chisel (ref. C/CHISEL) is designed to do the job quickly and easily, placing it into the routed recess and striking with a hammer to remove the waste



21 Drop the lock into the mortise to check the fit. To ensure you can remove the lock easily, shoot the bolt to its locked position first so that you have something to pull on to remove it



22 To drill the door for the keyhole and spindle, measure the backset of the spindle and keyhole with a square. It's common for a sash lock to have the spindle and keyhole centres in line with each other with identical backsets



23 Mark and transfer the position of the keyhole and spindle bar to the door



24 Select suitable drill bits for the spindle and keyhole. The Trend Snapy SNAP/TH2/SET 60-piece set has a complete range of drills and screwdriver bits, which are ideal for door hanging and other work



25 Drill the holes through one face of the door for the spindle and repeat from the other door face to prevent the face veneer from breaking out. Or, use a piece of scrap timber on the rear face of the door and drill straight through



26 Clear out any residual debris in the mortise, then slide the lock in and secure, drilling the pilots with a hinge self-centring drill bit guide to ensure the screws sit centrally



27 The resulting finish will leave the faceplate let in clean and flush to the door edge, ready for adding door furniture of your choice



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FITTING A MULTIPPOINT SECURITY LOCK STRIP

Using the **Trend Adjustable Trade Lock Jig** and various cutters, multipoint lock strips can be added with ease to leave a neat and unobtrusive result

Multipoint lock strips are standard in UPVC doors and offer exceptional security by having various locking bolts along the entire closing stile of the door. These strips are now becoming commonplace in wooden doors as well, meeting insurance standards for external doors and replacing the British Standard 5 lever or cylinder locks required for insurance purposes.

Once fitted, the locks are neat and unobtrusive, but they are quite complex in terms of how they are fitted as they have a stepped profile for the strip itself, plus the series of lock cases along the strip need to be let in accurately so that the locks operate correctly. **GW**



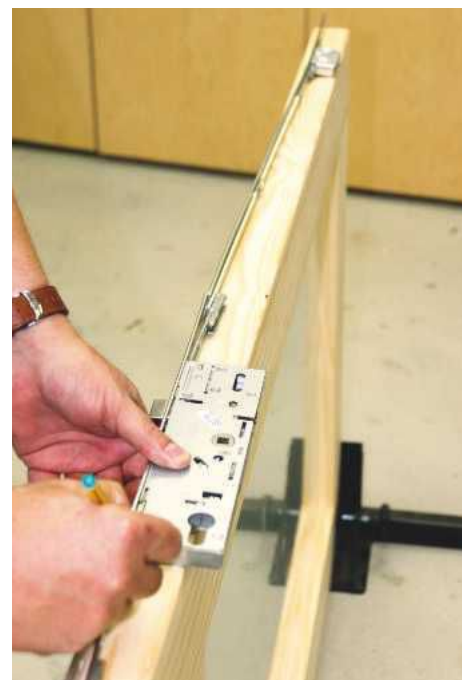
1 Trend has recently introduced two new cutters to speed up the process. The 15mm diameter x 63mm 4/09X1/2TC cutter is used to rout the lock case recesses and will cut deeply enough for the main lock case as well as the auxiliary shoot bolt cases



2 The 34/51X1/2TC cutter is then used to rout the full length 'T' slot for the strip, and has a bearing guide to set the correct depth to sit the strip flush with the door edge

3 A suitable 1/2in shank capacity router, such as the Trend T10, is required for both cutters.

Secure the door on its edge in a suitable holding device, such as the Trend Door Holder Stand (ref. D/STAND/A). Mark out the lock case positions by laying the assembled lock strip in position on the door edge, then mark the outer edges of the lock cases, allowing around 6mm at either end of the cases to account for the cutter radius



4 The lock case mortises can be made using the router side-fence for support and guidance but for speed, and also to avoid mishaps, the Trend Adjustable Trade Lock Jig (ref. LOCK/JIG/B) is ideal and can be adjusted to fit all the lock cases on the strip quickly and easily. Using the Trade Lock Jig, the sliding inserts need to be adjusted to the 30mm guide bush to restrict it and keep the cutter central to the door edge



5 Moving the plates inwards until they align with the top plate aperture sets the jig for a 30mm opening. Check the guide bush runs freely along the entire length without binding and without too much free side-to-side movement; it needs to be a fraction of a millimetre wider than the guide bush to allow it to run smoothly



6 Measure the lock case, allowing an additional 12-15mm overall to compensate for the cutter diameter, then set up the length stops. Check the lock against the jig to ensure the length is correct and clamp to the door, checking the jig is central to the door edge and in line with the initial lock position layout lines



7 Set up the router with the 30mm guide bush and insert the 15mm diameter router cutter, ensuring it is inserted to the 'K' mark on the shank, then tighten off



8 The router is then placed onto the jig and plunged until the cutter bottoms out on the door edge. You can then lock the plunge to secure the setting



9 Using the multipoint lock case as a gauge, position it against the turret and set the depth/height post to the case, and then back the post off by around 6mm to allow for clearance at the bottom of the lock when it is fitted



10 Rout the lock case in a series of plunges along the jig and clean the remainder by moving the router backwards and forwards



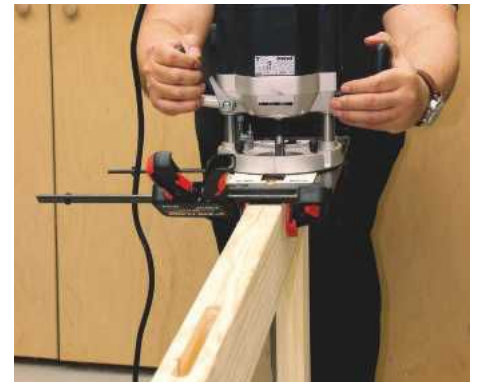
12 Reset the lock jig by adjusting the length stops to the correct length for the other lock cases and clamp in the correct position, aligning to the marks made previously



13 Set the depth of the lock case in the same way, using the turret and depth post to restrict the plunge



11 Clear the waste from the mortise and remove the jig to check the fit of the lock into the mortise



14 Rout the mortise in the same way as previously, in a series of plunges, clearing the waste, then repeat for the remaining lock cases



15 Fit the 34/51 cutter to rout the lock strip, paying attention to the 'K' mark and tighten off. The door needs to be laid flat to use this cutter, so lay it on trestles or a suitable support. Make sure the door won't slide around as you work, securing with clamps if necessary. Set the plunge depth of the cutter until the widest part is aligned with the mortise



16 Make the cut at a steady rate, ensuring the guide bearing remains in contact with the edge of the door at all times



17 Check the fit of the locks by dropping into position and securing to leave a snug fit, perfectly flush with the door edge

FURTHER INFO

The Trend 4/09X1/2TC two-flute cutter (15mm diameter x 63mm cut with a 1/2in shank) is currently priced at £38.33, and the Trend 34/51X1/2TC guided multi lock cutter is priced at £65.78. To find out more about these and other specialist jigs and router cutters in the range, see www.trend-uk.com

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MATTHEW PRINCE

Matthew Prince is a retired corporate photographer who now works on his own personal woodworking projects from his custom-built workshop. Having been unable to install solar panels on his house, Matthew decided to convert his shed into a solar ramp as well as a workshop. Since a young age he has had a desire to work with wood and retirement has given him the perfect opportunity. Matthew commented: "At 16 I went to a working camp in France in order to learn French and while working on a chateau, I discovered my passion for masonry and woodworking."

K3 Winner panel saw

In early 2017, Matthew completed his workshop with a K3 Winner panel saw from the Felder Group's Hammer range. Talking about his new machine, Matthew said: "I had a previous table saw and when I cut my first pieces of wood, they were all 'wibbly wobbly' – the accuracy just wasn't there. I wanted a machine that was sturdier and bigger. There were a few second-hand ones I could have bought, but they were wrought iron lumps of weight – there was no way of moving them and I am quite restricted in terms of space. I was looking online when I came across Felder and they came back and answered all my questions with great patience. What I absolutely loved about this machine is the fact it has the wheel, which makes it easy to turn and move the saw."

Exciting projects

Now that Matthew has the perfect panel saw for his workshop, he is free to work on the projects he's wanted to complete for years. "I'm currently building a Tardis for my son and creating a hedge to hide another shed, so that it will be bigger on the inside than it is on the outside. It's made up of 20 pieces per side, all cut at angles, all of which have to fit together beautifully. It's a joy to work with a machine that is so precise where you're not fighting the equipment – having the equipment working for you rather than against you is a definite bonus. It's just solid, it's there, and you can rely on it." GW



FIND OUT MORE

See how a range of machines from Felder can benefit your workshop at www.felder-group.co.uk or call **01908 635 000** for more information. You can watch the full testimonial on YouTube – simply visit www.youtube.com and search for 'FELDER GROUP UK TV'

AROUND THE HOUSE WITH PHIL DAVY



It's said that moving house is one of life's most stressful experiences, though I'm not so sure... Sometime later than I'd envisaged, a new home is on the horizon at last, complete with garage and workshop. Clearing my existing 'shop has been a challenge to say the least, with hand tools carefully sorted and packed away into crates and toolboxes. That was after shifting a large quantity of timber into a shipping container as a temporary home. There are still a couple of machines to move, just about manageable when the rental van has a tail lift.

The logistics of dismantling benches, sorting, van rental, loading and transporting equipment and materials has made the actual house move relatively straightforward. Ahead are likely to be more sleepless nights planning a new workshop layout!

OUT & ABOUT:

WESTONBIRT WOODWORKS: Chairmaking course



Building his third Windsor chair is just another challenge for Paul Palmer (left), who is completely blind. Westonbirt Woodworks tutors offer excellent support when it's needed

Taking up a new woodworking discipline is often demanding. Many of chairmaker Paul Hayden's students have never handled woodworking tools before, so the prospect of making a Windsor chair in six days is both exciting and daunting. But how do you cope with such a project when faced with a life-changing disability? What if you're completely blind?

For ex-army major Paul Palmer, this was yet another challenge since losing his sight back in 2010. When I met up with him he was building his third chair on the popular green woodworking course at Gloucestershire's Westonbirt Arboretum. I had a hint of his unexpected humour when he greeted me

with 'You're looking well!' We chatted over a cup of tea and ginger cake provided by his wife, Pauline. I should point out that food is an important element of the course, with participants providing endless homemade goodies. A daily highlight is the lunchtime break, with sausages sizzling over an open fire and jacket potatoes in the kiln. And, of course, the kettle is always on the boil.

But back to Paul P, who related his amazing story to me. With his chair nearing completion, he was mortising the back spindles when I caught up with him.

Blind Veterans

After 30 years in the army, including stints in Northern Ireland and the first Gulf War,

Paul had become a major in the Royal Logistics Corps. Leaving in 2002, he then worked in the Middle East before finally retiring in 2009.

'We bought a motorhome to travel around Britain. We went for one trip before starting to lose my sight in November 2009. Four months later I was totally blind, so we had to sell the motorhome,' he laughed.

After nine operations on his right eye and five or six on his left, the specialist finally told Paul there was nothing more that he could do. He would be signed off as blind. In typical fashion, Paul responded: 'I asked if that meant I would get a free black labrador? The specialist had no sense of humour as he actually said, you realise not all guide dogs are black... I replied, they are when you're blind!' Paul didn't get the dog, however.

'I prefer to use a white cane and can get myself around with no problems at all. I can walk around the Arboretum on my own as we used to come here before I was blind, so I know the layout. If I keep going in a straight line, then I'm going to do a big circuit. I've never been lost here yet!

Paul is philosophical about his disability and is an enthusiastic member of Blind Veterans UK, a charity that offers both physical and emotional support to ex-service people and helps them get back on their feet.

'I'm diabetic, diagnosed in 1995, though I didn't get the proper treatment. But these things happen and you can't just sit there and say, well, that's me. I suppose I did for the first couple of months,' he reflected.

'You know, I'll wait for the big black taxi to arrive, they'll put me in the back and take me away. But once you come out of that mindset you think no, I'm sure this is a can-do thing.



Adjusting leg tenons so they fit tightly into the seat mortises, assisted by tutor Pete Murray

Blind Veterans make sure you don't sit around. They're very pro-active in making sure people are well cared for. If they need any help it's given to them,' Paul informed me.

Westonbirt Woodworks

Set in a courtyard just below the stunning Stihl Treetop Walkway, Westonbirt Woodworks is a fantastic location. On a beautiful, sunny autumn day with smoke drifting across the yard, it's hard to imagine anywhere more idyllic for such a course. With facilities for up to 10 people at a time, participants travel from far and wide. When I visited, two or three were local so could return home at the end of each day. Others were camping in a motorhome, while most stayed in local B&Bs.



Chairmaker Paul Hayden explains how to mark the stretchers to length

Paul H has an excellent team of tutors to assist him, including Pete Murray, Ralph Kingscott and Tom Walter. All are experienced chairmakers and happily share their skills with the group. Pete was overseeing Paul P's mortising procedure during my visit.

To help guide Paul P across the courtyard an overhead tramline had been rigged up. This helped him to find his pole-lathe, plus those vital tea-making facilities and loo without having to rely on others for assistance. But just how did Paul P end up on a green woodworking course?

'My wife and I were taking the dog for a walk in the Arboretum and took a short cut, as her knee was hurting. We came past Silk Wood Barn (where Paul H used to work)



Hammering the two outer spindles snugly into the seat

and there was a course running. Paul H asked if he could help me, so I explained I was blind and just wondered what was going on. He showed me around – a couple of guys were working on seats at the time. Then he sat me down on a sawhorse with a spokeshave and piece of wood and encouraged me to have a go. I got it almost round, though not completely,' he remembers.

Paul H had never had anyone blind on a course before, though agreed to let Paul P give it a try. Paul P resumed the story: 'He said I'd need to bring someone sighted as there would be sharp tools, so I took an ex-army buddy. I didn't think I'd finish a chair in six days, but Paul H told me not to worry, adding that I could come back and finish it off on another course if necessary. Once I got started, I made the first chair on the sawhorse, doing it all by hand – legs, spindles, stretchers, everything.'

Did you manage it in a week, I asked? 'Yes, including the seat. I didn't feel safe using a pole-lathe. For some reason I had this vision of the chisel flying off and sticking in someone, which I didn't feel was quite fair!' So presumably this chair had quite a rustic feel? 'Yes, fairly rustic, but Paul H was happy with it, plus my daughter, which was the main thing. I obviously needed help drilling the mortises for the tenons. I could possibly do those on the seat, but not the others



Having previously been on the Westonbirt course, Jack Williamson works on a more advanced continuous arm Windsor chair



Pete explains to Paul how the grain of the carved seat resembles a map's contours



Once he'd got the hang of it, mounting a spindle on the pole-lathe and winding the string is easy enough for Paul



Checking a tenon diameter: 'It's close enough for government work,' laughs Paul P

because you're drilling into the back of a very thin piece of wood (the comb). You've only got to be slightly out and you've ruined the whole thing. So I'm now on chair three,' Paul P announced proudly.

Chairmaking challenges

As he was working on the seat, Paul P wanted to know what the grain of the timber was like. Paul H described it as being similar to the contours on an OS map. Taking Paul P's hand he moved his fingers across the seat, describing the change in colour from blonde to darker wood. So what did Paul P find was the hardest part of making a chair? 'It's been drilling the mortises. You obviously need someone who knows what they're doing with you. I use the drill, but with no electricity

on site it's all done by hand. It's just making sure mortises are being drilled at the correct angle. That was the biggest challenge for me, followed by using the pole-lathe. Once you get used to that machine it's quite easy.'

I'd watched him earlier threading the string around a spindle. I suggested he was obviously quite confident doing that. 'Yes, once you're shown how to do it. There have been a few times when I've put something on the lathe and started going up and down with my foot and found it's not moving! What's wrong with this, I thought? Ah, perhaps you need a string on the end of it!'

Sense of humour

I'd heard about the challenges that Paul P faced, but what was it like for the tutors

to work with a blind person? Pete Murray elaborated: 'Probably his terrible sense of humour! There are a few things, but mainly trying to ensure accuracy of joints, because they've got to be good and tight. The artistic stuff, such as making the turnings look good, is easier as there are more tolerances than when making solid joints. You think of different ways to do the things which most people can do by eye,' he reflected.

Giving up

Paul has taught chairmaking at Westonbirt Arboretum for around 20 years, with well over 2,000 participants completing chairs under his tuition. Had anyone ever given up on the course, I wondered? 'Once. I had a retired chap who was spending all day in front of the telly, with fags and beer and on the phone to his bookie, watching the racing on Channel 4. His family thought he should get out more and bought him the course as a gift. He did two or three days, then thought where he actually wanted to be was back in front of the telly! So he went home, but that was the only one,' Paul grinned.

Considering the techniques involved when building a chair, did Paul H wonder how the team would cope with a blind person? 'No, actually. I just thought it had to be completely do-able. The problems are relatively simple, we just had to solve them. For example,



Using an adze to hollow out an ash seat blank. Many participants have never used woodworking tools before, let alone attempt specialist chairmaking techniques



Paul lines up the back spindles against the comb by feel. Not easy for someone who is completely blind!



Paul Hayden helps Paul P to mark the ends of the comb



Paul's third chair nearing completion

setting up a tram line for him so he's completely independent. He can get around the yard, get to his cup of tea, making sure that nobody puts anything in his way, those sort of things because he's so independent. Paul P is not embarrassed about asking for help when he needs it, which takes some of the pressure off. He's extraordinary.'

All age action

So what are Paul P's thoughts about the course? 'What we wanted was a chair that I'd made, not someone else's because I'd



The kiln for drying green timber components and, more importantly, cooking the lunchtime spuds

been unable to finish it. So that's what I did and thoroughly enjoyed it. It's a fantastic course. If anyone thinks they can't build one because they're blind, I'm sorry to tell them but they can. If I can do it, they can.'

If you enrol on a chairmaking course with Paul H, don't expect to fit in a stroll around the Arboretum while you're there. It's pretty full-on, crammed into six packed days. Don't think you'll be too old, either. On one of my visits there was a lady in her early 80s building a chair, but the oldest was apparently in his 90s! **GW**

FURTHER INFO

To find out more about Paul Hayden's green woodwork and Windsor chairmaking courses at Westonbirt Woodworks, see www.greenwoodcourses.com

Blind Veterans UK
www.blindveterans.org.uk

Westonbirt Arboretum
www.forestry.gov.uk



A tramline across the courtyard helps Paul find his way to and from the pole-lathe and tea facilities



Sausages sizzling nicely above the fire ready for the lunchtime break



Harry Hayden, guardian of the tool store and everybody's friend...



LETTERS & MAKERS

LETTER OF THE MONTH

FROM OFFCUTS TO COOKBOOK STAND

Hello Tegan,

Here's a quick story which you might find interesting. My partner and I are big fans of Art Deco, from figurines to furniture. A couple of years ago, just before Christmas, I was getting a bit stuck for ideas on what to get my partner, Angela. She loves cooking and spends most of her time in the kitchen producing the most wonderful food, so I had an idea to get her an Art Deco style cookbook stand, but could I find one? No! The only types I could find were made from wrought iron and pretty naff, then I noticed that my neighbour was clearing out his garage and had emptied a load off offcuts into his bin, and that gave me a plan to work to – I would build her one myself out of wood. I drew up the design and set to work, and the photo I have attached shows the finished article. This is a one-off as I am just an enthusiastic amateur, not a professional woodworker, but Angela was over the moon when she received it. It just goes to show what can be done with a few scraps of wood – and the whole project cost me less than £3. Not bad for a personal and unique gift, don't you think? Kind regards, **Pete Cain**

Hi Pete, thanks so much for your email and for sharing the photo of your project with us – it looks great! As you say, using up scraps and offcuts really is satisfying, especially if they can be used to make something as useful and attractive as your cookbook stand! I hope your partner enjoys her present and thanks again for sending in the photo. Do let us know what you come up with next! **Tegan**



Pete's Art Deco cookbook stand, which is made entirely from offcuts

INTERESTING THOUGHT FOR FUTURE MACHINERY

Dear GW,

I have a kind of arthritis in my hands, particularly around the thumb and forefinger area. It might actually be RSI, but can be pretty painful. In my tool kit I have a couple of old style DeWalt 12V drivers, but am finding it more and more of a pain to take the batteries out for recharging. Perusing the market for a lighter, more effective tool I looked at the 18V machines, and frankly they are too heavy and unwieldy, so I recently looked at the new Bosch 12V pistol grip, which are upgraded from the 10.8V version. I could not easily remove the battery, which is a push type. Why does no-one consider things such as whether or not the customer can squeeze the battery to get it out? Best regards, **Paul Craig**



A range of different 18V batteries from various manufacturers
Photograph courtesy of **Axminster Tools & Machinery**

Hi Paul, although Bosch has the 'new' 12V range, these are 10.8V, as are all the 12V Li-ion drills or other tools out there. They are badged 12V as this is the maximum voltage they store on a fresh charge – measured as peak performance – which drops back to 10.8V in real use. It's a workaround by some manufacturers to try and fool the end user into believing they are getting higher voltage, and therefore higher performance. At its most basic level, it's a simple multiplication equation if you look at the battery cells – much the same as NiCd and NiMH batteries that had 1.2V cells in their structure, the voltage ranges were based upon multiples of cells in the battery: 8 cells @1.2V = 9.6V, for example. Li-ion batteries are rated at 3.6V per cell so the 10.8V battery has 3 cells: $3 \times 3.6V = 10.8V$, but because they will overcharge to a peak of 12V, they are allowed to badge accordingly. Bosch are upfront with this on their website and have simply rebranded to sit alongside the likes of Milwaukee, etc. who badge as 12V.

On that note, the Milwaukee 12V 'Fuel' (brushless) drill driver and impact are cracking, and have super power for their size. I'm a big fan of the 10.8/12V platform for general drilling and driving work: I only use 18V for bigger sawing, planing or drilling work.

Regarding the battery connection, Bosch are using their original design and it could be that it proves too costly to alter to the more efficient slide on batteries that are used by DeWalt, for example. That said, Makita used the same push in cloverleaf style for their original 10.8V tools but went over to the slide on type a couple of years ago, so I guess Bosch may bite the bullet themselves at some stage. Bosch already use the slide on for their 18V platform, so it's my guess that it's the redesign of the tools to accept a different connection and new battery design that is the issue.

The slide on style is always touted as a more efficient connection for power transfer and charging, diagnostic feedback, etc. by the manufacturers. The slide on packs can be easier to remove in most instances but may still be a bit tough on finger ailments. It might be worth looking at the Bosch wireless charging system in instances like this as they don't need the battery to be removed; the tool is simply placed on the charger. They work well and can be left on the charger all the time so constantly get powered up. The downside is on high drain applications where the battery depletes quicker than it can recharge, so you find yourself waiting for the battery to catch up, or swapping it as you would normally (the standard batteries are interchangeable with the wireless ones), but for general smaller drilling or normal driving work they function really well. Bosch also have a 12V version to go alongside the 18V platform, so definitely worth considering.

Hope this helps! **GW**

TREND PRIZE BUNDLE COMPETITION WINNER

We're pleased to announce that the winner of the recent **Trend workshop prize bundle competition**, featured in GW327, is **Craig Seviour** from Somerset. Congratulations to Craig, who is the lucky recipient of a workshop haul totalling £1,498! Craig tells us that he's just started a new business, so this kit couldn't have arrived at a better time! Fantastic news and we hope it really helps.

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ONE TO WATCH: FERNWEH WOODWORKING

The man behind these wonderful pieces of furniture is Justin Nelson, who hails from Bend, Oregon, where the closeness of the mountains and forest inspires his creativity and appreciation of woodworking. His passion for creating beautiful products from hardwoods is easily seen from a glance around his studio space: experimental products lying on the workbench, neat vertical stacks of wood labelled by species and quality, and of course, a pile of half-finished lamps, shelves and planters, all waiting for the next step in the process of hand-creation before being shipped out to eager customers.

Justin, who is a former Marine Officer and Wildland Firefighter, loves the phase of life he finds himself in, where he's his own boss and creates his own brand from scratch revolving around his passion for woodworking.

'Real trees, real wood & really handmade'

Using the tagline 'Real trees, real wood & really handmade' the pieces he makes are varied but they all seem to tie together into a series such is the relationship between the materials he uses, as well as common shapes and styles that he creates.

Justin uses mainly hardwoods to complete his work and he always likes to make sure that the wood is the star, even if combined with another media, such as one of his Hexagon Edison Lamps, for example. The quality of the wood he uses is also very important to him and he ensures to visually and physically inspect each piece before shipping.

Complementing the raw material

It's fair to say that Justin really is in love with this raw material and reading excerpts from some of his interviews, his passion for what he does comes across abundantly. The business recently turned one-year-old and Justin's vision for Fernweh Woodworking continues to grow. He is also a man who cares a great deal about the finish of the products he makes, trying his best to bring out the optimum grain patterns, doing justice to natural figuring and letting the wood really speak for itself. As a result he tends to stick to a basic oil finish that works to complement the colouration of the wood. He has written about this topic specifically in his blog, which can be viewed here – www.fernwehwoodworking.com/blog – and you can also follow him on Instagram: [@fernwehwoodworking](https://www.instagram.com/fernwehwoodworking).



Black walnut dining table



Triangular floating shelves in black walnut



Desktop Edison lamp in walnut



Walnut side table

WRITE & WIN!

We always love hearing about your projects, ideas, hints and tips, and/or like to receive feedback about GW'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 1/4in 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!



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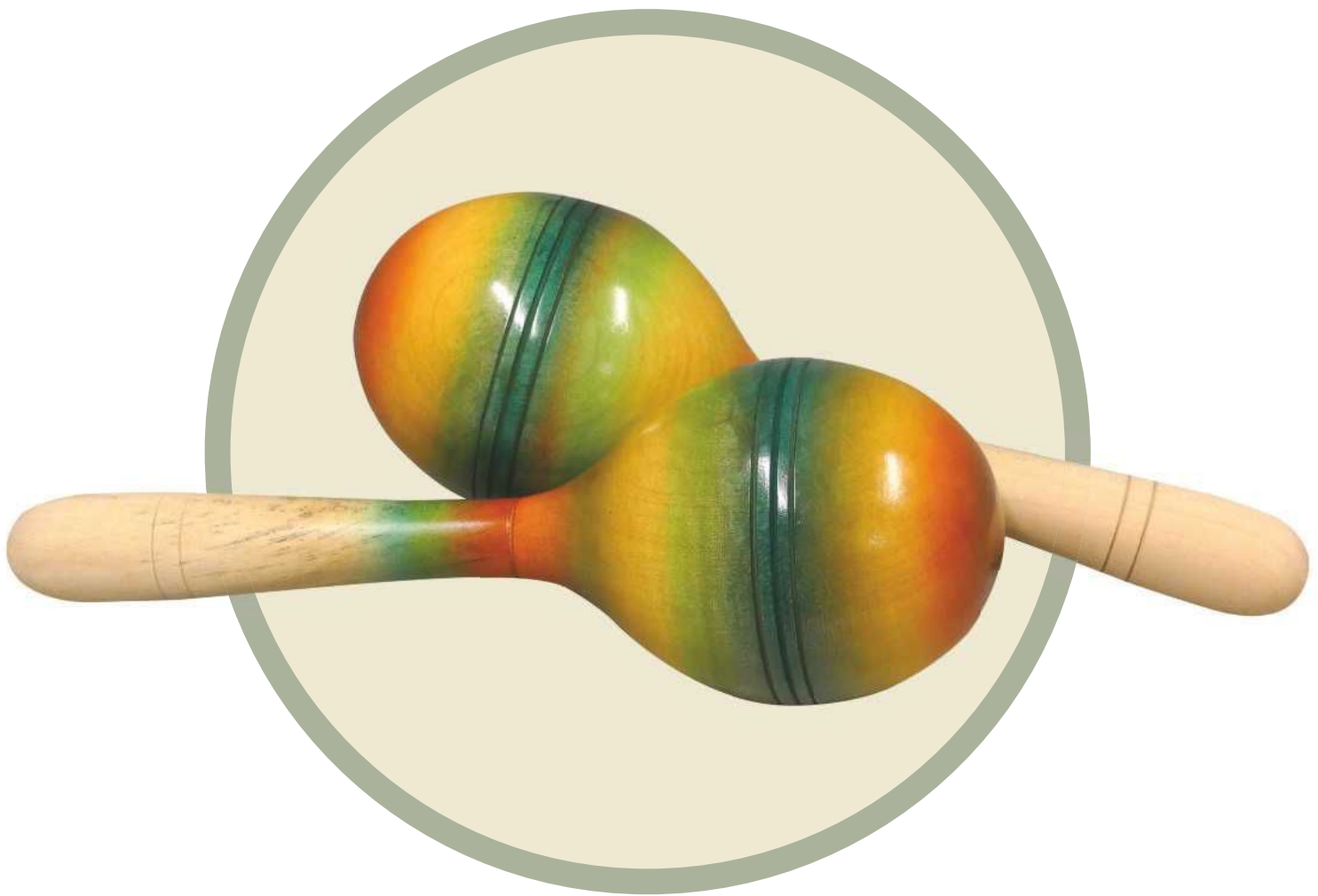
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Creative PERCUSSION

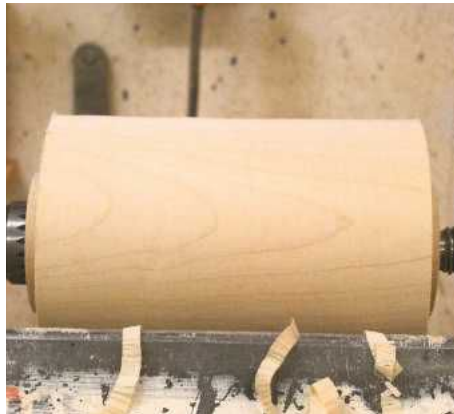
Les Thorne's idea for a pair of turned maracas not only makes for a fun project but is also a great exercise in copy turning and airbrushing

I was all set to do a different project this month but sometimes fate plays a hand and points me in an alternative direction. I was watching breakfast TV when a feature came on about encouraging the older generation, especially those in care homes, to take up music as a form of therapy. The instrument they were all using was a pair of maracas. As far as I am aware, I have not made a musical instrument in all my years of writing for *Good Woodworking*. I have never made maracas commercially and a quick search on Amazon will tell you why: they sell for just a few quid so it's therefore not economically viable to make them

to sell. Saying that, however, they are a great project to create for yourselves or for family members. Online research tells us that the instrument has its roots in South America and is often used in Caribbean and Latin music. Originally, they would have been fashioned from gourds with handles attached after a few pebbles had been put inside to generate the noise once shaken. If you do not want to commit to making a pair of maracas that are so big, you can downsize to a smaller version, which could be used as a baby's rattle if turned from a safe timber and treated with a toy safe/food safe finish. **GW**



1 I decided to make my pair from sycamore as it's the best timber to airbrush. The bodies are around 150 x 100mm square with the handles 200 x 30mm square



2 Start by placing the body between centres and use a spindle roughing gouge to make it round. The spigots on either end will allow you to hollow both ends when they are held in the chuck



3 Measure about two-fifths from one end and cut a slot with a 10mm multi-purpose tool; this will be the spigot that joins the two pieces together. A depth of 10mm is about right



4 Putting some of the shape on at this stage will give you an idea as to what you are trying to achieve. Using a 13mm spindle gouge in a sweeping cut with the bevel in contact with the wood will afford you the best results



5 Both blanks are prepared in the same way; this means that I didn't put the chuck on and then take it off, which saves time and makes the whole turning process more efficient



6 Hold the smaller end in the chuck and part off at the join. Use a 2mm parting tool, which will allow you to waste the minimum of timber. Leave the spigot on the piece in the chuck



7 Here's the two halves of the body. When I parted it off, I left a ring of material on the right-hand side; this is the same diameter as the spigot on the left and will act as a guide when you are trying to fit them together



8 When setting up to hollow end-grain put the toolrest in a position so you are hollowing over the stem on the rest. This is the strongest position and will ensure you encounter the minimum amount of vibration



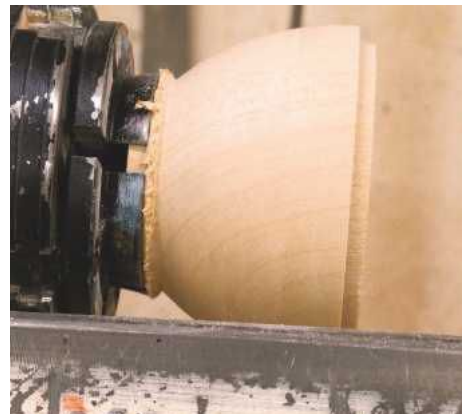
9 The initial hollowing is completed using the signature spindle gouge with the flute of the tool pointing towards 10 o'clock. If you get it right, the shavings are fantastic and should fly off the tool like ribbons



10 A simple depth gauge will show how you're progressing. I ended the hollowing just short of the chuck, which allowed me to clean up the end of the piece



11 A negative-rake scraper is the tool of choice for cleaning up the inside. You're looking for a wall thickness of around 5mm maximum; if it's too thick, it won't make a decent sound



12 When the inside is tooled to a finish (no sanding required as the two halves will be glued together) you can work on the shape of the outside; this will leave less to do when you remount the top



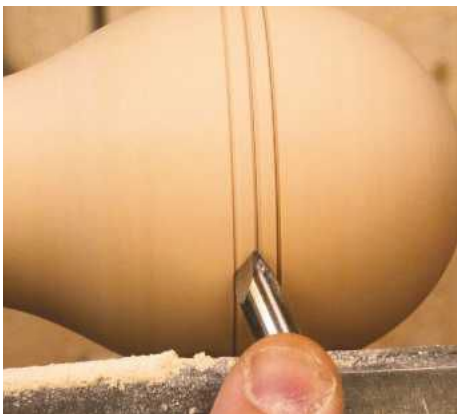
13 Next, mount the other half in the chuck. This piece will have a hole all the way through it, which you can make using a 10mm drill bit. Remove the drill frequently so it doesn't bind up with shavings



14 It's now time to fit the lid by making really small cuts using a 10mm skew chisel. It will need to be a tight fit as you are going to jam the top on; this will allow you to complete the shaping of the maracas



15 The curve on the top can now be turned by following the shape all the way down to the live centre. Make sure you allow for about 5mm of waste on the top, which will ensure you don't end up with a mark from the centre



16 There are a few ways of hiding the join when turning something like this. A couple of beads work well, but in this case, three grooves made with the skew chisel is the perfect addition



17 As I was working further into the piece, I found that the spindle gouge became less effective due to the overhang on the toolrest. The Simon Hope hollowing tool is stronger and easily copes with the extra depth



18 All my toolrests in the workshop have these locking collars on them; this means that I can move them from parallel to the lathe bed to right angles, without altering the height



19 The best description I can find for the shape is a balloon. As it gets thinner near the chuck you may experience some vibration, so make sure you finish each section as you go along



20 The other one is turned in the same way and here I am offering the first top up to the second one so I can get the sizes similar. It's a good exercise to try and get them both exactly the same



21 These profile gauges are absolutely essential when trying to match profiles. I find the metal ones suit the fine detail from turned shapes better than the plastic gauges



22 When you are happy that the bodies match each other, mount the stems between centres and make them round. An accurate 10mm diameter spigot about 10mm in length needs to be created on one end



23 The neck section will need to be turned to shape and the best way to do this is to make a jam chuck out of pine to accept the recess on the base



24 You will find that you will need tailstock support all the way through this part of the process. The aluminium cone on my live centre allows me to cut right up against it without damaging the edge of the tool



25 The surfaces where the handle meets the body need to be cut square or you can end up with a gap. For added security during the turning process, you can glue the handle in place at this stage



26 Sweeping cuts with the spindle roughing gouge are fine for these types of flowing shapes. I angle the tool slightly, which eliminates any chance of the tool running back on me



27 As always, leave enough waste at the tailstock end – here I have left a good 10mm. The skew creates a fantastic finish across the end-grain, which requires little or no sanding



28 Copy turning is about measuring and making the same cuts on each item. Vernier callipers are the best tool for taking measurements that can then be transferred to the other handle



29 The end of the handle just needs to be sanded when it's off the lathe. If you left enough waste on, then there should be no unsightly marks on the top of the handles



30 Glue and chickpeas: I thought about the filling for the maracas and couldn't really find much information about it, but as I had some chickpeas in the kitchen, I used these. Around 40 peas in each gave the desired sound



31 A bit of protection around the handles means you can grip them in your chuck jaws so you can colour the top of the maracas. You wouldn't be able to turn them with this fixing, but you only need to spin them



32 I think my airbrushes probably need a good clean. This is a set I purchased off eBay: they are not expensive, and they continue to work despite the way I've looked after them



33 The airbrushes are of the dual action bottom fed type. I use them more for the application of colour rather than drawing pictures, and I find these work perfectly for the job



34 I like to use spirit stains when I am colouring wood as I prefer the vibrancy of the colours compared to other types of stain. A mixture of colours blended into each other gives an interesting effect



35 A good durable coating is a necessity on something that's going to be handled. Acrylic sanding sealer is first applied, and when dry it's given a light rub down. Three coats of gloss lacquer finishes the project



36 The completed maracas should look something like this

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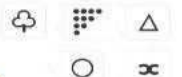
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Some of you know a phenomenal amount. You have manual dexterity, and the sort of brain that absorbs information. You're a walking book. People ask questions and you answer them. Chapter 1: Timber. Chapter 2: Preparation, right up to Chapter 37. But what happens (it's going to get miserable now) when your covers are shut, never to be opened again? What happens to all that knowledge? It goes, of course. It is lost.

Back to the beginning

Start again. What inspired you about woodworking? I have no way of knowing this, but I guess that often, it was seeing someone else do it. Maybe at an exhibition or a craft fair. Maybe in your Dad (yes, I know, but it usually is male)'s shed. In those early situations, you already began to learn. That's how it's done! Isn't that neat? I'd like to do that!

I watched my father carve a boat from several inches of pine. I was impressed. Later I carved a little bowl from a log of hawthorn. The connection is obvious. Before I thought of being a full-time woodworker I worked in a children's home in Suffolk. The handyman there bore the splendid name of Bert Godsmark. I saw the way he worked - matter-of-fact mortises and tenons slipping together: glue; nails: competence.

An inspiration

What's the next best feeling to being inspired? Inspiring someone else. How good to pass on your knowledge and your attitude, before you're put up on the library shelf to be covered in dust and eaten by worms. The traditional scenario was father to son. Then the apprenticeship. Learning by watching others and imitating them. Learning from their mistakes and from your own. Learning because you want to learn.

I'm lucky. My son, James, owes little to me in direct teaching. Independently he helps produce impressive round-wood structures. We've been working on his house, sometimes in my workshop making a gate, cupboards, a table and suchlike. I love these times because we work so well together, and because I see him becoming increasingly able. I make pronouncements occasionally, deliberately imparting information, but mostly we get on with the job.

You may not have a son or a daughter who wants to do woodworking, but someone else will. I don't know how you're going to do this. You can hardly put a card in the post office window. I suppose it will be by being open. When you hear that someone needs help, you can offer it. You can let it be known that you have time to spend showing someone else the ropes. You can volunteer.

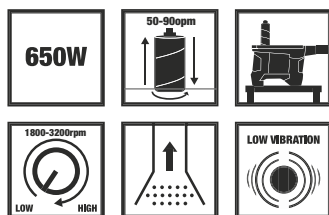
It isn't showing off, it's passing it on. You don't have to be an expert (even if you are), you just need to do it. Demonstrate. It won't always catch fire but sometimes, I suspect, it will. It'll be like one of those toy cars that you pull back an inch or two, and it shoots off right across the dining room floor. The driver looks ahead, but also back over a shoulder, and sees you. You were an inspiration. You helped. You won't actually live forever (sorry if I misled you) but you can do a bit more writing. Chapter 38: How to be remembered well. Chapter 39: How to preserve one of mankind's most valuable skills. Chapter 40: The continuing story....

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