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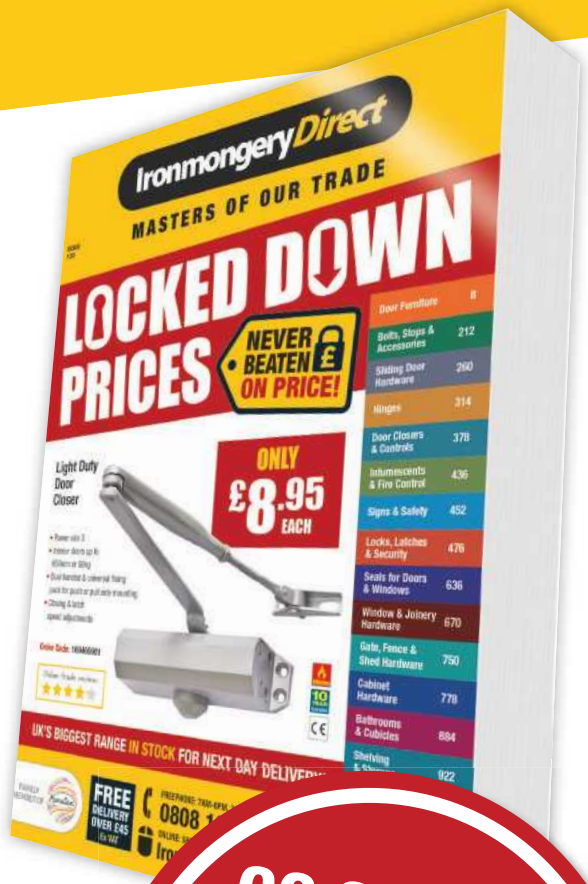

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Welcome

Although it feels like we've been blessed with glorious weather this summer, I think we all knew that it had to come to an end. And come to an end it did, just as my long-anticipated holiday rolled around. Now, staying in the UK is always dangerous as far as the weather is concerned, as you never really know what you're going to get, and in hindsight, I should have considered this more thoroughly before packing for my Cornish escape.

As many of you know, Cornwall is one of my favourite holiday destinations, mainly because my family live there so I can see them as well as exploring unknown parts. Despite calling it my home for 18 years, there's still so much I haven't seen, so that was the plan for our most recent trip: to visit the South Coast (where palm trees grow and the weather is notoriously more favourable) and see some wonderful coastline, beaches, gardens, and eat some amazing Cornish fare.

The trip didn't start off too well, as once we'd left home the heavens opened and the rain poured down, pretty much for the whole duration of our 200 mile journey. It was at this point I started to wish I had packed more woolly jumpers and less dresses…

Exploring paradise

For those of you who aren't familiar with Cornwall, or indeed the South Coast, it is a stunning stretch of coastline that is famed for its iconic sandy beaches and intimate sheltered coves, not to mention the 300 odd beaches that are gloriously varied. We started our expedition in Truro, the UK's most Southerly city, which boasts an impressive cathedral with wonderful gothic towers that dominate the skyline, before setting off for the lovely harbour town of Falmouth, just in time to see the Red Arrows fly over.

One of the highlights this time was visiting Trebah Garden, a sub-tropical paradise with a stunning coastal backdrop. Set in 26 acres, the garden also has a jaw-dropping private beach and is home to some of the most remarkable trees and plants I've ever seen. It was amazing to witness bamboo growing naturally, and navigating the Gunnera Passage reminded me of the lawn scene in *Honey I Shrunk the Kids*. Everything was so green and lush; it really did feel like we were immersed in paradise for a few hours. Highly recommended.

Lobsters & oysters

Visiting Padstow was the last leg of our journey and as well as playing crazy golf overlooking the harbour, one of my favourite things was seeing baby lobsters at the National Lobster Hatchery, a pioneering marine conservation, research and education charity. It was fascinating to learn about the life cycle of these magnificent sea creatures as well as seeing them in their various stages of growth. It has certainly made me think twice about eating one, that's for sure…

Unexpectedly, food and drink played an important part in our holiday, and although practically eating my body weight in pasties, it was fantastic to sample some exquisite locally caught seafood. In one of the restaurants we ate at, I was also delighted to note the hand-carved wooden butter knives, which I found a joy to use, and also various bowls, one of which cradled the Rock oyster that had been caught that very morning.

A notable summer

I do hope you have all enjoyed your summer holidays too, and indeed your woodworking. Although autumn is sadly knocking on our door and the long days may soon be over, I think you'll all agree that the summer of 2018 is one that won't be forgotten in a hurry!

Email tegan.foley@mytimemedia.com

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50 A PART TO PLAY

Edward Hopkins uses the Triton TRA001 router to organise society

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AUTUMN 2018

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www.facebook.com/GetWoodworking

www.getwoodworking.com
Published by MyTimeMedia Ltd.
Suite 25, Eden House Enterprise Way,
Edenbridge, Kent TN8 6HF
UK and Overseas Tel: +44 (0) 1689 869 840

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A CLAMPING SYSTEM WITH BITE

Tough, portable and versatile – Triton Tools' SuperJaws is the ultimate clamping system, whatever the task.

SuperJaws has proven to be the clamp of choice for many people undertaking projects, whether that involves timber, fence panels, doors or even bikes. With its robust, powder-coated, all-steel construction for longevity, the SuperJaws Portable Clamping System has a powerful 1,000kg clamping force for a sturdy, controlled hold.

SuperJaws' reversible sliding jaws allow an extra-wide 955mm clamping width capacity and a load capacity of 200kg.

The urethane jaw facings provide a protective, slip-resistant grip, and the foot-operated clamp frees up the user's hands for full control of the workpiece. SuperJaws also has an extra-wide tripod base for increased stability, even on uneven surfaces, and the lock/release switch allows fast, trouble-free release of the jaws.

The larger SuperJaws XXL option offers an increased load capacity of 250kg and a 1,000mm width capacity, for larger workpieces.

Simon Barrett, Global Product Manager at Triton Tools, said: "SuperJaws is one of the gems in the Triton Tools range. We have had fantastic feedback from people who have used it for a wide range of tasks. The improved frame and leg design means the whole unit can be set up and folded down in seconds. It can be easily transported right to the job, whether that is indoors, outdoors or on the workshop floor. The stand-alone design gives people 360° access to their work, while the powerful clamping force will keep even the most awkward workpieces secure."

There are two other products in the range – the Multi-Stand and the WoodRack Storage System. The Multi-Stand is a multi-purpose, adjustable support stand with a load capacity or 100kg. It features an extra-wide tripod base for excellent stability. The low friction side surfaces provide smooth controlled travel of the workpiece. The Triton WoodRack Storage System is easy to install and provides generous storage for wood, piping, guttering and long metal pieces on six levels, each with a capacity of 50kg.

For more information on this and other products, visit **www.tritontools.com**.

PAINTS & COATINGS SPECIALIST, PETER SOTHERTON, JOINS TEKNOS

Peter Sotherton has joined the business development team at Teknos having previously worked for Crown Paints and B&Q.

Formerly a Contract Sales Account Manager for Crown Paints working across London and the Home Counties, Peter is now looking forward to the challenges of his new position as Business Development Manager for TeknosPro, part of the established worldwide paints and coatings specialist, Teknos.

Peter comments: "With many years of experience in the paints and coatings industry, I can't wait to start promoting the professional portfolio of TeknosPro products. The Teknos name is already established and I plan to build on this success by expanding the number of locations stocking TeknosPro and growing the brand in the professional decorator market. We are targeting professional tradesmen, independent retailers, merchants and interior designers, many of whom may already know

of Teknos. My role is to develop sales in all these sectors and I'm looking forward to this next challenge in my career."

To find out more, see **www.teknos.co.uk**.

DIARY – OCTOBER

2 Pyrography
2–3* Bowls & platters
5* Introduction to Leigh Jigs
8–12 Hand dovetailed box in hardwood (new)
9* Routing
9 & **10** Beginners' woodturning (five days)
11* Spindle moulding
13* & **18** Pen making
15 Scrollsaws
16* Sharpening turning tools with Tormek
22 Tool sharpening
22–26 Five-day beginners' woodturning
23* Christmas decorations
24 Bandsaws
24–26 Woodcarving (new three-day course)
30* Tool sharpening
* Course held in Sittingbourne, Kent
Axminster Tools & Machinery
Unit 10 Weycroft Avenue
Axminster, Devon EX13 5PH
Tel: 08009 751 905
Web: www.axminster.co.uk

5–7 Basic jointing weekend
8–12 Make a bookcase
13 Chairmaking – part III
19–22 Beginners' four-day course
27–28 Dovetailing weekend
Chris Tribe, The Cornmill, Railway Road
Ilkley, West Yorkshire LS29 8HT
Tel: 01943 602 836
Web: www.christribefurniturecourses.com

13 Mill experience
13 Traditional wooden rake making
20–21 Woodcarving weekend
Weald & Downland Living Museum
Singleton, Chichester PO18 0EU
Tel: 01243 811 363
Web: www.wealddown.co.uk

16 Spiralling
23 Pen turning
24–25 Woodturning
Turners Retreat, Faraday Close
Harworth, Nottinghamshire DN11 8RU
Tel: 01302 744 344
Web: www.turners-retreat.co.uk

6 Basic wood joints
13 & **16** Drills in a day
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Web: www.thegoodlifecentre.co.uk

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Bennetts Timber (Lincolnshire)
Tel: 01472 350 151
Web: www.bennettstimber.co.uk

Black Isle Woodturning (Scotland)
Tel: 07842 189 743
Web: www.blackislewoodturning.com

Brodies Timber (Perthshire)
Tel: 01350 727 723
Web: www.brodiestimber.co.uk

Brooks Brothers Timber (Essex)
Tel: 01621 877 400
Web: www.brookstimber.co.uk

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Web: www.cilfiegansawmill.com

Clive Walker Timber Ltd (West Yorkshire)
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Web: www.clivewalkertimber.co.uk

D Emmerson Timber (Lincolnshire)
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Web: www.emmersontimber.co.uk

Earlswood Interiors (West Midlands)
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Web: www.earlswoodinteriors.co.uk

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Web: www.englishwoodlandstimber.co.uk

Exotic Hardwoods (Kent)
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Web: www.exotichardwoods.co.uk

EO Burton, Thorndon Sawmills (Essex)
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Web: www.eoburton.com

Eynsham Park Sawmill (Oxfordshire)
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Web: www.eynshamparksawmill.co.uk

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Web: www.surreytimbers.co.uk

Sykes Timber (Warwickshire)
Tel: 01827 718 951
Web: www.sykestimber.co.uk

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

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

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

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

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

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

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

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

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

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

Yandle & Sons Ltd (Somerset)
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Web: www.yandles.co.uk

WOOD AWARDS: EXCELLENCE IN BRITISH ARCHITECTURE & PRODUCT DESIGN – 2018 SHORTLIST ANNOUNCED

20 exceptional buildings across the UK and 12 furniture and product projects have been nominated for the Wood Awards 2018 shortlist. The judging panel, led by three-time Gold Award winner Stephen Corbett of Green Oak Carpentry, will visit all the shortlisted projects in person, making this a uniquely rigorous competition. The shortlist will be showcased at the London Design Fair, Old Truman Brewery, from 20–23 September, and winners will be revealed at the annual Wood Awards ceremony, held at Carpenters' Hall on 20 November.

Established in 1971, the Wood Awards is the UK's premier competition for excellence in architecture and product design in the world's only naturally sustainable material. The Awards are free to enter and aim to encourage and promote outstanding design, craftsmanship and installation using wood.

The Awards are split into two main categories: Buildings and Furniture & Product. Within the Buildings competition there are five subcategories: Commercial & Leisure, Education & Public Sector, Interiors, Private and Small Project. For more information, visit **www.woodawards.com**.

Shortlisted within the Buildings Competition's 'Commercial & Leisure' category, Storey's Field Centre & Eddington Nursery is arranged around three sides of a landscaped courtyard

Shortlisted within the Buildings Competition's 'Small Project' category, Look! Look! Look! sits in the centre of an 18th century walled garden

BUILDINGS COMPETITION SHORTLIST

COMMERCIAL & LEISURE

1. City of London Freemen's School swimming pool – *Hawkins Brown*
2. Fallahogey studio – *McGarry-Moon*
3. The Macallan Distillery & visitor experience – *Rogers Stirk Harbour + Partners*
4. Storey's Field Centre & Eddington Nursery – *MUMA*

EDUCATION & PUBLIC SECTOR

1. Royal Academy of Music Theatre & Recital Hall – *Ian Ritchie Architects Ltd*
2. Sultan Nasrin Shah Centre – *Niall McLaughlin Architects*
3. Streatham & Clapham High School – *Cottrell and Vermeulen Architecture*
4. West Court – *Niall McLaughlin*
5. Woodland Classrooms, Belvue School – *Studio Weave*

INTERIORS

1. 61amr – *WIDGER architecture*
2. Barbican Mezzanine – *Francisco Sutherland Architects*
3. The Department Store, Brixton – *Squire and Partners*
4. The Vortex, Bloomberg – *Foster + Partners*
5. Marie's Wardrobe – *Tsuruta Architects*

PRIVATE

1. Blackheath House – *Walker Bushe Architects*
2. Kent Downs House – *McLean Quinlan*
3. Old Shed New House – *Tonkin Liu*

SMALL PROJECT

1. Dewsbury Road – *O'Sullivan Skoufoglou Architects*
2. Kudhva – *New British Design*
3. Look! Look! Look! – *Studio Morison*

FURNITURE & PRODUCT COMPETITION

BESPOKE

1. Black Trine Variations – *Clive Baines*
2. Cleft – *Hinoki Kougei*
3. GYC#1 – *Sarah Myerscough Gallery*
4. Mycelium and Timber – *Sebastian Cox Ltd and Ninela Ivanova*

PRODUCTION

1. Ballot Chair – *Barber & Osgerby*
2. The Lastra Collection – *Emile Jones*
3. Ovo Furniture Range – *Foster + Partners*
4. Passage Table – *Frank*

STUDENT DESIGNER

1. Arne – *Alexander Worsfold*
2. Digi-Weave Shoe Cabinet – *Tom Morgan*
3. Objekt Bord – *Ellen Rose Svenningsen*
4. Super Desk – *Ben Smith*

Shortlisted within the Furniture & Product Competition's 'Student Designer' category, the Objekt Bord is an assembly of two components: an upright curve and a circle

Shortlisted within the Furniture & Product Competition's 'Production' category, the Passage Table's bold, pared down aesthetic suits any style of dining chair

THE W EXHIBITION & ELEMENTS: ONLINE REGISTRATION NOW OPEN

Registration for the UK's only woodworking machinery and materials event, The W Exhibition, is now open. To register your attendance, simply fill out the online form to gain free entry into the event: **www.Wexhibition.co.uk/Register**.

This year, the four-day exhibition will be held from 30 September-3 October at the NEC, Birmingham and, following on from its success in 2016, will be co-located alongside the UK's only dedicated furniture components show, Elements.

Featuring a brand-new Education Zone and over 200 of the industry's biggest names, The W Exhibition is set to be the biggest show to date. Boasting a blueprint of over 11,000sq.m, visitors to the bi-annual event will be the first to see the latest product launches and innovations to enter the marketplace, while also being able to talk to the experts and experience live demonstrations first hand.

Big names including leading machinery giants Biesse, SCM, Felder, Homag, Daltons Wadkin, RW Machines, Schelling, TM Machinery and Weinig will be among the solid exhibitor line-up. Visitors will also have full access to The W Exhibition's sister show, Elements, which will showcase the very latest furniture trends, design novelties and prototypes for the furniture production and interior design markets. Among the 50-strong line-up, leading names including Blum, BA Components, Alpi SpA, Crofts & Assinder, Hranipex, Ostermann and Doellken will be introducing new and unique products to the UK market.

To see the latest innovations for yourself, register for your free visitor badge today and join the industry this September at The W Exhibition. For a full exhibitor list and to register, visit **www.wexhibition.co.uk/exhibitors**. For the latest exhibition news, follow **@W_Exhibition** and **@Elements_Expo** on Twitter and like '**The W Exhibition'** on Facebook.

Elements 2018 For Furniture & Joinery Suppliers 30 Sept - 3 Oct NEC, Birmingham

W Exhibition 2018 Joinery & Furniture Manufacturing Show 30 Sept - 3 Oct NEC, Birmingham

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NEW MACHINES ENHANCE AXMINSTER TRADE RANGE

Axminster Tools & Machinery has recently upgraded its trade-rated range of woodworking machinery. The new machines will be part of the newly named Axminster Trade range and include a bandsaw, table saw, two spindle moulders and a unique dust processor. These are quality machines built to meet the growing demands of trade customers and serious woodworkers, and will be on display at the W Exhibition (stand E910) at the NEC from 30 September–3 October.

The five new machines have all been chosen for their uniqueness or quality of build. The Gyro dust processor is compact, portable and requires no assembly. It is designed with ground-breaking axial centrifugation technology. The processor has won several awards including the Red Dot Design Award (established internationally as a quality mark for good design).

The new bandsaw is the result of close collaboration between Axminster and the manufacturer. It is designed to be the very best 15in bandsaw on the market with many exclusive features. The welded steel frame is over-sized with extraordinary rigidity, allowing very high blade tensions. The T-square style fence maximises accuracy with complete adjustability for aligning to the blade. Uniquely, the precision ground cast-iron table has a titanium nitride coating, which apart from looking great, creates a smooth surface and protects the table from rust.

Then there is the table saw, which is designed to take some of Axminster's unique attachments such as products from the UJK Technology range. It is able to mount the UJK router insert plate or UJK router lift in the cast-iron side extension table. Although of a conventional design, the exacting precision used during manufacture marks this machine out from others of a similar price.

In addition, there are a number of very useful accessories available for the table saw: dado blade set, overhead blade guard, sliding table, fence for sliding table and router table fence.

Both table saw and bandsaw come with a better standard of rip fence and mitre fence. No cost cutting has occurred with the material used and these machines are the best they can be without overpricing them.

Finally, there are the two spindle moulders: deluxe and CNC. The CNC model is fitted with a custom-built Siemens control system, which gives it precise control of spindle height, spindle tilting angle and spindle speed. The result is the user can mould profiles with optimised accuracy and

achieve perfect results. The deluxe model comes in a 230V and 415V version. The spindle is of the quick-release type, which means you can change the machine into a router, using the supplied collet chuck.

These products are aimed at bespoke furniture and joinery makers, small-scale kitchen and bathroom producers and keen home woodworkers who want a higher specification machine.

Ian Styles, Product Development Director, commented: "We have been working with a number of manufacturers on the launch and upgrading of our Trade range for some time. We now have a host of machines all ideally suited to the expectations of the trade customer. These are at the very top end of the range and the five new machines form part of that picture."

Innovation & Product Manager Keith Thompson went on to say: "We were looking for machines that were a better build and spec than our Trade Series range, but were still of a physical size, attractive to both a small woodworking business or enthusiastic home woodworker. The results are machines that raise the bar in terms of build quality, simplicity in use and custom build using the extensive options available."

All Axminster Trade machines will come with a comprehensive free guarantee covering parts and labour for three years. Also, flexible and affordable payment options are available in the form of finance or leasing.

Inc VAT prices range from £2,099 for the bandsaw to £3,204 for the dust processor and then up to £8,226 for the CNC tilting spindle moulder. For more information call **0800 321 822**, search **www.axminster.co.uk/axminster-trade** or visit an Axminster store.

CLARKE WOODBURNING STOVES – FIT NOW READY FOR WINTER!

What can beat the warmth and ambiance of a real fire in your home or workshop throughout the cold winter months? Clarke cast-iron woodburning stoves offer the ideal solution.

The best selling Buckingham model is a classically designed multi-fuel stove that will add a sense of timeless style to any modern or period room this winter. Suitable for burning wood and coal, this stove is as efficient as it is stylish. It has a maximum heat output of 6kW, featuring an air wash system which helps to keep the glass clean, and air control to alter burn rate and heat output. It is currently priced at £238.80.

The best selling Wentworth is a stylish, contemporary designed, highly efficient multi-fuel stove, which has passed government DEFRA tests to demonstrate exceptionally clean burning of wood in smokeless zones. It has a maximum heat output of 5.3kW, featuring an air wash system to help keep the glass clean and air control to alter the burn rate and heat output. It is currently priced at £358.80.

For more information on all models, see **www.machinemart.co.uk**.

MAKITA INTRODUCE NEW OMNIBOHRER MULTI-PURPOSE DRILL BITS

The new OmniBohrer range of drill bits joins the extensive range of high performance Makita accessories. Bits in this multi-purpose collection are suitable for use with a diverse range of materials including concrete, tile, brick, slate, limestone, wood, composite materials, aluminium and plastics, totally eliminating the need to switch between bit types. Ultimately, the new OmniBohrer range is time saving while improving operator efficiency and accuracy.

The collection of 25 drill bits, ranging from 3-14mm diameter and lengths of 60-400mm, feature a high quality tungsten carbide tip that can be used for different applications across various industries. Tungsten carbide is more durable than many other materials due to its exceptional levels of toughness and hardness. The wide flutes of the OmniBohrer bits deliver quick and efficient material extraction.

This multi-purpose collection will be welcomed by many manufacturing professionals using multi-layer, or composite materials such as that used in the manufacture of windows and doors, or for fixing wood or metal to brickwork without the need to switch bit types. Choose OmniBohrer drill bits for improved quality, convenience and versatility.

To find out more, see **www.makitauk.com**.

EXTRACTION SOLUTIONS FROM LAGUNA

The American-based brand Laguna Tools have now launched their range of high quality Cyclones and dust extractors into Europe. A specialist network of independent retailers are now displaying and stocking these distinctive looking and innovative machines.

Starting the range is the sleek, compact and powerful B Flux 1 single stage dust collector.

Ideal for single machine use it comes as standard with a 1 micron canister providing filtration of 99.97% of particles between 0.2-2 microns.

Cyclones are designed to separate as much waste and dust from the airflow before it passes through the impellor and escapes via the filter; this means the airflow performance is far more efficient and constant than traditional single stage extractors.

With their second generation of cyclones, Laguna sets a new standard in terms of separation, airflow and quality of components. All Laguna's cyclones come with a remote control for ease of use in the workshop. The patented easy drum lift mechanism makes bag emptying far faster than previous designs, and it also has the benefit of making the machines more portable as an extra set of wheels are not being forced into the ground. In their search to build the ultimate Cyclone, Laguna also re-designed the fan and it is now housed inside a single piece of horizontal plenum, which has dramatically improved the machine's airflow.

The C|Flux series is available in a 1.5hp and 3hp option. Both machines have a 1 micron canister that provides filtration of 99.97% of particles between the sizes of 0.2 to 2 micron. The smaller C|Flux 1 is ideal for connecting to single machines or a small ducting system, while the C|Flux 3 is ideal for larger workshops where airflow and consistency of performance are paramount.

The P|Flux series is not only one of the most radical designs to ever hit the market, but also offers a host of innovative features and HEPA grade filtration of 100% of 1 micron particles and 99.2% of particles at 0.4 micron. Again, two options are available – the 1.5hp P|Flux 1 and 3hp P|Flux 3 – both of which have LED indicators to warn when the drum needs emptying or the filter requires cleaning. They also feature acoustic foam lining inside the swing doors to reduce noise. Laguna's unique 'smart drum' design allows a connecter at the back of the drum to automatically hook up to a pipe in the cyclone, creating low pressure on the bottom of the drum that stops the bag being sucked up. No other Cyclone or dust extractor has such a smart system.

If you are thinking of upgrading your extraction or buying a new extractor, Laguna have a network of independent retailers who have display models in their showrooms.

For more details on the machines and to find your nearest stockist, please visit **www.lagunatools.uk**.

C|Flux 3 Cyclone


B Flux 1 extractor

P|Flux 3 Cyclone

JOINERY made simple

POCKET-HOLE JIGS

Triton's new Pocket-Hole Jig range provides a fast and effective way of creating strong, concealed joints. Even with limited woodworking knowledge, the operator can easily create accurate, professional pocket-holes on multiple projects.

Engineered Precision

SINGLE MINI POCKET-HOLE JIG

Triton's TWSMPJ Single Mini Pocket-Hole Jig is a compact and highly compatible solution for creating strong joints in materials of any thickness.

NEW

DOUBLE MINI POCKET-HOLE JIG

Triton's TWDMPJ Double Mini Pocket-Hole Jig is a highly versatile Jig designed and optimised for creating strong joints in projects at the home workshop or on the building site.

NEW

POCKET-HOLE JIG 7PCE

The TW7PHJ Pocket-Hole Jig is a fast and simple solution for creating strong joints in wood at both the home workshop and on the building site.

NEW

ADJUSTABLE JIG

Triton's TWAJ Adjustable Jig is a highly versatile jig designed and optimised for creating strong joints in projects at the home workshop or on the building site.

NEW

JIG ACCESSORIES NEW

POCKET-HOLE JIG CLAMP 	SQUARE DRIVER SET 76MM & 152MM / 3" & 6" 2PCE 	POCKET-HOLE PLUGS 50PK PINE 	Screws available in various sizes 
QUICK CHANGE HEX SHANK DRILL BIT 9.5MM / 3/8" 	SQUARE DRIVER SET 152MM / 6" 2PK 	POCKET-HOLE PLUGS 50PK OAK 	

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tritontools.com

triton Precision Power Tools

What's new from D&M TOOLS

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'THE' TOOL SHOW '18

THETOOLSHOW.COM

12–14 OCTOBER '18 – KEMPTON PARK RACECOURSE

We look forward to seeing you at **'THE' TOOL SHOW 2018** at Kempton Park Racecourse at Sunbury-on-Thames, on the weekend of 12–14 October 2018. 'THE' TOOL SHOW is the UK's premier hand, power tools and woodworking machinery exhibition for DIY amateurs and trade professionals and is now in its 18th year. Don't miss this opportunity to get hands-on with the very latest tools and equipment demonstrated by experts from all the leading brands. Visitors can pick up exclusive deals and special offers, which are ONLY available at the show, plus the opportunity to take part in our popular Free Prize Draw. Admission is FREE and there is ample FREE parking.

Also back at the show for 2018 is **Record Power's Woodworking Live!** with another three days of woodworking demonstrations, inspiration and fun. Make a note in your diaries and visit **www.thetoolshow.com** for more details.

VETO PRO PAC TOOL BAGS

MANUFACTURER: Veto Pro Pac
D&M GUIDE PRICE: See website

VETO PRO PAC
TOOL BAGS THAT WORK

Veto Pro Pac professional grade, industrial strength tool bags are designed by tradesmen for tradesmen and allow you to keep your tools accessible, organised and protected. They ensure you're not wasting time searching for tools, but keeping the focus where it should be – on getting the work done.

Veto Pro Pac Tool Bags are designed with a patented centre panel and hinged ergonomic handle, vertically tiered pockets, heavy-duty construction and stabilising injection-moulded waterproof base that keeps tools dry in the nastiest of conditions. These tool bags offer immediate visual inventory and access to your kit, and the ergonomic platforms protect and transport tools to and from the jobsite.

Available in a range of styles and sizes – see our website, or scan the QR code below for more details.

PLEASE CHECK OUR WEBSITE – WWW.DM-TOOLS.CO.UK – FOR THE LATEST PRICES AND DEALS

TRITON SJA100E SUPERJAWS

This portable clamping system from Triton boasts an impressive 1,000kg clamping force and the extra-wide tripod base maximises stability for large workpieces

Although perhaps not quite so familiar as Black & Decker's Workmate, the original SuperJaws has been around for some 40 years. With virtually identical products and similar sounding names available under different brands it can get confusing, but Australian manufacturer Triton was responsible for designing the original work support system. Time to revisit the SJA100E then, which is the most basic version.

The SuperJaws will withstand a load of 200kg, though it's still easy enough to carry

Although it has a pair of jaws to grip a workpiece and folds down for storage, that's about all it has in common with the Workmate. Rather than four legs the SuperJaws has three, its tripod format being particularly sturdy. Holes in the front feet enable the bench to be pegged to the ground for even greater stability, or screwed down to a board. Made from welded steel with square section legs, this is a heavy device, weighing 14.5kg. It will withstand a load of 200kg, though it's still easy enough to carry.

Folded it measures about 800 × 300 × 230mm. To open it up you first lay the SuperJaws upside down on the floor. Slackening off a large rear knob enables you to slide the back leg outwards and pivot it up. This then slots into a recess and is locked. Next, you swing both front legs upwards, which automatically lock into position. Finally, lift the hinged foot pedal up until this clicks into place. Turn the SuperJaws the right way up and you're ready for action.

Slackening off a large rear knob…

… enables you to slide the back leg outwards and pivot it up

Next, you swing both front legs upwards, which automatically lock into position

Jaws have thick urethane facings to prevent damage to work surfaces and are grooved horizontally and vertically to grip metalwork and suchlike

Slide the red lever downwards at the front of the bench, then press down on the pedal to finally clamp the workpiece

Apply extra downward pressure on the pedal for an extra tight grip, though most of the time this probably won't be necessary

Flip the locking tab at the back of the bench and slide the plate (with rear jaw attached) outwards

Reverse the plate and slide it on to the body again

Clamp & release

Jaws have thick urethane facings to prevent damage to work surfaces and are grooved horizontally and vertically to grip metalwork and suchlike. Both can be removed easily. To clamp an item you place it against the front fixed jaw, then operate the foot pedal to advance the rear jaw. Slide the red lever downwards at the front of the bench, then press down on the pedal to finally clamp the workpiece. Apply extra downward pressure on the pedal for an extra tight grip, though most of the time this probably won't be necessary. Triton claim the clamping force is 1,000kg, which is immense…

With a standard capacity of 455mm, the SuperJaws will grip large items extremely firmly. However, if you need to clamp something wider than this it's a simple process to reverse the sliding jaw to increase capacity. Flip the locking tab at the back of the bench and slide the plate (with rear jaw attached) outwards. Reverse the plate and slide it on to the body again. Capacity is now a massive 955mm – wide enough to clamp a door horizontally.

The foot pedal is retracted by pulling on a spring-loaded latch

Releasing an item is a cinch. You slide the red lever upwards, then step on the foot pedal to free the clamping action. And that's it. Once you've finished, folding the SuperJaws down again for storage means reversing the set-up process. The foot pedal is retracted by pulling on a spring-loaded latch.

Hold tight

After gluing together three 30mm thick oak boards (for a deep window board), I was impressed the SuperJaws gripped this heavy timber securely. Using my foot to operate the clamping mechanism left both hands free to support the workpiece on either side. However, once I'd sawn a tapered edge (to fit the window opening) I found the bench wouldn't grip. Unless edges are parallel to each other the clamping action won't work tightly, although you could make some tapered wedges to overcome this.

I found the SuperJaws really useful when sanding an area of worktop prior to fitting, though not ideal for ripping to width or routing the front edge as the jaws get in the way of the power tools. That's where a Workmate has a particular advantage.

Optional extras for the SuperJaws include log jaws (cost £25.12), making the bench perfect for cutting up logs with a chainsaw. Engineers jaws (cost £38.46) further increase versatility.

Conclusion

SuperJaws are understandably popular with carvers and green woodworkers, not to mention bike repairers. The tripod design makes them particularly stable and with timber clamped between the jaws, access all around is pretty good. Although you can't hold material down on top of the bench as you can with a Workmate, it would be easy enough to make a large workboard with timber rail underneath to fit between the jaws. So, is the SuperJaws as versatile as a Workmate? Probably not, but for some tasks it's actually better, especially when working with heavy timbers.

SPECIFICATION

Capacity – maximum load: 200kg
Clamping force: 1,000kg
Clamping method: Foot operated
Folded size – height: 295mm
Folded size – length: 810mm
Folded size – width: 330mm
Material – primary construction: Steel
Product height: 980mm
Product length: 880mm
Product weight: 14.5kg
Product width: 860mm
What's in the box: 1 × SuperJaws plus manual

Typical price: £88.33
Web: www.tritontools.com

THE VERDICT

PROS

- Ideal for gripping heavy items; fast clamping and release mechanism

CONS

- Will not grip tapered boards

RATING: 4 out of **5**

Using my foot to operate the clamping mechanism left both hands free to support the workpiece on either side

After gluing together three 30mm thick oak boards, I was impressed the SuperJaws gripped this heavy timber securely

The tripod design makes them particularly stable and with timber clamped between the jaws, access all around is pretty good

RYOBI R18MT-0 18V CORDLESS MULTI-TOOL

Featuring a handy articulating head, this versatile multi-tool from Ryobi is capable of performing a variety of cutting and sanding tasks

Since Fein invented the oscillating multi-tool 50 years ago, most power tool manufacturers have followed suit. The advantages of a small, toothed blade that could cut through a variety of materials (without slicing your hand if it slipped) meant previously awkward jobs could now be tackled with a compact power tool. Cutting off the bottom of architrave in situ to accommodate laminate flooring, sawing across floorboards or sanding in tight corners are just a few examples of tasks that were previously tricky. Swapping its semi-circular or straight saw blade for a triangular sanding pad or maybe a carbide rasp created a specialist multi-purpose tool, often referred to as a detail sander. Initially mains-powered, the advantages of cordless versions soon became obvious, particularly when working outdoors where a cable can be hazardous, if not annoying.

Ryobi have had both cordless and 240V multi-tools in their product range for a good few years, but the new R18MT-0 is probably unique in this crowded marketplace. As far as I'm aware, it's the first such tool to have a tilting head. This makes it possible to sand, cut or grind in even more confined spaces than before, or so the theory goes.

Pivoting head

Part of Ryobi's ONE+ 18V range, the tool itself is quite slender, particularly around the lower hand grip. With sufficient textured rubber around the body where it's needed, the R18MT-0 is long enough to be gripped with both hands for greater control. With a battery slotted into the base the tool is especially stable when placed upright on the bench top, taking up minimal storage space. With a 5.0Ah battery fitted the tool weighs 1.8kg, so you may want to use a smaller capacity battery to reduce weight if working vertically or overhead.

The on/off trigger can be locked on via a single thumb button if you're right-handed – not quite so convenient for left-handers, though not too difficult. With a speed range from 10,000-20,000rpm, this is easy to select via a knurled rotary dial with clear numerical markings. Mounted centrally, access is good from either side. The oscillation angle is 3.2°, which is fairly

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You can adjust the head to any one of five positions to suit a particular task

standard. At full pelt the Ryobi is noisy, but that's true of virtually every multi-tool I've used.

You can adjust the head to any one of five positions to suit a particular task. This is done by depressing a spring-loaded button with your thumb while tilting the head up or down with your other hand. Marked from 0 to 90°, there are intermediate click stops at 22.5, 45 and 67.5°. I detected some slight play in the head irrespective of the angle selected, though this doesn't seem to affect performance.

Blade locking

Blades and pads are quick to fit, with no need to remove a hex screw first. You simply pull back a spring-loaded lever on the head, moving the blade retaining clamp forward to release. A series of locating pins enable the accessory to be clamped almost anywhere around the steel face, with a pair of small magnets helping location. Flicking the lever forward then locks everything firmly in place, though take care as there's quite a kick when you do this. A reversible adaptor is supplied, which means practically any brand of accessory should fit, including Fein's Starlock system.

Supplied are semi-circular (flush cutting) and narrow straight (plunge cut) toothed blades, plus a triangular detail sanding pad and five abrasive sheets to fit. These are hook-and-loop fixing, as you'd expect.

Conclusion

I've used the R18MT-0 over the past few weeks across a variety of tasks, including cutting through floorboards. Working tight into a corner, the ability to alter the head certainly made controlling the tool easier with the flush cutting blade. The same was true when it came to sanding a casement window prior to painting. Tidying up new plaster-work at ceiling level was that bit more bearable, as well as removing ceramic tiles with the straight blade. There was a certain amount of vibration evident in use, though it's no worse than many similar tools. Like almost every multi-tool there's no dust port, so wearing a mask when sanding is recommended, especially for overhead work.

This tool comes bare, so you'll have to fork out for a Ryobi charger and battery unless you've already bought into the ONE+ system. A three year warranty is offered as standard.

To fit blades and pads, you simply pull back a spring-loaded lever on the head, moving the blade retaining clamp forward to release

A reversible adaptor is supplied, which means practically any brand of accessory should fit, including Fein's Starlock system

SPECIFICATION

Oscillation angle: 3°
Oscillation rate: 0-20,000opm
Voltage: 18V
Weight with battery pack: 1.33kg

Typical price: £109.99 (bare)
Further details: www.ryobitools.eu

THE VERDICT

PROS

- Can tilt head to five positions; offers greater control

CONS

- Locking lever can swing loose; slight play in head

RATING: 4 out of **5**

Supplied are semi-circular (flush cutting) and narrow straight (plunge cut) toothed blades, plus a triangular detail sanding pad and five abrasive sheets to fit

Being able to alter the head made it easy to sand a casement window prior to painting

I've used the R18MT-0 over the past few weeks across a variety of tasks, including cutting through floorboards

Machine Mart

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Clarke TABLE SAWS

LEG STAND KITS FOR CTS10D AND CTS11 ONLY £27.59 INC VAT

FROM ONLY £72.99 EXC.VAT £87.59 INC.VAT

BEST SELLER

CTS10D *was £185.99 inc. VAT

INCLUDES LEFT & RIGHT TABLE EXTENSION

MODEL	MOTOR	BLADE	EXC.VAT	INC.VAT
CTS800B	600W	200mm	£72.99	£87.59
CTS11*	1500W	254mm	£149.98	£179.98
CTS10D	1500W	254mm	£169.98	£203.98

Clarke 4" BELT/ 6" DISC SANDER

- Dust extraction facility
- 4" x 36" belt tilts & locks 0-90°
- 225mm x 160mm table, tilts 0-90°
- 370W, 230V motor

CS4-6E

£92.99 EXC.VAT £111.59 INC.VAT

Clarke 6" BELT/ 9" DISC SANDER

- Includes stand
- 1 HP/ 230V/ 1ph motor

CS6-9C

£239.00 EXC.VAT £286.80 INC.VAT

Clarke TABLE SAW WITH EXTENSION TABLES (250mm)

CTS14

- Ideal for cross cutting, ripping, angle and mitre cutting
- Easy release/locking mechanism for table extensions
- 0-45° tilting blade
- Cutting depth: 72mm at 90° / 65mm at 45°

£129.98 EXC.VAT £155.98 INC.VAT

SHOWN WITH OPTIONAL LEG KIT CLK5 £19.98 EXC.VAT £23.98 INC.VAT

Evolution FURY5-S TABLE SAW

3 YEAR

FROM ONLY £159.98 EXC.VAT £191.99 INC.VAT

- 1500W motor
- 0-60° mitre gauge
- Cutting depth: Steel 3mm, Wood 85mm at 90° or 58mm at 45°

Clarke WOODWORKING VICES

STANLEY Record

FROM ONLY £14.99 EXC.VAT £17.99 INC.VAT

WV7

MODEL	MOUNTING	JAW (WIDTH/OPENING /DEPTH)mm	EXC.VAT	INC.VAT
Clarke CHT152	Bolted	150/152/61	£14.99	£17.99
Stanley Multi Angle	Clamped	72/60/40	£18.99	£22.79
Record TV75B	Clamped	75/50/32	£21.99	£26.39
Clarke WV7	Bolted	180/205/78	£29.98	£35.98

BLACK & DECKER / Einhell POWER PLANERS

TE-PL850

- 82mm cutting width

FROM ONLY £54.99 EXC.VAT £65.99 INC.VAT

MODEL	MOTOR	DEPTH OF CUT	EXC.VAT	INC.VAT
Einhell TE-PL850	850W	3mm	£54.99	£65.99
B&D KW750K - GB	750W#	2mm	£57.99	£69.59

Clarke 1" BELT/ 5" DISC SANDER

- Includes 2 tables that tilt & lock

£69.98 EXC.VAT £83.98 INC.VAT

CBS1-5B

NEW

- Quality Induction 250W motor

Clarke 40" WOODTURNING LATHE

Ideal for woodturning in the workshop

- 1016mm distance between centres allows for turning longer spindles
- Inc. tool rest, tail stock, drive centre, face plate & 3 chisel
- Large turning capacity of 350mm
- 4 turning speeds

CWL1000B

ONLY £136.99 EXC.VAT £164.39 INC.VAT

LOCKABLE TAILSTOCK

BENCH MOUNTED

Clarke 13" MINI WOOD LATHE

£154.99 EXC.VAT £185.99 INC.VAT

CWL325V

- Ideal for enthusiasts/ hobbyists with small workshops
- 325mm distance between centres
- 200mm max. turning capacity (dia)
- 0.2HP motor

TURBO AIR COMPRESSORS

airmaster

- Superb range ideal for DIY, hobby & semi -professional use

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* 'V' Twin Pump

8/250

MODEL	MOTOR	CFM	TANK	EXC.VAT	INC.VAT
8/250	2HP	7.5	24ltr	£89.98	£107.98
7/250	2 HP	7	24ltr	£94.99	£113.99
11/250	2.5HP	9.5	24ltr	£109.98	£131.98
8/510	2HP	7.5	50ltr	£119.98	£143.98
11/510	2.5HP	9.5	50ltr	£139.98	£167.98
16/510*	3 HP	14.5	50ltr	£209.00	£250.80
16/1010*	3 HP	14.5	100ltr	£259.98	£311.98

Clarke 4" BELT/ 8" DISC SANDER

- Includes two tables
- 550W 230V motor

£159.98 EXC.VAT £191.98 INC.VAT

CS4-8

Clarke DUST EXTRACTOR/ CHIP COLLECTORS

CDE7B

CWVE1

FROM ONLY £109.98 EXC.VAT £131.98 INC.VAT

- Powerful 1100W motor
- 50 litre bag capacity
- Flow rate of 850M3/h

MODEL	MOTOR	FLOW RATE	BAG CAP.	EXC.VAT	INC.VAT
CWVE1	1100W	183 M3/h	50Ltrs	£109.98	£131.98
CDE35B	750W	450 M3/h	56Ltrs	£144.99	£173.99
CDE7B	750W	850 M3/h	114Ltrs	£159.98	£191.98

Clarke MORTISING MACHINE

£174.99 EXC.VAT £209.99 INC.VAT

CBM1B

- Accurately creates deep square recesses
- Table size 150 x 340mm
- Max. chisel stroke 76mm
- Robust cast iron base & column ensures stability & accuracy
- 95mm depth of cut

CHISELS AVAILABLE FROM £8.39 INC VAT

"Fast and accurate with a good solid feel...Excellent value for money." See www.machinemart.co.uk

Clarke AIR TOOLS

CAT165

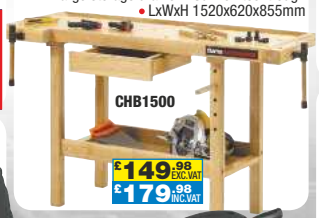
HUGE CHOICE IN-STORE/ONLINE

FROM ONLY £34.99 EXC.VAT £41.99 INC.VAT

MODEL	DESCRIPTION	EXC. VAT	INC. VAT
CAT160	6" Dual Action Random Orbital Palm Sander	£39.98	£47.98
CAT16510	5mm Air Belt Sander	£39.98	£47.98
CAT168	50mm Right Angle Orbital Sander	£34.99	£41.99

Clarke HARDWOOD WORKBENCH

- Includes bench dogs and guide holes for variable work positioning
- 2 Heavy Duty Vices
- Large storage drawer
- Sunken tool trough
- LxWxH 1520x620x855mm



CHB1500

£149.98 EXC.VAT £179.98 INC.VAT

Clarke DISC SANDER (305MM)

- Powerful, bench mounted
- 900W
- Dust extraction port

PRICE CUT £124.99 EXC.VAT £149.99 INC.VAT WAS £155.98 inc.VAT

CBS1-5B

Clarke RANDOM ORBITAL SANDER

- Adjustable front handle improves control
- 7000-14000rpm

£32.99 EXC.VAT £39.59 INC.VAT

CROS3

INC DUST BAG AND SELECTION OF 125MM DIAMETER SANDING DISCS

Clarke BELT SANDERS

- Ideal for surface removal, sanding and finishing

Makita

ABRASIVE SANDING BELTS IN STOCK

BS1

FROM ONLY £36.99 EXC.VAT £44.39 INC.VAT

MODEL	MOTOR	M/MIN	EXC.VAT	INC.VAT
Clarke BS1	900W	380	£36.99	£44.39
Clarke CBS2	1200W	480	£79.98	£95.98
Makita 9911	650W	75-270	£89.98	£107.98

Clarke DETAIL SANDERS

- Perfect for smooth and fine finishing along with hard to reach areas or curved surfaces

CDS-1V

FROM ONLY £19.98 EXC.VAT £23.98 INC.VAT

MODEL	WATTS	EXC.VAT	INC.VAT
PS105	105W	£19.98	£23.98
CDS-1V	280W	£29.98	£35.98

ALL MODELS INC. SANDING SHEETS

Clarke ELECTRIC POWER FILE

CPF13

- Variable belt speed
- Tilting head

*Black & Decker

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CON185*	1600W	60/40	£62.99	£75.59

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CVAC20PR2	1400W	16/12ltr	£64.99	£77.99
CVAC25SS*	1400W	19/17ltr	£67.99	£81.59
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MODEL	SHEET SIZE	MOTOR	EXC.VAT	INC.VAT
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CON300*	230X115mm	330W	£29.98	£35.98

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Clarke CONTRACTOR

powered by Li-Ion

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MODEL	VOLTS	BATTS	EXC. VAT	INC.VAT
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CON18Li	18V	2 x Li-Ion	£89.98	£107.98

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MODEL	BLADE DIA/BORE (mm)	MAX CUT DEPTH/ CROSS	EXC.VAT	INC.VAT
CMS210S	210/30	60/120	£89.98	£107.98
CMS10S2	254/30	78/340	£139.98	£167.98

Clarke MITRE SAWS

CMS210

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Laser Guide ‡ Sliding Compound

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MODEL	BLADE DIA/ BORE (mm)	MAX CUT DEPTH/CROSS	EXC. VAT	INC. VAT
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Einhell TC-MS 2112	210/30	55/120mm	£59.98	£71.98
Einhell TC-SM 2131#	210/30	62/310mm	£129.98	£155.98
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CDP152B

B = Bench mounted
F = Floor standing

MODEL	MOTOR (W) SPEEDS	EXC. VAT	INC. VAT
CDP5EB	350 / 5	£66.99	£80.39
CDP102B	350 / 5	£79.98	£95.98
CDP152B	450 / 12	£149.98	£179.98
CDP202B	450 / 16	£189.00	£226.80
CDP10B	370 / 12	£198.99	£238.79
CDP452B	550 / 16	£229.00	£274.80
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CON750 *DIY #Professional

MODEL	POWER (W)	DEPTH OF CUT (WOOD/STEEL)	EXC. VAT	INC VAT
CJS380*	420W	55/6mm	£15.99	£19.19
CON750#	750W	80/10mm	£27.99	£33.59
Bosch PST700E*	500W	70/4mm	£49.98	£59.98

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TC-BJ900

Clarke SCROLL SAWS

CSS400C

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- Table tilts 0-45°

MODEL	MOTOR	SPEED RPM	EXC. VAT	INC. VAT
CSS400D NEW	120W	400-1600	£79.98	£95.98
CSS16VB	90W	550-1600	£94.99	£113.99
CSS400C	90W	550-1600	£114.99	£137.99

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- Cuts in all types of wood

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CBS190B

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REMOVABLE DUST TRAY

CBS225

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MODEL	MAX. MOTOR HP	FUSE	EXC.VAT	INC.VAT
PC20	2HP	10Amps	£229.00	£274.80
PC40	3.5HP	20Amps	£269.00	£322.80
PC60	5.5HP	32Amps	£319.00	£382.80

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- Simple, easy to set up & use for producing a variety of joints • Cuts work pieces with a thickness of 8-32mm • Includes a 1/2" comb template guide & holes for bench mounting

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CDTJ12

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- Includes stand

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MULTI-STEP DUST EXTRACTION OUTLET

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REMOVABLE DUST TRAY

BLADE TENSIONING CONTROL

* was £478.80 inc.VAT # was £597.60 inc.VAT

MODEL	THROAT DEPTH	MAX CUT 90°	MAX CUT 45°	EXC. VAT	INC. VAT
CBS250 NEW	250mm/10"	100mm	75mm	£219.98	£263.98
CBS300*	305mm/12"	165mm	115mm	£379.00	£454.80
CBS350#	340mm/14"	225mm	160mm	£479.00	£574.80

Clarke CONTRACTOR BOSCH ROUTERS

- Powerful heavy duty machines ideal for trade and DIY use

CR2 INCLUDES 15 PIECE KIT WORTH OVER £20

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CR1200

NEW

*DIY

MODEL	MOTOR (W)	PLUNGE (mm)	EXC.VAT	INC.VAT
CR1200 NEW	1200	0-55	£44.99	£53.99
CR1C*	1200	0-50	£46.99	£56.39
Bosch POF1400ACE	1400	0-55	£89.98	£107.98
CR2	2100	0-60	£119.98	£143.98

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CBG6RZ	PRO	150mm	£42.99	£51.59
CBG6RSC	HD	150mm	£54.99	£65.99
CBG6SB#	PRO	150mm	£54.99	£65.99
CBG6RWC	HD	150mm	£59.98	£71.98
CBG8W* (wet)	HD	150/200mm	£56.99	£68.39

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PEGAS SCP-C100 SCROLLSAW BLADE CLAMP SET

Ian Wilkie looks at this scrollsaw blade clamp kit from Pegas, which allows you to upgrade your machine and enhance the performance and finish of your work

The Pegas clamp set is designed for parallel LINK scrollsaws, such as the Axminster Trade Series and the Excalibur; it will not fit the standard parallel ARM scrollsaws. This product is the result of research carried out in Switzerland and it is manufactured from aircraft grade machined aluminium. Both clamps are designed to replace the ones provided with the scrollsaw and will fit directly to the machine. The step-by-step instructions with colour photos are easy to follow.

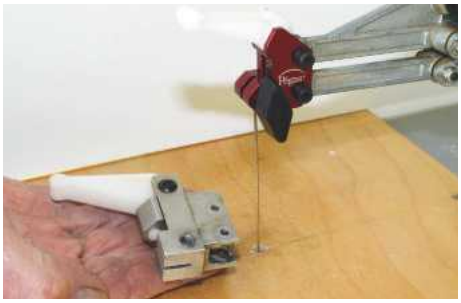
Superior build quality

These clamps are undoubtedly very well made and they look and feel superior to the existing clamps already provided on the scrollsaw; however, I must say that I have never experienced any problems with the standard clamps on my Excalibur EX16 machine. The Axminster scrollsaw looks identical, so I would not expect problems there either. Pegas claim their clamps will save wear on the scrollsaw because they are machined to a high quality, are more compact and lighter in weight, and they also reduce vibration, but this is difficult for me to assess.

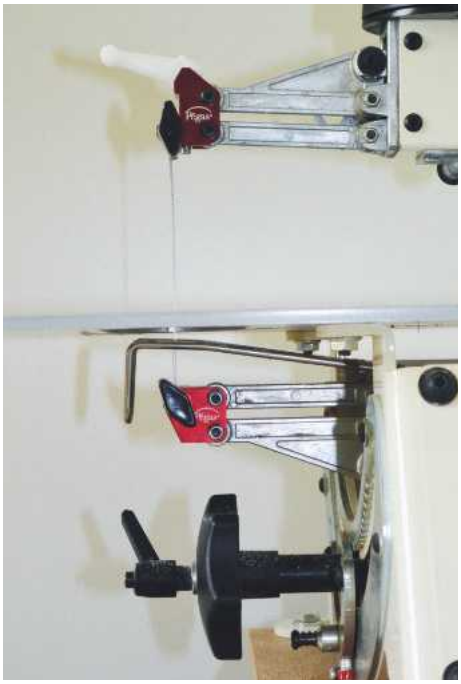
Upper and lower clamps with four bolts and bushes, plus tightening screws

The top clamp has a white nylon tension lever and the blade is clamped in position and tightened with a thumb screw; no separate key is required. It is easy to guide the top of the blade into the slot

The bottom clamp has a similar thumb screw



The Pegas top clamp and the Excalibur clamp it replaced



Both clamps in position holding a plain-ended blade and aligned perfectly with no adjustment necessary

Easy blade changing

A scrollsaw usually stands or falls by the ease of changing blades, especially when making internal cuts. Moreover, it must hold the blade firmly without the need for keys or spanners. The Pegas clamp system meets these criteria. I found the clamps held the blade efficiently and it was easy to change blades and possibly even faster. I did find the 'wings' on the tightening screws hard on the fingers but it is the same with the white-metal equivalents. If they could be a little bigger and made in a softer, ergonomic material, this would certainly be an advantage.

Conclusion

As a keen scrollsaw user who enjoys cutting intricate patterns for my models, once fitted I was reluctant to remove the Pegas clamps. They are a quality product and enhance my Excalibur machine; however, they are very expensive at £85. If you do decide to buy them, I think you will be pleased with their performance.

SPECIFICATION

- More compact than standard blade clamps
- Aeronautical aluminium – over 40% lighter
- Greatly reduces vibration
- Blade changing is easier and faster
- Reduces stress on the machine, thus increasing life of the scrollsaw
- Easy to fit as an upgrade

Typical price: £84.96
Web: www.brimarc.com

THE VERDICT

PROS
- Well engineered; efficient

CONS
- Cost

RATING: 4.5 out of **5**

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ONE GOOD TURN & ANOTHER

A search for some woodturning help leads **Dave Roberts** to two borderland clubs with a common purpose

During the Industrial Revolution, such was the pull exerted by the growing number of factories and the push created by unemployment among rural communities, that by 1850 Great Britain had undergone a sea change: she had become the world's first country to have a population that was more urban than rural. Despite *The Daily Telegraph*'s jolly 'Farewell to Waitrose' articles about relocating beyond the M25, that tide won't change, and there remains the perception that life ends where the streetlights peter into the outer darkness. And, of course, one sort of life does end when you leave city limits, but here in the borderlands another begins – one that can be characterised as being neither the independence of the Welsh hill farms nor the collectiveness of the English towns. It's also a type of life that has been so busy that a plan to make something of my applewood boles has progressed no further than the back of an envelope.

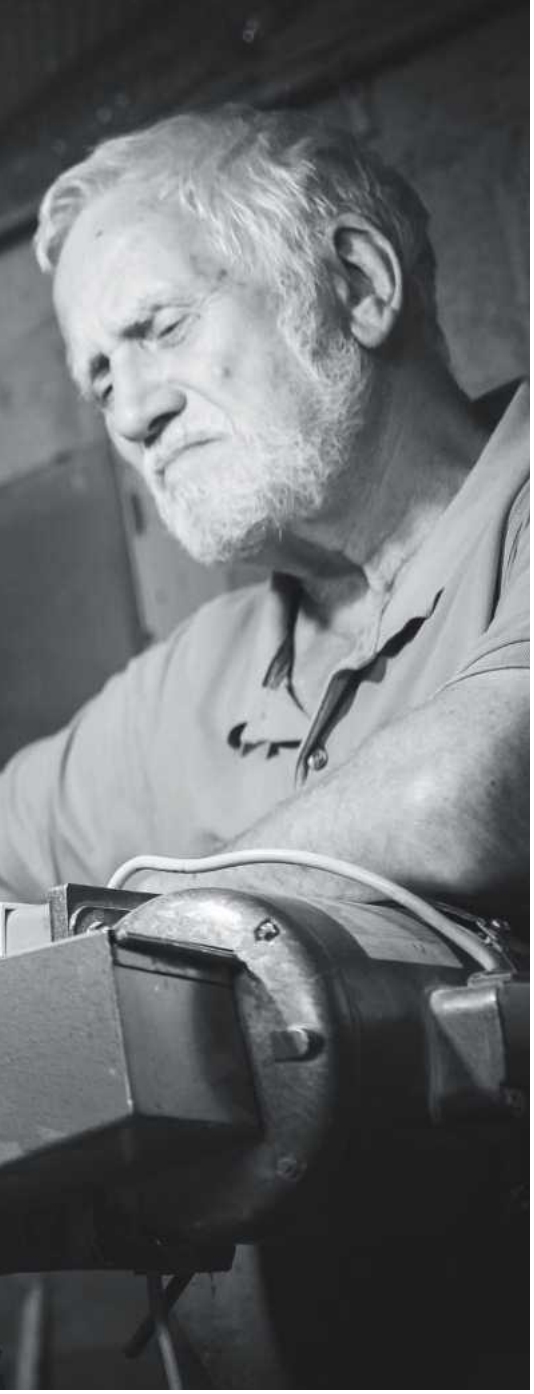
I've harped on about these pieces before; they're the result of repeated pruning which has created knots of dense and tangled grain that look like wooden versions of a plaited-rope Monkey Fist. The idea is to have at least one of them turned into a sphere and mounted like a globe, on which the fruitwood's figure will, with the exercise of a little imagination, reveal the story of the tree's vanished past.

More sociable than social media

In the borders, there's someone to do everything, and it's generally true that everyone does several things; a nearby nurse, for example, also moonlights as the village mole-catcher. No, really; it's true. The search for a woodturner to tackle the applewood, however, has led me further east, to Rhydycroesau, where an informal little turning group comes together once a month in a garage whose door, standing open in the late summer evening, frames the Shropshire plain below.

Inside, six men – from the youngest standing at the back, to the most senior comfortably seated at the front – are ranged about Derek Wilson, who hosts the Selattyn Woodturning Club. Everyone's welcome, the club 'site says, no experience required; you don't even need to have a lathe, just an interest in learning a little more about the subject – which at least relieves some of the guilt I'm feeling about stealing in on my applewood mission.

My selfish intentions, however, remain undiscovered for fully 15 minutes or so as Derek works and the members watch. He pauses briefly between the stand-mounted electric drill and the small lathe to say hello, but otherwise his



demonstration continues in almost unbroken silence. At one point, I'm passed a slip of paper with a photo of something resembling the *Magic Roundabout*; "That's what we're making tonight," I'm told, sotto voce.

Derek used to run the club on more structured lines, but as the membership has slowly dwindled – "They seem to be dying off, literally" – he has been able to adopt a more informal approach. Now, members suggest projects that they'd like to tackle, these go onto a blackboard, and are approached as a group learning experience. On the blackboard tonight, written with chalk in a neat hand, is 'Ear-ring stand'.

Derek works by the light of a single bulb suspended above the headstock of the lathe. His tools – skew chisels, parting tools, scrapers, bowl gouges – are laid out neatly, ready to hand, and he works with that quality of measured pace – unhurried but also unhesitating – that always speaks (silently, of course) of practised skills. He works freehand for the most part, using a handful of shavings to burnish the workpiece now and then as he judges its finish; there's a Vernier gauge for spigots, of course, but otherwise form, curve and undercut are all measured by eye. Even so, he invites the group to, "stop me if you think I'm making a howler."

Derek at work: "As a piece of turning," he'll say of the ear-ring stand, "it's OK; as a piece of furniture, it's dreadful!"

Practised skills: there's a Vernier gauge for spigots, but shape, curve and undercut are all measured by eye

For their part, the members lean in to watch, like students around the surgeon, refining their understanding through observation; if a club is about coming together around a common interest, then this is a club at work. It's only later I learn that Derek really is a retired surgeon.

"Help yourself to a coffee," he says eventually, and at his invitation the others turn their attention to the flask and biscuit box. Jason, the newest member of the group, enthuses about making, about the turning process in general, and about the mesmeric quality of ribboning shavings in particular; in fact, he admits to having become so carried away that he once turned a bowl blank to nothing. Jason came to Derek as an absolute beginner, needing instruction and help to make three turned pieces in order to qualify for an eight-day intermediates' course he'd impetuously booked. He's now returned, "and he's bloody good," Derek confides. "He can produce a better finish than I can!"

The coffee-time conversation revolves around lathes being bought, bandsaws being set up, and woodworking videos found on YouTube. There might be a cultural insight to be learned in the fact that the clips from the US seemed to show people using tractor hubs as headstocks to turn huge items, while those from Japan were about competitions to produce the finest and longest plane shavings. Discuss.

In the meantime, though, the simple lesson from closer to home is that a club – perhaps the oldest-school way of learning; heck, it's almost Socratic, isn't it? – is much more sociable than social media. It's a thought that, winding down out of the hills and onto the plain, is reinforced by the Shropshire Association of Woodturners (SAW), where a demonstration evening is just beginning…

Sharing inspiration

SAW's monthly meetings usually host a professional woodturner, and I count about 35 members watching this month's demonstrator, Emma Cook, who – at just over 4ft 10in – bills herself as 'the Tiny Turner'. "This is a good night," says club treasurer Andrew Thomson, indicating the rows of occupied seats, and some of the reason for the turnout quickly becomes apparent: while she works, Emma maintains an informative and humorous patter with vowels that are almost as broad as she is tall. "Are you from Yorkshire?," someone asks; "How did you guess?" Emma replies. It's the sort of good-natured exchange that has made her a popular guest at SAW.

The set-up here is quite different from Derek's garage: we're in a warm and well-lit village hall, which may be another reason that the club, which meets just outside Shrewsbury, is able to draw around 40 members – who are predominantly older and male, but not exclusively so – from a 20-mile radius. In one crucial respect, however, Selattyn and SAW are just the same: there's an audience which knows how to turn (to a greater

The members lean in to watch, like students around the surgeon, refining understanding through observation

NORTHERN RECIPE

Before visiting SAW I hadn't come across Yorkshire Grit sanding paste, but I was fascinated to learn that someone has created a brand around an old finishing recipe by combining mineral oil, beeswax, some 'ultra-fine grinding powders', and a helping of professional Northern-ness. It seems popular with turners, though, and while it's primarily intended to prepare turned wood for a wax finish, Emma reckons that, "it doesn't give a bad finish for something that says it in't a finishing product" – a bit like using sanding sealer as a finish in its own right, rather than a foundation.

If Yorkshire Grit's grinding powders are pumice and rottenstone (which is a combination of powdered pumice and limestone), then you could make your own brand of fine and super-fine abrasives to burnish finished work (Note to self: Old Vic' Grit). The materials' combination of hardness and friability means that their particles break down while maintaining cutting edges, and so produce an increasingly fine grit; if used to dress a coating of shellac, say, pumice will give a gentle gloss, while rottenstone will build on pumice's finish to give a high gloss. To use them, you can make up a paste using linseed oil (or any light oil) as a medium, or use a piece of strong cotton cloth dipped in oil to pick up the powder, and apply it directly.

Because Emma was turning, she applied the Yorkshire Grit to the stationary workpiece before using a soft cotton cloth and the lathe's rotation to burnish the piece. My do-it-myself approach, meanwhile, would simply involve applying the pumice or rottenstone by hand, working with the grain, and checking progress by wiping away the paste with a clean cloth. When finished, the pumice or rottenstone residue can be removed with a cloth and turpentine or similar, though if you've been polishing shellac don't use meths – it'll soften and dull the finish

The Tiny Turner in action

Different setting, same principle: everyone takes something away from a demonstration

Old skills, new direction: Emma combined spindle turning with a hand-blown glass bauble and a string of LED lights to make a Christmas decoration

or lesser degree), and which is developing that understanding by watching and learning. Yes, SAW uses video cameras and flat-screen monitors to provide a close-up view of the tool addressing the workpiece but, like Selattyn, the evening comes down to example and inspiration. Instead of an ear-ring stand, Emma's combining some spindle turning with a hand-blown glass bauble and a string of LED lights to make a Christmas decoration; the demonstration still revolves around a common set of turning means, though, and an end to which they can be put.

While, with the exception of the occasional question, SAW's audience is just as quiet and engrossed as Derek's, Emma – who's well-practised on the show and demonstration circuit – does a good deal of chatting. She explains her intentions, techniques and choice of tools (see 'Northern recipe'); as she turns, she points out mistakes and their remedies, and the information spins out from the lathe like the shavings. Watching and listening isn't the whole of a SAW evening, mind. There's also a competition that takes the form of two challenges – one for less experienced turners, another for more advanced craftsmen – that invites them to use that common set of turning skills to interpret a challenge (September's competition, for example, calls for a pair of door knobs from the regular turners, and an offcentre item from the more ambitious). Oh, and did I mention the bar?

Yet for all that SAW has the advantage of more facilities – or is it just the benefit of numbers? – it was interesting to find that it is fundamentally the same as the Selattyn club. As SAW's chairman Tim Aaron says, turning comes down to Form and Finish with capital Fs, and – through the exchange of ideas that occurs by demonstration, observation and conversation – form and finish have been the beginning, middle, and end of the two evenings I've spent in the hills and on the plain. When so many turners are self-taught and work in solitary workshops (I can throw a zebrano blank and hit three from where I'm sitting), the opportunity to come together and share in this way is invaluable. And for myself, I'm more than pleased to have finally found someone who's willing to turn my applewood.

SAW uses video cameras and monitors to provide a close-up view of the tool addressing the workpiece

Fixed centre: sharpening skills are central to all turning

Tim Aaron: turning comes down to Form and Finish with capital Fs – oh, and tea

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GILLY THE GIRAFFE PART 1

In part 1 of this project, **Grace Silverwood** shares her modern take on the traditional rocking horse – a rocking giraffe

The giraffe shown in this article, now known as 'Gilly', is ideal for any child, young or old. It was a pleasure to make and a pleasure to watch so many children have many hours of fun on her.

Gilly herself is made entirely from reclaimed materials that I had knocking around my workshop and the house. I think the only thing I needed to buy was the wood filler, but fortunately I had suffient wood available for the rockers as well.

Some stages are shown in a different order than they were actually completed – for example, the head and neck were not fixed permanently in place until the rocker was completed, and you may notice this throughout some of the photos.

CUTTING OUT YOUR PIECES

This project requires a fair amount of solid wood worktop. It has to be at least 38mm thick and I was lucky enough to have some oak worktop offcuts available. If you don't have any to hand, try looking on eBay and other similar auction sites. If you can't find oak worktop, then you could use beech instead.

As this wood was quite thick, parts such as the legs, back/seat and neck are kept at their original thickness. This was also due to the limited amount of worktop I had to play with. The only part you need to double the thickness on is the head; this also allows more room to shape and gives the child a greater surface area to hold on to.

Using the templates provided (**Fig.1**) – please note that these are not to scale – transfer the shapes and dimensions onto your worktop using a pencil (**photo 1**). To minimise as much waste as possible, I would try to leave around a 12mm gap between each drawn piece. However, do not draw anything between the two legs, as these offcuts will be used later on for the shoulders. You need to leave a large piece for your seat top, roughly 609mm long and 229-254mm wide, but each child is different in age and size so you may want to increase this. I found this size sufficient for most ages up to around 10 years old. Now, either using a jigsaw or bandsaw, begin to cut each piece out. I used a bandsaw. You should now have two head pieces, a neck and two legs (**photo 2**).

1 The templates once transferred onto the worktop

2 Once cut out, you should have two head pieces, a neck and two legs

3 Installing the back legs – a car jack came in particularly handy here!

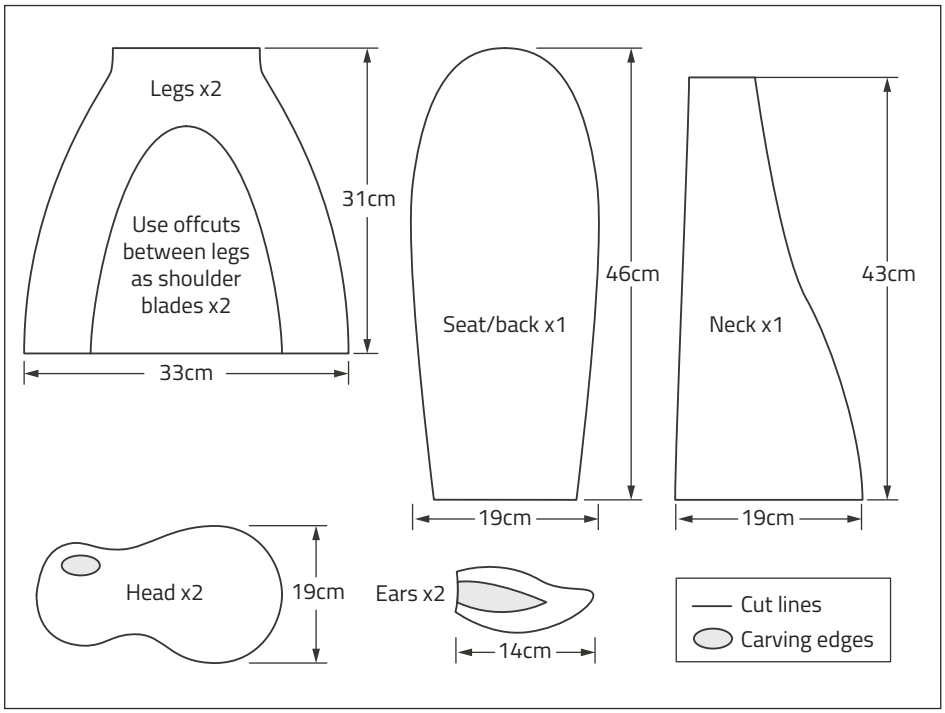

Fig.1 Templates for Gilly the giraffe

Assembling the back to the legs & belly

Once all your pieces are cut out, the body is more or less ready to assemble. I found this was easier for me and more fluid to carve later on. Using a bandsaw, tilt the table to 26° and run the top of the two legs through before gluing and screwing these to the body. You want to fix the front leg first as this has a straight edge for the legs to line up to. Using an F clamp, secure this in place and mark two holes for your screws (**photo 3**). Drill two pilot holes and then countersink them, as these need to be hidden later on. This can then be glued and screwed securely in place. A converted car jack I had lying around proved most helpful in installing the first leg, but an extra pair of hands

MATERIALS & TOOLS REQUIRED

Materials

- 100g ball of black wool
- Offcuts of (40mm) thick oak worktop (this must be solid wood throughout, not the chipboard kind)
- 1m of 3 × 2 pine for the rocker struts
- 1.2m length of 254 × 50mm thick ash for the rockers (any hardwood would do although softwood will probably not take the strain as well)
- 254mm length of 25mm square tulipwood or beech for turning the horns (a rolling pin would also work well)
- 12mm thick solid oak for the ears
- Offcut of broom handle or 25mm thick dowel to use as the handle bar
- PVA glue
- Two-part epoxy resin glue
- White primer and eggshell paint for the rockers
- Mahogany stain and 6mm artist's brush

Tools

- Heavy-duty bandsaw with a cutting depth of at least 20mm for shaping the head (but you could also use a jigsaw and shape the head by hand using a mallet and chisel)
- Angle grinder – fitted with a 80 and 120 grit sanding disc
- Lathe (for turning the horns, but you could use some ready-turned pieces such as a pair of drawer knobs or light pulls instead, for example)
- Mallet and carving chisel
- Bench drill with Forstner drill bits to match your broom handle handle bar
- Dremel or Foredom with suitable wood burr (I use 25mm Saburr wood burrs on my Foredom)
- Pencil
- F clamps (heavy-duty ones with fairly wide openings)
- Spring clamps
- Spokeshave
- Belt sander
- Countersink
- Bevel gauge
- Workmate or outside workbench
- Dust mask and face protection

4 The belly, once installed between the legs

5 The 'muscles' are glued into place using various spring clamps

would also work just as well holding the second leg while the first pair are secured in place.

Now using the first leg, once again secured in place, take the second leg and position this near Gilly's curved bum. You may want the posterior to overhang by around 25mm or so, but this is up to you. Using the first installed leg, eye up the second pair from behind so they are both lined up with the body. Two straightedges can also be helpful for this, at either side of the leg.

Repeat the second step of this stage and your giraffe should now stand by herself. Leave to dry overnight while placing the legs on your bench with additional F clamps to hold these in place (belt and braces).

The belly, which is a narrow piece of 1.8cm thick oak, is now cut to size and then installed between the legs, glued and left to dry (**photo 4**). I found a bevel gauge a handy tool for helping me to find the angles I needed to cut between the legs. Gilly then needs to be placed upside down while the glue dries.

Next, 'muscles' are glued in place using spring clamps (**photo 5**). These are basically offcut triangles from the original cutting out stage; you don't have to add these but I think they are useful in building up the shape of the legs.

The head

This is the only part of the project that requires two pieces to be glued together. These are glued and clamped overnight and the finished result can be seen in **photo 6**.

Now to add some contours to the face and nose. This is done by making a few shallow cuts on your bandsaw. This is a very risky step and I found holding the head at the back with a large F clamp, rather than with your hands, useful in keeping things well away from the blade (**photo 7**.) If you don't have access to a bandsaw with a large cutting height, then a mallet and chisel could also be used.

The next step is to remove the sharp edges of the head. Using an angle grinder and a sanding disc (80 grit), work at the angles of the head and contours of the mouth (**photo 8**). I found holding the head with a large F clamp on a Workmate helpful. I would strongly recommend you do this process (and further carving with an angle grinder) outside. Please also remember to wear face protection and a dust mask during this process.

Once you are happy with the shape, switch to using a 120 grit sanding disc on your angle grinder. Now that the shape of the head has been completed, you can draw the nostrils onto the nose. These are drilled out using a Forstner bit for the larger areas before being shaped further using a Foredom/Dremel fitted with a 25mm Saburr bit (or wood burr bit to fit a Dremel).

Mounting the head to the neck

The next step is to attach the head to the neck. At this point, the neck has not been shaped with an angle grinder as there is still more to add to the neck. The top of the neck is then cut for the contour of the head, where the head will be attached using two dowel joints. I found it best to lay them both flat on the bench so they are positioned in place, which will help you to achieve the correct tilt of the head. I wanted

6 The head shape after having been glued and clamped together the night before

7 You can use the bandsaw to add contours to the face, or a mallet and chisel if you prefer

8 Ready to remove the sharp contours from the head and adding shape to the mouth

9 The nostrils drawn on to the nose, ready to be drilled out

Gilly's head looking more or less straight forward, but you may want it differently.

Once you are happy with your position, remove the neck and using a piece of paper under the head, copy the curve. Some people may find a profile gauge more suitable for this step.

Next, cut out the negative space of the template and transfer this onto the top of the neck before cutting out with a bandsaw.

A dowel joint then needs to be made by drilling two holes into the neck followed by two corresponding holes in the head. A dowel can then be half inserted into one hole on the neck followed by the opposite hole on the head. Next, glue these dowels in place as well as adding more glue to the rest of the join. The head can then be hammered down with a mallet. I found a bench vice quite handy for holding the head upright, which kept it dead level. Leave overnight so everything can dry.

Adding the shoulders & shaping the neck

The next step is to add the shoulders; these will act as a counterweight for the head, which will start to feel quite heavy at this point. You should have two rough offcuts from the negative space between the legs; these are your two shoulder pieces. If they currently don't have a straight edge at the bottom, you will need to do this now so that the head sits nice and level on the body. These can then be glued, clamped in place and left overnight (**photo 11**).

The following day, you can now begin to shape the shoulders into the neck line. For me, this proved quite difficult using an angle grinder so I chose to carve this with the help of a good old-fashioned mallet and chisel (**photo 12**). Please note you need to do this for both sides of the shoulders.

Once you are happy with the roughly carved shape, you can now finish off the wood. Take your angle grinder with a 120 grit sanding disc fitted and remove the chisel bumps you've created. You will also need to soften the edges on the shoulders and round off the edges of the neck. The finished result will look something like that shown in **photo 14**.

NEXT MONTH

In part 2, Grace will make the remaining elements of the rocking giraffe before painting and assembling the completed toy

10 The head once attached to the neck

11 The two shoulder pieces glued to the neck

12 Shaping the shoulders into the neck line using a trusty mallet and chisel

13 The head is now beginning to take shape

14 The head once mounted onto the body

CONSTRUCTING A TUDOR WHEELBARROW FOR HAMPTON COURT PALACE

John Greeves talks to **Greg Rowland** about the building of a Tudor wheelbarrow

At one time the Wheelwright's shop was considered the 'Workshop of the World', and little seems to have changed today for Mike and Greg (**photo 1**) who run their business, Mike Rowland & Son Wheelwright and Coach builders, with the help of George Richards. The business is situated in Colyton, Devon and has a family lineage dating back to 1331 when Rowland Wheelwright carts carried stone for the building of Exeter cathedral. In 2005 the business had the honour of gaining the Royal warrant of approval in the position of wheelwrights and coachbuilders to Her Majesty the Queen. On average, they produce 200 wheels per year along with many vehicles, cannons and other commissions.

1 Greg & Mike Rowland

Wheelwrights have been connected with transport and agriculture, building entire carriages and wagons or harrow and ploughs, as well as making wheels. Being a wheelwright dictates having a wide skill-set involving skilled carpentry and joinery, furniture making, blacksmithing and house building, for instance. In addition it can also include 'rural' carpentry (responding to farmer's needs for wheelbarrows, fences, gates, posts, etc.), cooper making items such as barrels and buckets, constructing and repairing mill wheels, sails and grinding machines, besides the essential business of making a variety of different sized wheels.

No challenge remains too big or too small for Greg and his dad, as well as wheelwright George. In addition to repairing or making 200 wheels per year, the business has undertaken other specialist work. This has included wheels for a Norman trebuchet, constructing many brewery drays, providing parts for promotional carts (which sell produce such as strawberries), and fabricating carts for Newfoundland dogs to pull. They have also provided wooden wheels for vintage cars such as the Ford Model T and the workshop has even created historical props for films including *Gladiator*. Greg has built various cannon carriages (his favourite speciality) and wheels (**photo 2**), as well as assisting in the construction of a replica 1830 MacMillan velocipede bicycle (reputed to be the first pedal bicycle propelled by a horizontal reciprocating movement – similar in action to a modern cross-trainer in a gym today – for Guy Martin's *How Britain Works* TV series. Tudor wheelbarrows also appear on the list of commissions undertaken. Not only were these master wheelwrights asked to build four Tudor wheelbarrows for Hampton Court Palace, but Greg and his dad were also commissioned to build a cheese and market cart at the same time.

Market cart or tumbrel, plus Tudor wheelbarrow completed for Hampton Court Palace

Design & problem solving

The word 'wheelbarrow' has been in the English language since the 14th century and comes from the old English word 'bearwe', with the word 'barewer' meaning one who makes barrows.

2 Londonderry cannons – an example of Greg's wheelwright craft

3 The previous Hampton Court wheelbarrows

FURTHER INFORMATION
Mike Rowland & Son Wheelwrights & Coachbuilders – **www.wheelwright.org.uk**
Historic Royal Palaces – **www.hrp.org.uk**

Legend has it that the first wheelbarrow was the brainchild of a Chinese inventor, with most sources crediting Chuke (Zhuge) Liang as the true creator. The wheelbarrow didn't reach Europe until several centuries later. The first two images of the Western wheelbarrow are found in a manuscript illustration of Matthew Parris' drawing 'Life of SS Alban and Amphibalus', which dates from the early 13th century and in a stained glass window in Chartres Cathedral, dated 1220. In attempting historical reproductions, design information often comes from the most unexpected sources. As Greg says: "Restoration gets you thinking in a completely different way." There's no off-the-shelf manual with plans and instructions, just a series of interesting challenges to overcome in recreating something generated from the past. Greg used a painting called 'The Market' by Pieter Aertsen, 1550, to develop his Tudor wheelbarrows. The painting depicts a bustling market scene full of people, trestle tables, fish, cheese, a market cart, baskets brimming with vegetables and fresh produce, all set amidst a human melee. Central to the scene is the loaded wheelbarrow resting

TOOLS & EQUIPMENT USED

Hand tools	Larger equipment	Bonding process
Drawknife	Spokehorse	Tyre roller
Hand plane	Bench	Bonding or tyring plate
Spokeshave	Forge	Sledge hammer
Side axe	Mortise machine	Tyre-dogs
Adze	Hollow auger	Tamper
Mortise chisel	Bandsaw	
Mallet		
Hammer		
Spoke dog		
Traveller		

4 A typical example of a cart hub, which has been turned on the lathe

5 Another typical example of a hub that has had square mortises cut and hub rings fitted to prevent the wood splitting or cracking

6 George, Greg and Mike bonding a tyre

7 blacksmith's nails give the appearance of the strakes on the tyre

8 Inside the workshop

9 Tudor wheelbarrows

on the ground with its curved sides and handles reaching up. "The artist's picture actually gave us quite a bit of information," Greg tells me. For instance, the 'fellies' or 'felloes' (the shape blocks that make up the rim of the wheel) are chamfered and this detail would only have been included if the artist had observed it.

From the start, Greg decided to work the design back from the wheel. He was very keen to copy the sweeping curve on the sides. Proportions and measurements for the cart were scaled from the estimated height of people at the time, which assumed male heights between 5ft 6in and 5ft 7in. Previously, other Tudor wheelbarrows had been made for Hampton Court Palace (**photo 3**), but although these contained many good features found in the Aertsen's barrow, they didn't, for example, include certain essential features such as the sweeping sides. Also, to the trained eye, it was apparent that the wheel had been made by a joiner rather than by an experienced wheelwright.

A General wheel overview

The making of the wheel embodies its own vernacular. Basically, a wheel consists of a hub (**photo 4**), spokes, fellies and tyre. The spokes are driven into mortises (**photo 5**) in the hub (sometimes called the nave), with the other ends, the spokes, the tanges, or tongues (which are usually oval or round), fitted to the rim of the wheel. The rim is made from a series of fellies (referred to in other regions as felloes) which make up the rim of the wheel. Each fellie needs to be cut at the correct angle to make the perfect circle. The spokes are dished in wheels of larger wagons. Here the mortises are angled (slanting outward from the centre) to strengthen the wheel and allow wider carriages more downward pressure and lateral thrust of the axle. The wheel is bonded by a metal hoop tyre (**photo 6**) that compresses all the joints and is applied while hot. In the past, a number of curved iron strakes (**photo 7**) were used. These individual pieces were nailed around the circumference of the wheel, but this technique ceased around the last part of the 19th century.

Making the wheelbarrow wheel

Certain preconceptions exist when it comes to the making of a wheel. Firstly, larger wheels are more difficult to build than smaller ones. The reverse is true and it's said that if you can make

10 Smaller hub rings need to be further heated to generate the expansion of the metal

11 Aligning the hub ring with a hammer

12 The mortises are then calibrated on the mortising machine

13 This will cut the square mortises and save considerable time

14 Greg using a spokeshave to carve the spokes

15 Spoke shoulders are driven into the hub

16 A favoured auger used to produce the round tenons, which are called 'tangs'

a wheelbarrow wheel, you can make anything. Secondly, the assumption that making a circular wheel remains the most difficult aspect of construction can certainly be challenged. For Greg, a wheel has to be treated as a whole and the most difficult aspect he thinks (when you are first learning) is that "all the joints have to be pulled together at the same time." According to Greg you can't reinvent the wheel – the traditional components remain the same – although the methods to reproduce, often with machinery, are quicker and more accessible today (**photo 8**).

Much of the work for the Tudor wheelbarrow is handcrafted (**photo 9**). The hub for the 18in wheel is turned on the lathe, and four wheelbarrows were made using oak throughout to ensure longevity. The ends of each hub then have a metal band shrunk onto it; this prevents the hub from cracking and opening up. In total, four metal bands will eventually be heated and attached to the hub (**photos 10** & **11**): two at either end of the perimeter of the hub and two bands that extend to the middle up to the line where the spokes radiate. The mortises can then be cut (**photos 12** & **13**). In the past, this could have been done by hand with the use of mortise chisels, callipers and dividers, but today the mortising machine does it in a fraction of the time. Again, a technique known as double dishing (a bit like a bicycle wheel) could also be applied to small wheels but this overcomplicates the design, and as Greg says: "You don't need to dish them if you keep the spokes short and stout."

The eight spokes for each hub are all completed by hand using drawknives and spokeshaves (**photo 14**). The spoke foot is then driven into the hub using a hammer (**photo 15**). This has to be a tight fit – no glue is used throughout. The tanges or tongues of the spoke that go into the fellies can be circular or square but Greg uses a hollow auger to produce his round tenons (**photos 16, 17, 18** & **19**).

Four fellies per wheel are cut on a bandsaw (**photo 20**). Years ago an adze would have been used to create the curve and a tenon saw to cut square tenons. The fellies are cut oversize. The fellie is laid on top over the tangs and marked. Holes are then drilled in the correct locations. Two fellies are attached first. Each fellie used accommodates two spokes with the round tenons passing through. A tool called a spoke dog (**photo 21**) draws the spokes together and helps to manoeuvre the spokes into the fellie before it's knocked on with a hammer. The two remaining fellies are then laid on top of the attached ones so they can be trimmed, marked and drilled before the other spoke ends are fitted on (**photo 22**). A small gap is always left between the ends of the fellies; this enables all the joints to be closed up (this takes a specialist eye) when the steel tyre is bonded. There's a dowel between each fellie that's inserted to stop it moving once it's on. Greg then uses a traveller (**photo 23**), which is similar to the miniature trundle wheel you see officials pushing along the road; this calculates the circumference of the wheel. "You run it outside the tyre of the wheel first before transferring the measurement to the inside of the tyre. This gives you the size of the wheel but not the size of the wheel you are going to make," Greg says. Allowances have to be made for the gaps and thought given to the shrinkage or 'net', which is really a 'knowledge thing' gained by experience. A continuous tyre is made that is butt welded together because it's much stronger (**photo 24**). Big rivets or the ends of blacksmith's nails are added later, which gives the appearance of strakes. The wooden wheel is clamped to a bonding plate – sometimes called a tyring plate (**photo 25**) – and the steel tyre is then heated in a fire. We watch as the black carbon around the rim turns grey and is burned away. It's a way of gauging the readiness of the tyre. When it's white hot, it's quickly fitted over the wheel and levered into place with tyre-dogs,

17 Shaping the round tenons, which will form the tangs of the spoke

18 Round tenons are cut by machine

19 All the tenons are now completed

20 The fellie patterns or templates

21 A spoke dog draws the spoke into position

22 Fellies being fitted

23 Greg using a traveller

tamper and a sledge hammer. While it's in place, the entire wheel is cooled with water (**photo 26**). After this Greg says they go round with a sledge hammer and hit the tyre at the end of every spoke on the steel side. Greg can listen to the noise it makes, which tells him everything is as it should be. He likens this skill to beating a drum – he's listening for a distinctive sound that rings out to show everything is in place, which lets him know that the wheel is tight.

The arms

The sides (arms) present another challenge in terms of the correct curve. The bed or floor of the barrow needs to rest on the ground when stationary, while still allowing the handles to curve up (**photo 27**). In this case, the arms were made from 3 × 2in air-dried English oak, which was still a little green and better for steaming. Greg made a steam box (**photo 28**) and each arm was steamed for about three hours before being placed in the former (**photos 29** & **30**) and left to cool while the next was heating up. When the pair were cooled, they were marked and mortises cut along the side. Next, eight slats were hand-carved. Front and aft cross-members had through mortises cut, while the others had shallow mortises inserted to form the ladder bed of the barrow (**photos 31** & **32**). When it was ready, the sides were clamped together and the two main members, with through mortises, could then be pegged fore and aft.

Front assembly

All these components are made by hand using a drawknife and spokeshave, with a drill and chisel used to cut the entry for the wedges in securing the circular tenons. Four diagonals support a cross post – top former (**photo 33**). The holes are drilled into the barrow's arms at an angle, which helps to prevent any movement as it's braced all ways. The four uprights in the middle use tenon and wedge and then the entire assembly is driven together as a whole (**photo 34**).

The axle

Two pointed round spikes, with barbs on them, had been made in the blacksmith's forge by Greg. "A hole is drilled first and they are then literally driven into the end of the steel, into the middle of the hub on both sides. Quite a simple block is fitted at the wheel end with the axle held

24 Setting up the tyre roller

25 The bonding plate

26 Water being poured on to cool the wheel

27 A ladder platform bed needs to rest on the floor so it curves up

28 The steamer

29 The side arms are placed in a former

30 The sides have been curved ready to have the mortises cut

31 Ready to make the ladder bed of the barrow

in place with black metal plates, which have been riveted down on either side (**photo 35**). We had to juggle with the thought of the wheel coming through the side pieces. If it had gone through the side, we would've had a massive curve," Greg says. A solution was sought using the blocks. As Greg commented earlier: "Building something from the past constantly presents new challenges and keeps you thinking on your feet." The wood could now be oiled and the steel work painted black because all these wheelbarrows will be kept outside and the wood will eventually turn very black. Today these sturdy wheelbarrows can be found at Hampton Court Palace and are often used for historical interpretation sessions. For many of us, the modest wheelbarrow and its descendants remains an essential part of our lives. As Hai Borland, author and naturalist, once said: "Consider the wheelbarrow. It may lack the grace of an airplane, the speed of an automobile, the initial capacity of a freight car, but its humble wheel marked out the path of what civilisation we still have."

32 Completed platform ladder bed. The front assembly now needs to be built

33 Cross post of front assembly

34 Top and underneath of the completed front assembly – tenon and wedge jointed

35 Black metal plates riveted down to hold axles

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Diamond is the world's hardest material and almost twice as hard as cubic boron nitride (CBN), which is another commonly used abrasive. The diamond's extreme hardness and durability make it the optimal material for sharpening. All three diamond wheels are suitable for all types of material including steel, ceramic and carbide.

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Glenn Lucas, professional woodturner

"I've been using the Tormek diamond wheel for about a year, both in my production business and my classroom. It has performed superbly during that time. I love that it remains flat with no dressing and creates an excellent edge each time in seconds. I have found that I had much better results when I used water as a lubricant, keeping the wheel clean without maintenance."

Please note that due to heavy demand, only limited stocks are available until late 2018. Please ask your Tormek Authorised Skill Centre for details. To find out more, see **www.tormek.com**.

Three new diamond wheels are now available from Tormek

Make this cheese and wine bar using PAR pine and show off your DIY skills at your next party or special occasion, says **Janice Andersson**

PARTY PIECE

This cheese and wine bar is perfect for when you have dinner guests over or for celebrations and parties. The project is made using PAR pine, which can be bought at any builders merchants, and while I left mine natural, you can stain or paint it in the colour of your choice.

There's a place for storing wine glasses, and you can make it longer in length if you would prefer to have more glasses set out. The wine rack accommodates two bottles or red, white or rosé wine, and again, you can modify the height if you want to allow for extra bottles for a special celebration. The base of the cheese and wine bar has a large area where you can set out a variety of cheeses and snacks, and this can be treated with a food-safe product such as Howard Butcher Block Conditioner, which ensures it's perfectly safe for use with food.

MATERIALS & TOOLS REQUIRED

Materials

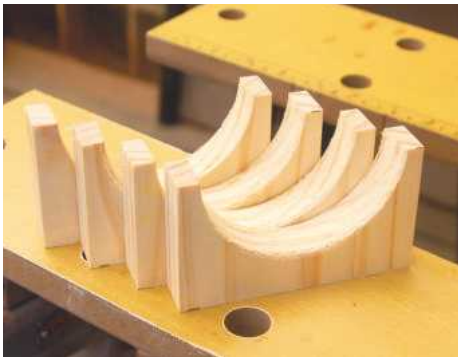
- 19 × 220 x 500mm PAR pine – base and shelf – 3 off
- 22 × 22 × 140mm PAR pine – cross-pieces – 12 off
- 22 × 22 × 260mm PAR pine – uprights – 8 off
- 22 × 22 × 400mm PAR pine – supports – 2 off
- 19 × 110 × 130mm PAR pine – bottle holders – 2 off
- Wood glue
- Howard Butcher Block Conditioner
- 25mm MAD or spade bit
- Rust-Oleum Ultimate Polyurethane natural matt sealer

Tools

- Drill
- 89mm hole saw
- Jigsaw plus clean-cut blade
- Sander plus 120 & 240 grit sanding pads
- Quick clamps
- Hammer and 30mm panel pins
- Work bench
- Tape measure and pencil
- Router and round-over bit (optional)

1 Apply wood glue to join the two 500mm long base sections together and clamp overnight

2 Clamp the two bottle holders to your workbench and use an 89mm hole saw to drill two holes in each



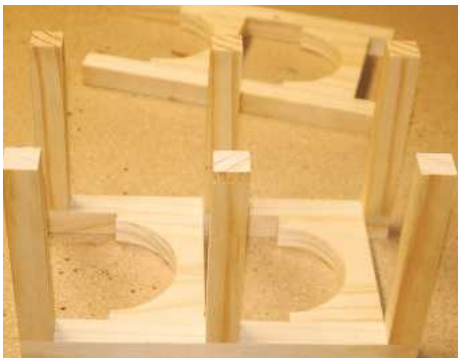
3 Use a jigsaw to cut the bottle holders to size, as shown here, so you have a total of four bottle holders

4 The bottles holders need to be glued to the uprights for the front of the wine rack. Make a note of the mounting position and transfer this so you're able to assemble the back section in the same way

GOOD TO KNOW

I forgot to take photos of the completed sections that hold the serviettes. For each one, glue the cross-pieces onto the uprights, as per the wine rack, and repeat for the remaining section. You will also need to add panel pins

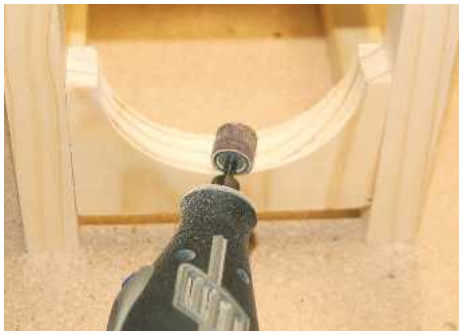
5 Once the front and back of the wine rack are assembled, they should look something like this

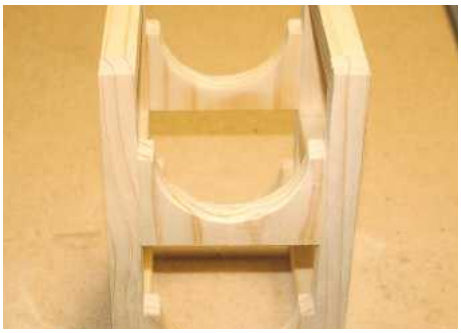


6 Glue the cross-pieces onto the (back) of the front section of the wine rack and then carefully position the back section on top of this

7 To secure the assembly, it's necessary to hammer panel pins in through the back and into the cross-pieces. Ensure to align all the edges flush as you work

8 Panel pins are used on both the front and back of the wine rack. Use a punch to hammer the pins just below the surface of the wood, which will ensure that these can be filled with wood filler to cover them up





9 Use a Dremel multi-tool to sand the edges of the wine holders, but as I found, it's easier to do this before assembly. If you don't have a rotary tool, sand the edges by hand to round off

10 Here you can see the wine rack, once assembled

11 You now need to measure and mark to drill pilot holes to attach the base and shelf to the individual components. Mark onto the shelf and then transfer this onto the base. On the shelf measure in from one edge: 30mm, 160mm, 232mm**, 328mm**, 400mm and 470mm. ** See step 12 opposite. Also measure up from the front edge on the above marks at 10mm and 170mm to drill pilot holes

12 Use a 2mm drill bit to drill pilot holes at the previously mentioned marks

13 The 232mm and 328mm marks are for cutting out the glass slots. Measure up 54mm from the edge. The slots need to be 15mm wide and the holes drilled using a 25mm MAD or spade bit. Check the stems of your wine glasses before cutting out the slots, as some are wider than others. Note: the 54mm mark denotes the centre of the circle for cutting out

14 I used a MAD bit to cut the holes. This provides a much cleaner edge than a spade bit, and is also easier for us ladies to use! Have a search online to locate your nearest retail stockist. When drilling, make sure you don't go all the way through your board – drill until you see the tip of the bit on the other side and then flip the board over to continue drilling through

15 Here you can see a close-up of the slot for the wine glasses. This shows how cleanly the MAD bit cuts the hole

16 Next, use a jigsaw to cut out the slots

17 Using an orbital sander, sand all your pieces nice and smooth, then wipe clean

18 If you have a router, you can add a decorative edge to the project's shelf and base

19 You can now chamfer (round off) all the edges on the sections prior to assembly. Even though manufacture has now ceased, I still regularly use my Dremel Trio to make sanding easier

20 Apply Howard Butcher Block Conditioner, or similar, to the front section of the base. Ensure to use a food-safe finish, which protects the wood and can be used where food is prepared

21 Apply two coats of Rust-Oleum Ultimate Polyurethane natural matt sealer, or similar, to the other sections. Ensure to follow the manufacturer's instructions

22 You can now assemble the cheese and wine bar using wood glue before hammering in panel pins. The holes are already drilled, so just ensure to line everything up. Hammer the panel pins in just below the surface, fill the holes with wood filler and sand smooth once dry. Touch up with a bit of sealer once you're done

23 The completed cheese and wine bar is now ready to be stocked with the necessary items…

24 … then it's ready for use

FURTHER INFORMATION

www.Home-Dzine.co.za – a source of ideas and inspiration, crafts, projects and tips for beginner DIY enthusiasts

Howard Butcher Block Conditioner – **www.justpuddingbasins.co.uk**

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THE BEST OF THE BEST

Rigorous selection and stringent moisture control are essential for top quality English willow cricket bats from J.S. Wright & Sons, says **Ron Smith**

Just outside Great Leighs, a remote village in Essex, England, halfway between Chelmsford and Braintree, sits the world's largest and oldest established company supplying English willow cricket bats. J.S. Wright & Sons Limited, founded in 1894 by Jessie Samuel Wright, is the world's only supplier of top-grade English willow used by top batsmen worldwide.

Surrounded by woods and willow plantations, J.S. Wright & Sons operate a spacious factory equipped for sawing, drying, and storing the wood. The willows, renewably harvested, come from thousands of farmers throughout England and Wales who grow the trees as a side crop.

Essex is the centre of cricket-bat willow farming in the UK, but it grows well throughout the country because the climate and rich, moist soil with a high water table are ideal for growing *Salix Alba Caerulea*, the preferred variety of willow used in the manufacture of cricket bats. Their cell structure is better suited to hitting a ball than other woods. Typically, it takes about 20 years to grow cricket-bat willow before harvesting, and harvesting occurs when the trees reach 56-58 inches in diameter.

Cricket bat willows grown in tube protection

Exceptional quality control

Jeremy Ruggles, Director of J.S. Wright & Sons and a fourth generation family member, carefully selects only the highest grades of willow. He inspects each willow cleft manually by hand and eye.

The trees are purchased standing in the field and are then felled by specialised tree fallers. They're transported to the yard by lorry, and the willows are then cross-cut into three or four 28in lengths. Next, they are cut lengthwise into clefts, which is a large cricket bat-shaped piece ready to be shaped into a bat.

An average tree yields 3-4 bat lengths from which 38-40 clefts can be cut. The end of the clefts are dipped in wax to prevent splitting and are dried to reduce moisture content (MC) and weight.

"The world's best batsmen prefer our English willow; that's because *Salix Alba Caerulea*, a softwood with hardwood properties, is lightweight and white and light brown in colour," says Jeremy.

Moisture control is critical

Obtaining an optimal MC in the willow is critical when preparing the clefts. To attain this optimal MC, Jeremy dries all the clefts using drying kilns.

When first cut, the clefts can weigh up to 10kg, but they lose more than half that weight through the drying process. According to Jeremy, he has perfected his kiln-drying technique over the years, one he now keeps confidential.

"We take special precautions in dealing with moisture. If we didn't, the clefts would be too heavy to lift or too light and could break," he continues. Since local pockets of moisture sometimes remain in the timber, special care is needed when testing the MC to ensure that reasonable uniformity is achieved.

Cricket bat clefts laid out, ready to be sent to the customer and made into finished bats
Photograph courtesy of **SM Cricket**

He takes MC readings whenever he thinks the clefts are ready. "I can tell by the temperature and the relative humidity in the driers that I monitor daily. They may be ready when I first check the willow or they may need 10 more days. After drying willow for 25 years, I've got the hang of it," he declares.

At one time, J.S. Wright used pin-type moisture meters to measure the willow's MC. But Jeremy says that took more time and effort, and often resulted in broken pins as they were pushed into the wood. "We went to the MMC220 pinless meter made by Wagner Meters. It's small, compact, and easily fits in your pocket. To get readings we simply place the MMC220 on the surface. It's much easier to use than a pin meter, and we're able to take more readings in the same time while getting an average MC," he says.

When first used, though, Jeremy discovered the Wagner meter wasn't giving him the same readings as the pin meter. After seeking advice from Wagner, the company changed the species settings on the meter. "We now get very accurate readings with the pinless compared to the pin meter, which is great. And it's much easier and faster to use. The Wagner meter is also very good at staying in calibration. Every few months we use their calibration checker to confirm this."

Exported to bat makers

J.S. Wright & Sons don't actually manufacture the bats. Instead, they provide bat makers with the willow clefts used in every high-grade cricket bat made in the world. 90% of Wright's blades are exported to India and Pakistan, with a smaller percentage going to other countries, such as Australia and New Zealand, and upon receipt, bat makers complete the bat-making process. This includes 'knocking in' all new cricket bats, which is where they harden and condition the blade's surface. This protects the bat from cracking and increases its usable life. It also improves the centre of the bat so the middle is bigger and better. "If this isn't done and a cricketer hits the ball hard with a new bat, he's likely to damage the bat," says Jeremy.

A mechanical press is also used on cricket bats, which applies up to two tons per square inch of pressure to the face of the bat through a roller. In its natural state, willow is a very soft timber and has to be pressed to form a hard, resilient layer on the surface. After this is done, the bat can be shaped. "Pressing the wood with metal rollers enables batsmen to hit balls further and harder than any other bat," Jeremy adds. Many bat makers also customise the bats for their cricketer customers, such as altering the length and weight of the blade, altering the length and shape of the handle, or shaping the blade to give it thick edges, scalloped blades, or a traditional shape.

Huge fan base

Although the game of cricket originated in England, its popularity spread rapidly in the mid-20th century, especially among countries once colonised by Great Britain. Today, with 2.5 billion fans cheering on its players, cricket is also played in South Africa, New Zealand, Australia, but mainly in India and Pakistan.

About 80% of the clefts used by the top 10 best playing nations come from J.S. Wright & Sons – a strong testament to their enduring quality and outstanding performance. And a contributing factor guaranteeing their preeminent quality and performance, notes Jeremy, is the accuracy of the Wagner pinless moisture meter.

"Having optimum moisture content is imperative in ensuring our products meet the highest standards demanded by our customers. Our moisture meter gives us that assurance."

Jeremy Ruggles, Managing Director of J.S. Wright and Sons Ltd, visits B3 Cricket in Nottingham
Photograph courtesy of **B3 Cricket**

Using a Wagner MMC220 pinless meter to check the cleft's moisture levels

FURTHER INFORMATION

Ron Smith is a Sales Manager for Wagner Meters, and has over 30 years' experience in instrumentation and measurement systems in different industries. In previous positions, he has served as a Regional Sales Manager, Product and Projects Manager, and Sales Manager with manufacturers involved in measurement instrumentation. To find out more, see **www.wagnermeters.com**

To learn more about J.S. Wright & Sons, visit **www.cricketbatwillow.com**

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PETER **SEFTON**

Peter Sefton runs the Peter Sefton Furniture School, which offers a wide range of woodworking and furniture making courses. The main course is 35 weeks long and covers hand skills, machining and much more. The school also offers specialist short courses and three-day machining courses on using bandsaws, planer/thicknessers, table saws and spindle moulders, all carried out on a range of kit from the Felder Group.

Safe machines

For the last 15 years, Peter has been using machines from the Felder Group and is still utilising three of his original ones to this day. When he first started the school, Peter purchased an A3-41 planer/thicknesser, an N4400 bandsaw, an F3 spindle moulder and a K3 panel saw from Felder's Hammer range. Since then, however, he has added two AF 22 dust extraction units, upgraded his K3 to a K700 Professional as well as investing in a second planer – the A 741 from the Felder range. Commenting on why he chose these specific machines, Peter said: "I had known of Felder for over 20 years and it's great to see how they have progressed. I went to the headquarters in Milton Keynes, and seeing their setup gives you a great confidence. The range they offer is also safe, which is essential when running a school."

Spreading knowledge & experience

Speaking about his kit, Peter commented: "The N4400 bandsaw is essential; it has so many uses. We swap the blade two or three times a day: a little narrow blade for tight curved work, a wider blade for ripping, and a medium blade for making tenons and dovetails. As the school became more popular, a queue for the A3-41 started to develop, so I decided to add another planer, taking the step up to the Felder A 741. The quick-change knives on both planers are easy to set up; I can teach someone in 15 minutes and be confident that they could go back to their own workshop and set it up." Regarding his panel saw, Peter said: "The Hammer K3 did well and I had that for 12 years, but we were ready for an upgrade. The bigger and more robust Felder K 700 has allowed us to do such accurate work – fine cutting for inlays/veneers and a selection of different tasks that I can show the students – but most important is the increased safety." Peter continues: "I wouldn't have a workshop without a spindle moulder. In the past, they have had a reputation for being dangerous but the technology has improved so much and now it is much safer – as long as it is set up correctly – and you can do some really nice work."

Peter now makes DVDs and digital downloads covering each of the machines, which helps to spread his knowledge and experience as well as keeping people up-to-date with the safety regulations.

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 also watch the full testimonial on YouTube by searching for '**FELDER GROUP UK TV**'.

A PART TO PLAY

Edward Hopkins uses the Triton TRA001 router to organise society

Let's start with the good news. The Triton TRA001 ½in router is relatively inexpensive (approximately half the price of its competitors). Like all large routers, it is a beast with bulk and a roar, but it also has a few refinements. There are four different mechanisms to facilitate rise and fall adjustment. There is a clever little lug that makes changing bits a one spanner operation. And, um, there we have it; but those features, plus considerable financial saving, count for a lot.

Router operations

Of the four rise and fall mechanisms, my favourite is a knurled knob (#1) that you turn to slowly and precisely wind the router up or down. At the desired position, a cam lever locks the router in place. I thought I didn't like these cam levers. I have one on a cheap ¼in router, and it slips on its axle. I've removed the lever and now have to wrench the cam off with pliers. Ugh! I have no reason to believe this will ever happen with the Triton. The lever did vibrate loose and drop off on its maiden voyage, but I saw the bits among the shavings on the floor and reassembled it more firmly.

A handle incorporates a collar (#2). If this is pulled in, the handle can be turned to effect the rise and fall. In the middle of this handle is a button (#3). If this is depressed and clicked into place, the gearing mechanism is disconnected and the rise and fall is free to be operated manually. I found this button a little clunky. In some positions it is not keen to locate or dislocate. On the bottom end of #1's shaft is a connector (#4) to be operated by a separate (rather flimsy) rod through a hole in the table. Why this is necessary when the knurled knob (#1) is so easy to use, I'm not sure, though I don't have a Triton table to play with, so I might be missing something there.

The locking lug is clever. As the router is fully depressed, the casting pushes this lug into the arbor and stops it, so that bit-changing involves only one spanner. It also shuts off the power supply eliminating one dangerous mistake.

The on/off switch lights up (nice). It has a fiddly sliding cover (not nice). This is deemed a safety device but I'm not so sure. It locks closed when the bit changing lug is located (good), so there is no chance of turning the machine on accidentally. It is, however, hard enough to turn on deliberately, and equally awkward to turn off deliberately (bad),

1 The rise and fall of the router

Inexpensive, effective, unattractive

which I consider to be a more significant safety issue. Maybe I'll get used to the switch but so far it has only been annoying.

The motor is designated soft start but I wouldn't say so. There is a momentary delay before it bursts into life but when it does so, it comes in at full whack. I can live with that, but a true soft start speeding up slowly is more luxurious. Gentler. More calming of the beast. Speed is variable from 8,000-21,000rpm. Though I don't have the equipment to test it, the Triton seems a fair bit noisier than my ancient Elu, but then ear-defenders should anyway be de rigeur.

The spring that makes the router return from a plunge can be removed. Mmm. A funny, and slightly hazardous thing to have to do. Apart from anything else you're going to have to put it somewhere memorable. I don't see the need. It's meant to make life easier when mounted in a table, but I'm so used to squatting at my Elu table, pressing down with my arm and heaving up with my knee, that I don't mind if my router remains fully sprung.

The Triton comes with a large rectangular pressed steel baseplate with adjustable fence and facility for a sliding pivot point (for routing arcs). When I've routed arcs before, the centre point has been on a trammel bar, and I've been able to adjust the height of the point so that a slither of timber could be taped on the workpiece, preventing it being marred. Here that wouldn't be possible.

2 Rise and fall auxiliary rod

Set the table

The baseplate is not refined or conducive to delicate work. But here we come to it. What do you do with a ½in router? I bought my Elu when I needed to make the housings of a staircase. I've used it for cutting and shaping 18mm ply in one swoop. In its hand-held mode, I can't think of much else. I could imagine running large mouldings along, say, structural beams, or cutting rebates in architectural work such as plank-and-muntin walls. Perhaps in heavy (and therefore more easily accurate, no matter what the size of workpiece) jigs. Whatever it is it would be large scale. Most of the time, though, my large router sits upside down in a table. There it is extremely useful and well able to cope with delicate tasks.

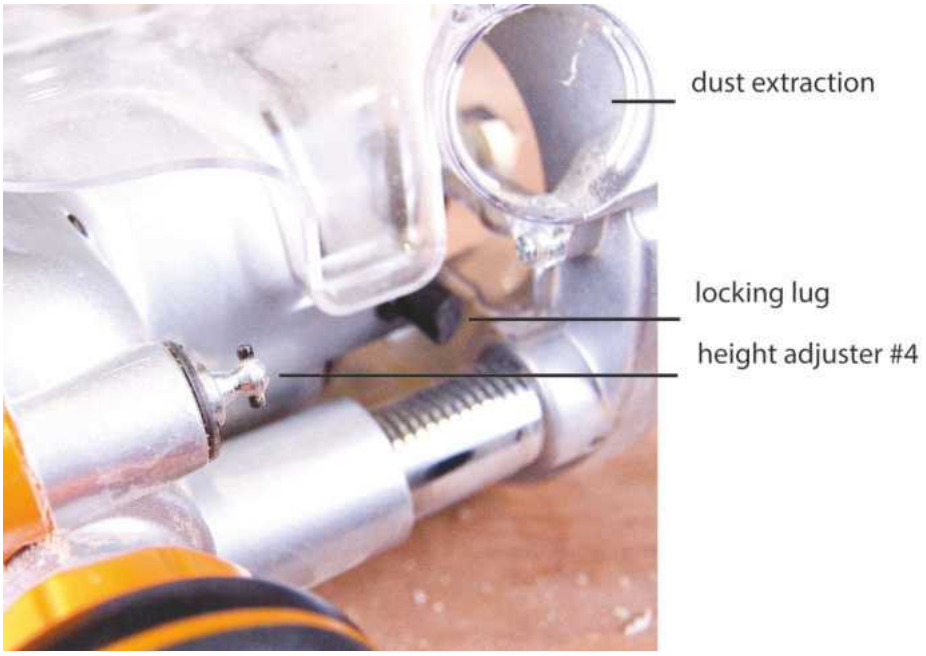
I decided it was best to test this router upside down. My first thought was to use the baseplate as a small (but possibly adequate) table. The plate does not, however, have any obliging holes drilled in it to make fixing (to anything) viable. What really dissuaded me though was putting a straightedge across this plate and finding that it wasn't quite flat. So I made my own table. It didn't take long. This is probably the way to go. If you're buying this router because it is cheap, you'll be reluctant to shell out for a table too. While a dedicated table is (probably) preferable, it is not necessary. I cut a sheet of 9mm MDF, screwed it onto pieces of 75 × 50mm softwood and held it between my two vices. I took the baseplate off the router (a thin and unconvincing piece of plastic that doesn't look as though it would survive serious battles – though again, it might) and used the four threaded holes with some longer bolts. If the adjusting rod is to be used, then a corresponding hole must be drilled in the table.

Had I been able to use the baseplate inverted as a table it would only have been effective for very large section timber as the aperture in the middle is large. Making my own table meant that I could keep the opening to a minimum, thus giving maximum support to the workpiece. It also meant that my adjustable fence could be large enough to support the workpiece all around. On a straight run through, it would then not risk a jerk as the piece left one half of the fence and hoped to engage smoothly with the other.

I modified my fence as I played with it, ending up with a larger gap to allow waste to escape. If it cannot escape easily, it clatters and chatters against the bit. Perhaps it was this that vibrated the collet and allowed the bit to come loose. This is the stuff of bad dreams but in this case nothing including me came to harm. I refitted the bit, wrenching it off tighter than my instinct dictated and it hasn't moved since.

On a building site you don't really need dust extraction; in the finer workshop you do. The Triton comes with a clear plastic hood shaped around the business end, with a port for dust extraction. This might be effective when plunge routing, but in a table it isn't, as the waste is ejected horizontally.

It is not a beautiful tool: bright orange, and bulbous curves don't look good. The materials and the scale of detail (large baseplate, large knobs) don't speak of refinement. The switch is definitely annoying and potentially dangerous. But for all that, I am developing some affection towards the TRA001. A lot of that is to do with cost. I don't really like routers but I can't deny their usefulness. One of their drawbacks is the time taken to set up. Indulgent though it may sound, I think that an efficient workshop might have several routers permanently set up for specific operations. In this, I am grateful to have a new member (I will probably add splayed legs to my table). But were I to be starting up from scratch, and with limited resources, this one might well be my choice.



3 Locking lug

Out with the knives

My planer was playing up. Or rather, I was. For some misguided reason, when I replaced

4 Fiddly switch

5 Adjustable three turret depth stop

6 'Spring under tension. Removal required when table mounting. Refer to manual'

the knives, I set them a little higher than usual. Most of a workpiece would thicken satisfactorily, but as it left the last feed roller, because too much wood (relative to the machine) had been removed, it lost purchase and juddered up and down, causing deep lateral scallops. I survived that job, but realise I'd have to sort the matter out.

It took a good hour of fiddling around and hoiking out of compacted dust (though I don't think this was responsible) to fit a different pair of knives lower in the block, and to check that both, at each end, protruded equally. It's a lot better now. It's as it should be (in my case, only the bevel of the blade is visible in the block, but appliances, I'm sure, must vary). A consequence of my misdemeanour was that the strips of ash I machined for my experiment with the Triton TRA001 were thinner than they might have been.

A hundred years ago I decided that my future might lie in wooden books. I think I made a couple of dozen of these with jacaranda covers and sycamore interiors. 'How hard could it be?' I thought in my naivety. I shelled out on matching cutters so as to fit pages into a spine, only to find that they didn't match, not quite, and I had to finish the mouldings by hand. Grr.

Routing out the cavity in the pages was not perfect. You wouldn't expect it to be, but there was no practical way to improve it beyond laborious scraping. The leather spine and hinge were accentuated by cramping a wire onto the crease: that worked very well. I used a baby hacksaw blade to scratch in some lines to indicate pages. A kindly bookbinder did the gold blocking for me, but that alone raised the price. My biggest regret was that I didn't get the covers to click shut. And, I remember; when the books were complete they didn't look like books! Only when I smoothed the corners of the covers did they spring into life.

My brief vision had been of a small showroom stuffed with a library of different shapes, sizes and titles. Wooden books have been made for yonks, but mine would be more realistic than most. I don't think it was such a daft idea, but it would have been subject to the economy of scale. As it was, I charged £35 each for these in the mid-1980s. They went eventually. A couple of years later I saw one on a second-hand stall in a market, and I bought it back for £5. The gold blocking cost more than that. A small item like this belies the amount of work involved, and therefore its perceived worth. The title of my boomerang acquisition? *A Comedy of Errors*.

The sociology of woodwork

My (vague) plan now was to use these matching cutters in the TRA001 to mould a heavy bead on one side of the strips of ash, and a matching dish on the other. These strips could be set at a slight angle to each other (like a long ball and socket joint) and still have a considerable glued surface. I thought I'd cut a circular trench on the underside of an occasional table top and fit them into that as a sort of curtain leg, which could then be shaped in a spiral or shell-like curve. I'd work that out when I arrived.

I never did arrive. When I stood some of the matching strips upright, they looked dull. I fiddled with several patterns of construction and they looked dull. All that work and all that wood for something dull? I don't think so. Something, however, wasn't dull. The most interesting thing about the moulded strips was their end-grain profiles. To my eye they looked like little people.

I decided to make a crowd. No, not as haphazard as a crowd: a community. I'd cut dozens of little people and glue them together.

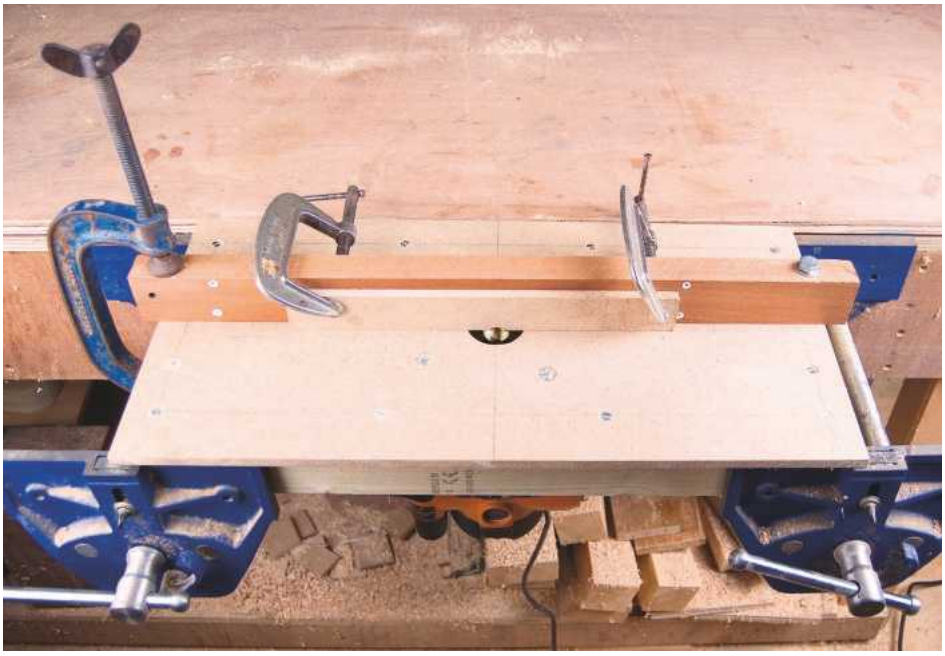
7 The baseplate: functional for large-scale work

8 A couple of hours, a couple of offcuts and four appropriate bolts

9 An unconvincing thin plastic sole

Immediately, there were choices to be made. They might just be bits of moulded wood but together, they were bound to say something, and I had to be careful what that was. I did not want to create a hierarchy. Neither did I want uniform ranks. There should be individualism but not elitism. Mmm. Tricky business, organising society.

There was a minimum manageable depth to each piece. I began by setting a fence on the table saw, and slicing off three people. I moved the fence out 2.5mm and sliced off three more. And so on. I used different strips of wood because they were of different colours. Then I reached what seemed like a sensible maximum depth, for nothing was to be gained by going deeper, and I didn't want to waste wood. At this stage, I didn't know if I was wasting time as well, but when I assembled the pieces in a square grid, I liked the look of them; or rather, of it.



10 A secondary fence cramped in place for chamfering small items

Now came the choices. I swapped some pieces over and moved others around, all the while trying to establish a balance of design. At the crudest level, I didn't want the whiter pieces to have any sort of priority or supremacy over the darker pieces: and vice versa.
I didn't want to inadvertently give the wrong impression and say something I didn't mean.

The solution was easy. As I sanded each piece (yawn) I put it in a big shopping bag. When I'd finished, and dusted my work table down, I reached into the bag and, without looking, picked a piece out. All alone; Number One! Then a couple: Two and Three, and so on to 128.

The decision to have 8 up and 16 across was mine, but that is just the size of the picture frame and contributes little to the arrangement. Apart from swapping two pieces around because I noticed a glitch on one; and two more because I dobbed glue in the wrong place, the arrangement is random. Not having complete faith in anything, I dry assembled it first. Again, I liked it.

I've seen worse things than this hanging in galleries with explanations far less intelligible. When you stray from furniture (which has a practical function) to art (which doesn't) it is easy to become pretentious. I want to avoid that. This was a test of the Triton TRA001 in my table; and an experiment; a very scant plan B. Nevertheless, I find it rewarding. I'll put some fixings on the back and hang this on my wall, at least for a while.

It does (to me) say something. It says that every person is an individual, but in a more real sense, every person is the same: a different colour; grain pattern and size, but each essentially of a similar shape, sawn from the same tree; moulded by the same machine. Our interaction is more interesting than our individuality. Individually, we are something, but not much: integrally we are part of an endless lively pattern.

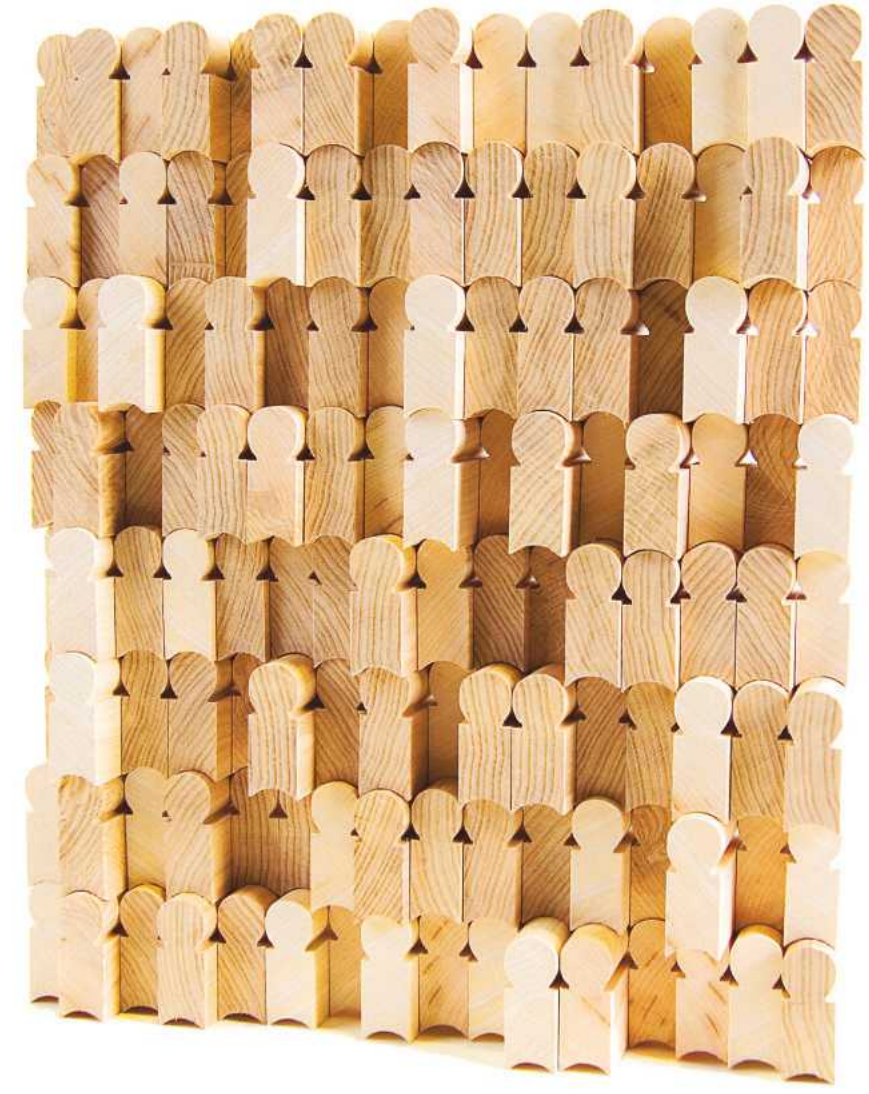
Either that, I thought, as I released my New Society sculpture from its melamine former by smacking it sharply with a mallet, and setting it on my dining table (things always look better in the house than they do in the workshop) catching

11 Nominally matching male and female cutters, but not completely compatible (so what's new?)

the evening light askance, throwing into relief all those (128) little round heads: more like a board of corks; the sort of thing you might see in a wine bar 10 times bigger. Mmm.

SPECIFICATION

Model: TRA001 2,400W dual mode precision plunge router
Depth adjustment: Micro winder
Electronic speed maintenance: Yes
No load speed: 8,000-21,000rpm
Plunge range: 0-68mm
Power: 2,400W
Power on indicator: Neon
Safety power switch: Yes
Sound power LW: 100.8dB
Sound pressure LP: 89.8dB
Speed maintenance under load: 8,000-21,000rpm
Product L × W × H: 180 × 300 × 310mm
Weight: 7.55kg
Included accessories: table height winder; multi-function fence; collet wrench; ½in collet; 12mm collet
Typical price: £270
Web: www.tritontools.com



12 Unity in diversity

P.S. Satisfied customer; uncomplicated woodwork; no batteries required

ME AND MY WORKSHOP

Graham Smith, Head Miller of Otterton Mill, Devon, works with age-old machinery that is still standing the test of time

Graham Smith

Head Miller Graham in his unusual workshop

1. What is it – and where is it?
It's one of the oldest working mills in the UK – mentioned in the *Domesday Book* – in the beautiful Otter valley, south Devon.

2. What's the best thing about it?
The mill itself, the workings, the amazing history. People have been grinding corn here for a thousand years.

3. And what's the worst?
It's open to the public so there's often unwanted pressures, but you get used to it.

4. How important is it to you?
Immensely. I'm its caretaker, so my job is to pass it on to the next generation.

5. What do you make in it?
Everything we need to keep the mill in good working order. Much of the machinery is wooden: there are 103 apple wood teeth on the upper wheel, and 105 on the lower workings – they have to be an odd number to ensure they spread the wear evenly.

6. What is your favourite workshop tip?
The right tool for the right job!

7. What's your best piece of kit?
Every day we have to find a way of dealing with this amazing old machinery, so it's hard to pick one tool, but I couldn't manage without my big sturdy workbench.

8. If your workshop caught fire, what one thing would you rescue?
Oh no! I'd be devastated! Too devastated to think.

9. What's your biggest workshop mistake?
Controlling the water through the wooden sluices is tricky. I often cut the boards too short!

10. What's the nicest thing you've ever made?
A new flour chute in yellow pine. It takes the flour from grindstones to bag.

11. And what's the worst?
I was asked to make a display box for public visits. It was extremely shoddy.

12. What's the best lesson you've learned?
Take your time and cut once.

13. If you won the lottery, what would you buy for your workshop?
I love this mill so much, I'd use the money to invest in its future.

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

A TURNING CHALLENGE

Colin Simpson embarks on an ambitious project, a flask in ash with contrasting plug and stopper, which is turned on two axes and requires several different holding methods

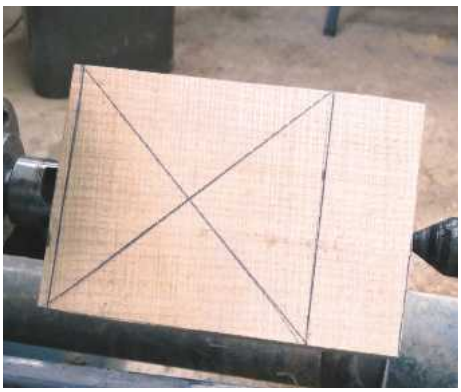
This month's project is a little challenging as it is turned on two axes and requires several different holding methods. Some accuracy is also required to fit the plug in the side of the flask.

Turning the flask body

Start with a rectangle of ash, measuring 125 × 175mm × 70mm thick. Find the centres of both ends and mount it between centres. Now mark out a 125mm square about 5mm from the headstock end and mark the centre of this square, as shown in **photo 1**. Turn the lathe on and use a spindle roughing gouge to round over the short sides (**photo 2**). You will be cutting more air than wood, so it is important not to push the tool into the wood. As you can see, I am using the tool well over on its side and not rubbing the bevel. Once the short sides of the rectangle are rounded over, stop the lathe and use a pair of compasses to draw a circle on the long face. The centre of the circle is the centre of the square you marked out in step 1. The circumference of the circle should just touch the rounded over parts of the short side (**photo 3**). You need to be able to see the outline of this circle when the wood is rotating. I had to go over the outline with a felt tip pen. Use a bowl gouge to cut the wood to the circle (**photo 4**) – it should look something like that shown in **photo 5**. Cut a chucking spigot at the headstock end using a parting tool (**photo 6**) and mount the piece in your chuck. I brought the tailstock up for additional support while I used a spindle gouge to shape the spout (**photo 7**), then sanded the circle with a power sander and the spout by hand to 400 grit. Next, replace the revolving centre in the tailstock with a Jacobs chuck and 12mm drill bit and drill a hole through the spout and into the body of the flask (**photo 8**). Open up the hole with a spindle gouge (**photo 9**) and sand this to a finish.

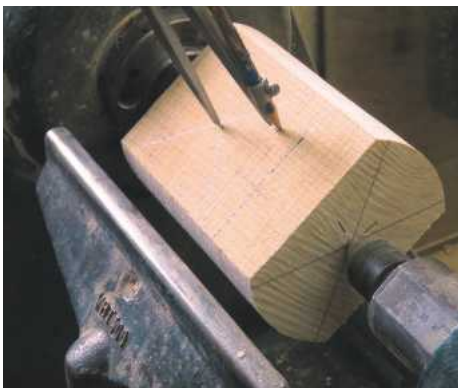
Holding & hollowing

The next step might be a little controversial and you might choose to find a different way to hold the piece. For example, you could mount a scrap piece of MDF in your chuck and use double-sided sticky tape or hot melt glue to hold the flask to the MDF. However, I was happy to simply jam the



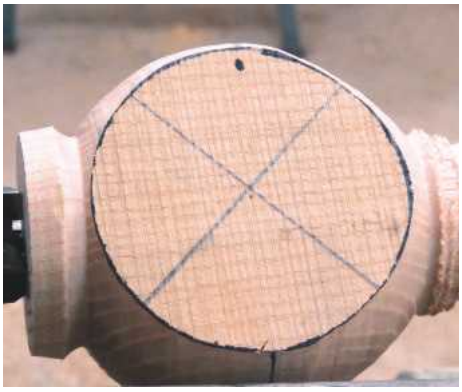
1 Lay out a square and mark its centre

2 Round over the short sides with a spindle roughing gouge



3 Mark a circle using the square's centre

4 Use a bowl gouge to cut to the circle's line…



5 … which should look something like this

6 Cut a spigot on the base with a parting tool

7 Shape the spout with a spindle gouge

8 Drill a hole down the spout…

9 … and open it up using the wing of a spindle gouge

10 Hold the vase transversely using the circle's centre as the axis of rotation

11 Cut a chucking spigot on the side of the flask

12 Mount it on the spigot and cut a stepped recess on the exposed side

flat side of the flask up against the jaws of my chuck and hold it in place with tailstock pressure (**photo 10**). Admittedly, it isn't the strongest hold, but I am going to take light cuts to turn a spigot. However you choose to mount the piece, the revolving centre in the tailstock should be located on the centre of the circle drawn in step 3. Now cut a chucking spigot on the face of the flask using a spindle gouge (**photo 11**). Turn the flask round and mount it on this spigot. Use a parting tool to cut a stepped recess on the exposed face (**photo 12**), then hollow the flask. I started to hollow it using a small bowl gouge, and then undercut it using a Robert Sorby multi-tipped hollowing tool (**photo 13**) before cleaning up the cut with a round-nosed scraper.

13 Hollow the flask – I used a multi-tipped tool

14 Cut the plug almost to size, cut a chamfer and…

Turning the plug

When the hollowing is complete, remove the flask from the lathe and mount the wood for the plug. I used the 'jam the wood against the jaws of the chuck' method for this, but, again, you could use double-sided sticky tape or hot melt glue. I used a contrasting wood – in this case walnut – for the plug. Turn the plug to a cylinder and turn a chucking spigot on it. Mount the plug in the chuck and turn it to a fraction larger than the diameter of the stepped hole in the flask (**photo 14**). Cut a small chamfer on this diameter and then offer the hole in the flask up to this chamfer (**photo 15**). The corner of the hole should leave a small burnish line on the chamfer (**photo 16**). Reduce the diameter of the plug to this burnish line and it should fit in the hole perfectly. Remount the flask on the chuck and glue the plug in place, using tailstock pressure as a clamp (**photo 17**).

When the glue is dry use a bowl gouge to make the plug flush with the side of the flask. I put a small convex curve on this surface (**photo 18**). You can then sand to a finish.

15 … offer up the flask to…

16 … burnish the chamfer

17 Cut the plug to the burnish line and glue it in place

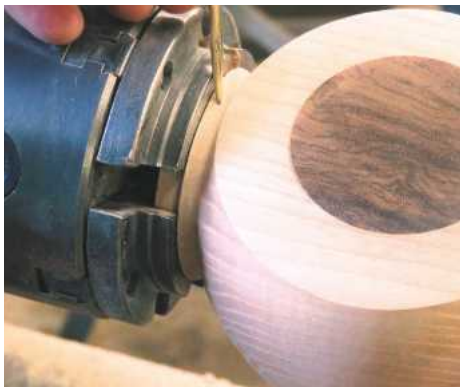
18 Clean up the plug and turn this face with a slight convex curve

19 Next, dish a scrap piece to accommodate the convex curve…

20 … and jam the flask onto the dish…

21 … to remove the chucking spigot…

22 … and sand away the small stub



23 There is not enough room to turn the foot

Making a cup chuck

The flask now needs to be reversed in order to turn off the chucking spigot on the other side. Mount a scrap piece of wood in the chuck – I used a part-turned bowl – and turn a shallow concave on its face (**photo 19**) – this is to accommodate the slight convex curve on the plugged surface of the flask. Using a thin piece of foam or router mat to protect the finished surface, jam the flask up against the scrap with the tailstock (**photo 20**). Now turn the spigot away, leaving a small stub for the tailstock support and put the same convex curve on this side (**photo 21**).

Next, mount the flask on the original spigot at the base of the flask; this will allow you to sand away the small stub on the side (**photo 22**). I also wanted to turn a small foot at the bottom of the flask, but I hadn't left enough room between the flask and the chuck (**photo 23**). If you make this project you could allow more room here: turn a foot and simply part off the flask. I had to find another way, however. I didn't think there was sufficient strength in the spout to hold the flask, so I made a small cup chuck to fit over the spout, which would sit on the shoulder of the flask. Soften the inside corner of the cup chuck (**photo 24**), and, using a protective pad, jam the flask up against the cup chuck (**photo 25**). This gives much better access to the bottom of the flask and enabled me to turn a small foot with a spindle gouge (**photo 26**). Finally, sand away the small stub left in the foot (**photo 27**) and give the whole piece a liberal coat of mineral oil.

The stopper is simple spindle work and can be whatever shape you want. I chose walnut again as a contrasting wood and turned a dome shape. There should be a very gradual taper on the stopper, so that it fits snugly in the spout (**photo 28**).

24 Make a cup chuck from another piece of scrap

25 Hold the flask on the cup chuck…

26 … and turn the foot

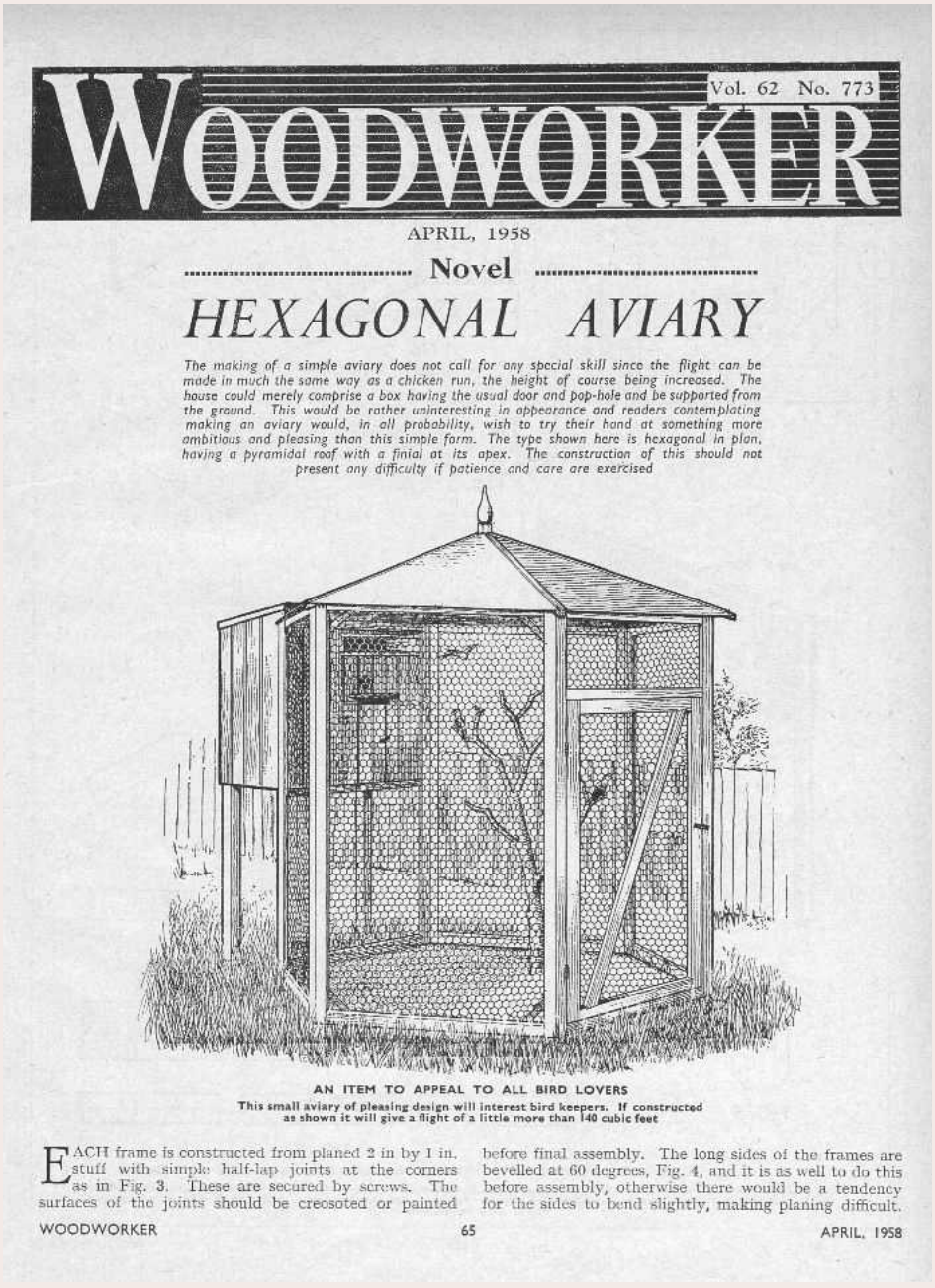
27 Sand away the small stub

28 The stopper is simple spindle turning, but make a gradual taper here

29 The completed flask in ash with walnut stopper and plug should look something like this

Flight of fancy

A 'Novel Hexagonal Aviary' from the April 1958 edition of *The Woodworker* puts **Robin Gates** in mind of a childhood teaching budgerigars to talk



WOODWORKER

Vol. 62 No. 773

APRIL, 1958

Novel

HEXAGONAL AVIARY

The making of a simple aviary does not call for any special skill since the flight can be made in much the same way as a chicken run, the height of course being increased. The house could merely comprise a box having the usual door and pop-hole and be supported from the ground. This would be rather uninteresting in appearance and readers contemplating making an aviary would, in all probability, wish to try their hand at something more ambitious and pleasing than this simple form. The type shown here is hexagonal in plan, having a pyramidal roof with a finial at its apex. The construction of this should not present any difficulty if patience and care are exercised

AN ITEM TO APPEAL TO ALL BIRD LOVERS

This small aviary of pleasing design will interest bird keepers. If constructed as shown it will give a flight of a little more than 140 cubic feet

EACH frame is constructed from planed 2 in by 1 in. stuff with simple half-lap joints at the corners as in Fig. 3. These are secured by screws. The surfaces of the joints should be creosoted or painted before final assembly. The long sides of the frames are bevelled at 60 degrees, Fig. 4, and it is as well to do this before assembly, otherwise there would be a tendency for the sides to bend slightly, making planing difficult.

WOODWORKER 65 APRIL, 1958

Leafing through old copies of *The Woodworker*, I'm constantly surprised by the variety of projects that have appeared down the years, texturing life's plain fabric with toys, furniture, garden gates, caravans, boats – you name it. Ah, but it was a different world back then, before this relentless pressure to buy everything ready-made. There was more pride in making than simply owning. In need of a new kitchen table, sewing box or see-saw, your first step was into the shed to see what timber lay at hand.

That was certainly the case when Mum announced one day in the 1960s her new passion for breeding budgerigars. What brings that to mind is *The Woodworker* of April 1958 in which the lead article is this elegant hexagonal aviary. Of chicken runs, rabbit hutches and dog kennels there has been a sprinkling down the years, but as far as I know this aviary stands in a class of one. Yet, unless I unwittingly grew up in a unique suburban birdworld, garden aviaries were not uncommon in the 1950s and '60s. Certainly a stroll up our road on an otherwise quiet Sunday morning was like a walk in the rainforest, there being so much birdy whistling and squawking going on.

I suspect Mum's desire for a garden chattering with budgies sprang from her between-wars childhood when her Dad had been a champion pigeon fancier. Be that as it may, over the course of a mid-1960s weekend I was picking up tools, losing them, and generally getting in the way while Dad sawed a stack of 2×1s to length and spread the chicken wire to make Mum's new aviary. Over subsequent years it was to be the scene of considerable elation and heartbreak.

Breeding budgies

Elation at the birth of every fragile nestling, notwithstanding the bickering between breeding pairs which preceded that happy event, each laying claim to the nestbox standing a fraction higher than the rest. (An uncomfortable parallel with human behaviour there, I think!). And more joy when a bird uttered its first 'Hello', following hours of patient instruction. As for heartbreak, budgies did occasionally die. One day Mum hurried indoors with a lifeless body cradled in her hands and, refusing to accept defeat, she blew gently upon its beak for what seemed like ages. Miraculously, the little fellow revived, took to its wings and spent the rest of the day hunkered down on top of a bookcase.

But panic set in if a bird escaped. How many times did we burst in on unsuspecting neighbours trying to entice a feathered fugitive down from a garden tree! Actually I think it was only once, after which Dad fitted an inner door to the aviary, making a vestibule of safety for entering and leaving. And that's something notably lacking from the design published here. The moment that door is opened, the birds perching watchfully within will make their bid for freedom.

Mum raised her flock from a single breeding pair themselves raised in captivity, and from them came many a 'Pretty Boy' and 'Pippit' who became companions to friends and relatives otherwise short of company. The last survivor of that era, our own blue Joey, lived to a ripe old age.

Fun joinery

Returning to this aviary, there'll be some fun in the joinery of the six rafters supporting the roof, each angled at 25° from the horizontal and tenoned into a hexagonal centre post, and bevelling the long sides of adjacent frames at precisely 60° could be tricky without a table saw. A long hand plane with Stanley's 386 adjustable jointer fence would do it, but that old attachment is as scarce as hen-budgerigars' teeth these days.

ROUTER PLANE MADE NEW

Clint Rose sets about restoring an old router plane as well as turning a custom set of handles to really make it 'pop'

1 Unscrewing the handles

2 The plane once fully disassembled

TOOLS & MATERIALS REQUIRED

Tools

- Toothbrush
- A plastic container that will hold the plane and all its components (also allow the vinegar level to get above the plane)
- Latex gloves
- Flat head screwdriver
- Atomiser
- Steel wool
- Low grit abrasives – around 120
- Grinding wheel
- Coarse sharpening stone
- 600/2,000 grit waterstone for final sharpening
- Strop
- Towel/rag for general cleaning

Optional tools for turning new handles:

- Lathe
- Dividers
- Pencil
- Turning chisels
- Small saw
- Brace or drill plus 10 and 6mm bits
- Mallet and gouge/chisel
- 240 grit abrasive

Materials

- White vinegar
- Polishing compound
- Oil for sharpening stone
- Wood finish (I used Danish oil)

I recently bought my first ever router plane but it was rusty, grimy and the iron was nowhere near sharp. So I thought I'd set about restoring it, getting the rust off, sharpening up the iron and turning new handles for it on a spring pole-lathe I recently made.

I hope you enjoy this project – please note that the accompanying video can be viewed on my website, details of which can be found at the end of this article.

Disassembling the plane

Please note that the tool featured in this article is a Stanley No.71 router plane, and so the steps shown here may not apply to all available models.

Most of the disassembling is fairly straightforward, unscrewing the various pieces to get everything free. The one piece that can pose a bit of a problem is the handles. They screw off from the plane just fine but if you want to clean the little nuts at the top of the handles, you need to pop them out. I wanted to remove them so I could make some new ones, but in order to do that, I had to place a small piece of wood under the handle and put pressure on the bolt inside, which would push the nut out of the top of the handle. You might find that turning it with a screwdriver at the same time helps to loosen it.

Soaking in vinegar & washing

I used enough vinegar to cover over the top of the 'Stanley' part of the plane – all in all that cost me around £3, which I don't think is much to de-rust a tool. Obviously if you have more tools to clean, then this process becomes cheaper. I soaked the router and all its components in white vinegar for a whole day – you can see that even before I started scrubbing with a toothbrush, plenty of the rust had already started to lift off. I put on the latex gloves and pulled it from the vinegar, then I began to brush the rust with a toothbrush. Since it had been soaking for a day, it was a fairly easy process and all the rust came away easily for the most part.

After scrubbing all the components, I put some water in an atomiser bottle and sprayed all over the plane and the smaller pieces, rubbing off the water as I went with a towel.

Scrubbing with steel wool & abrasives

After soaking in the vinegar and scrubbing the various parts, there's still bound to be some rust or griminess in the nooks and crannies of the plane, and this is where steel wool and abrasives come in. Start with the steel wool and scrub all over the plane; this should not

only help to remove the rust but also bring some shine back to the metal. If there's still some issues you can then move onto abrasives, but be careful as this is a rougher clean and can potentially wear away some of the components.

I then found a known flat surface – in this case the top of my shooting board – and slid the plane base over it a few times. It's important to find a flat surface for this stage as you don't want the bottom of the plane to be out of flat whatsoever. Having a non-flat router plane completely defeats the purpose of the tool.

Optional: turning the new handles

The following steps are completely optional and I'm sure most people would just leave the original handles as they are, but I felt like giving mine a bit of personalisation. I had some birch that I bought from a sawmill for next to nothing and noticed it

3 In order to remove them, the bolts required some extra persuasion...

4 ... and a small piece of wood did the trick

5 The vinegar and tray set up, ready to use

had some spalting on it, so I split it open, carved a piece down to a cylindrical shape, and set it up on my spring pole-lathe.

Using my dividers, I measured the top and bottom of the handles, and used those measurements to calculate the rough size of the handle I needed and then started turning it on the lathe. When I got it down to size, I used some 240 grit abrasive to sand it while it was still mounted between centres.

Optional: siting the new handles for the router plane

I turned the piece so I could cut it in half, with each half being a handle. I then placed them one at a time in the location where the handles sit and gave them a couple of taps with the mallet. This made an indentation of the metal piece that slots into the bottom. I then used a 10mm drill bit and brace to drill in about 10mm deep and then

6 I left the router plane and the various components to sit in vinegar for a full day

7 The next day, the difference was clearly visible

8 A bit of scrubbing with a toothbrush reveals the previous silver of the plane

9 The handle screws before and after cleaning

10 Using an atomiser bottle filled with water to remove the last of the vinegar

11 Using steel wool to clean up the last bits of rust

12 Previously rusted plane iron taken to a shine

13 Abrasives could also be used to restore shine

14 The screw top of the handle once cleaned up

15 Lying abrasive on a known flat surface to clean up the sole

16 Abrasive also worked well when cleaning the iron

17 All the plane components once de-rusted and cleaned

switched to a 8mm bit for the rest of the way, making a hole for the bolt to go through.

I pushed the bolt in all the way through and out the top of the handle. Screwing the nut onto the top of the bolt then allowed me to trace the size of the bolt onto the top of the handle and cut out a recess for it to slot into. I used a gouge and a chisel. Once the nut fitted inside, I was able to screw the handles on.

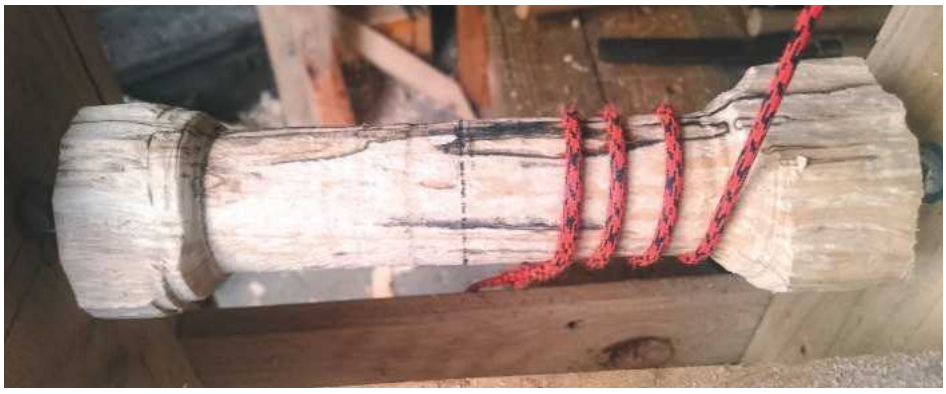
Grinding & sharpening the bevel on the iron/blade

The bevel on the iron was very blunt so I had to regrind it using my grinding stone. You can see how I did that by watching the video. It required some holding to the side, which helped to avoid the shaft of the iron hitting the grinding wheel. Once the bevel was re-established, I took it to a coarse sharpening stone. Spraying the stone with oil (I used WD-40) I laid it onto the edge of

18 Splitting some birch with a froe

19 The spalting left by fungus is attractive

20 Using dividers to measure the handle size



21 The birch mounted on my pole-lathe

22 I could also measure the lower parts of the handles

23 The birch cut down to size...

24 ... and once the spigots had been removed

25 The handles are now ready to be mounted on the router plane

26 Marking the screw holes for the new handles

27 Drilling holes for the screws

28 Measuring the screw head hole

29 The plane once reassembled

the bench to make room for the shaft of the iron to hang over the edge, using a slow back and forwards motion, ensuring to keep the iron square (or as square as I could). When a burr of metal was completely overlapping the edge of the blade, I passed the flat edge of the iron over the stone three or four times.

I repeated this step with a 600 grit waterstone followed by a 2,000 grit waterstone, but you could also do this using abrasives.

When I was finished with the waterstone, I rubbed some polishing compound onto my leather strop; this helps to remove any remaining burr left on the iron and also shines it up. To achieve the desired result, all you have to do is rub the bevel and the bottom side a few times.

Finishing the handles & reassembly

I used Danish oil to finish the handles but I'm sure there's a harder wearing finish out there and everyone has their own preference. The reassembly is fairly straightforward and if you get confused, just check out some online photos of your particular plane in its assembled form. All in all, I'm very pleased with how it cleaned up and I'm in love with the new handles even though

30 Resharpening the bevel on the iron

31 Flattening the sole of the iron

32 Polishing compound and a leather strop are used to finish the honing process

33 The handles before and after oiling

34 The refurbished pieces ready to be assembled

my turning definitely needs some work! If you'd like to see the finished iron/blade working like a dream on some wood, simply refer to the video on my website – see details below.

35 The router plane fully assembled and ready for use

FURTHER INFORMATION

If you'd like to see extra photos and videos of my projects as well as what happens in and around my shed, then visit my website – **www.timberanew.com** – where you can also see a video of this project being made plus a variety of others

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AROUND THE HOUSE WITH PHIL DAVY

Do you find smart technology for homes exciting or rather tedious? Sitting in a well-known store the other day, I had the chance to try out wireless controls for interior lighting. You could dim lights in wall cabinets, control light levels in pendant and table lamps, all from the comfort of a sofa. I'm sure some readers already have similar equipment installed in their homes and find it fantastic. Impressive stuff, but I couldn't help wondering if such technology may actually contribute to the growing problem of obesity in Britain! What's wrong with actually getting up to switch on a light? But then a remote control for the TV seemed to be the height of laziness a few decades ago. And you could say the same about power tools replacing hand tools. In 10 years' time we'll probably wonder how on earth we managed without smart technology in the home…

OUT & ABOUT: WESTONBIRT WOODWORKS

Although a low-key affair, Westonbirt Woodworks should be congratulated on its first open day at the end of June. With several major setbacks in the weeks beforehand, this two-day affair came close to being cancelled, but chairmaker and mastermind Paul Hayden was persuaded to go ahead. Well worth the considerable effort, it was a sound base on which to build for future events. With the backing of Classic Hand Tools, the emphasis was on green woodworking skills, with chairmaking a particular highlight. There were also plenty of specialist tools and books on offer, as you'd expect.

Coppicing and bodging skills were ably demonstrated by Brian Williamson, Westonbirt Arboretum's resident coppicer, and a demo of traditional dry stone walling from Rob Wildey filled me with admiration for this labour-intensive skill. Building a beautiful Cotswold dry stone wall around the perimeter of the site was far from easy with the sun beating down for days on end.

One or two of Paul's former students turned up with chairs they had built since setting up their own workshops. Most extraordinary were those by Jason Mosseri, who now runs courses himself. Recently back from a chairmaking trip to the States, his beautiful Windsors have an American feel and are extraordinary in their detail. Look out for a feature on him in the next issue.

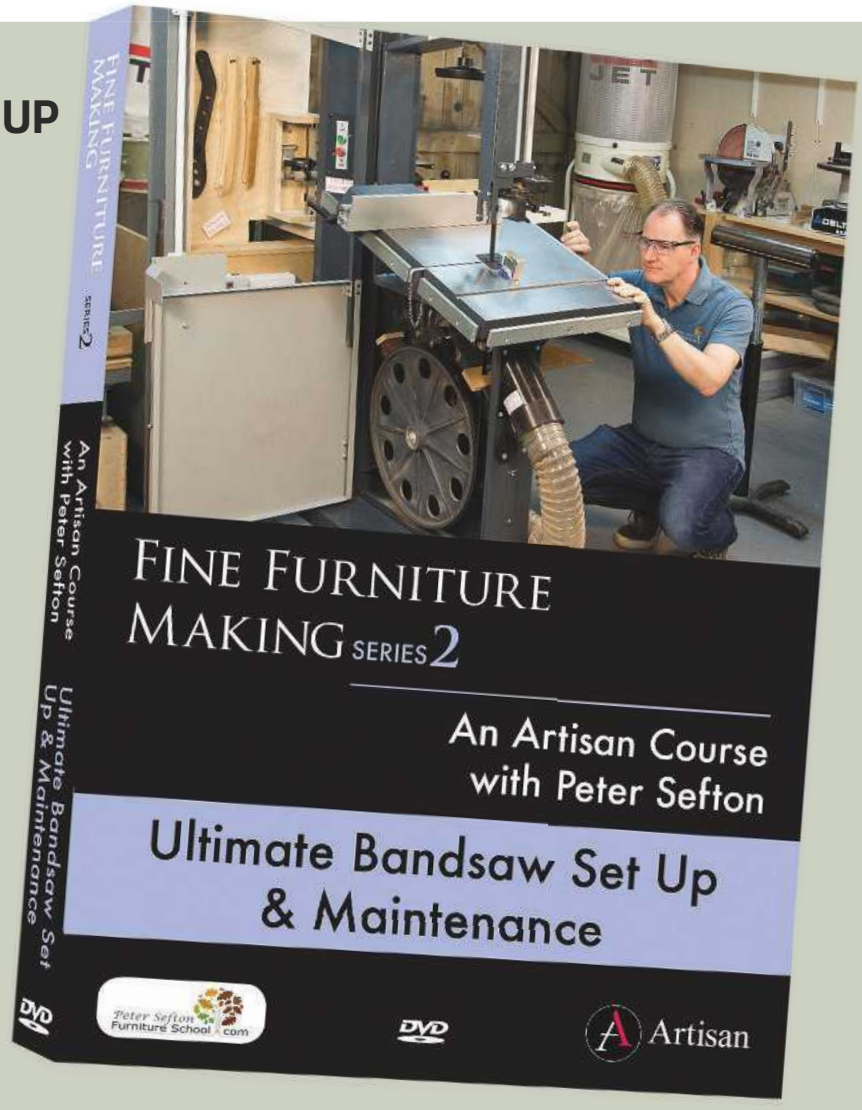
Latest news is that a bandsaw mill is due to be installed at Westonbirt Woodworks in the next few weeks, enabling visitors to buy air-dried timber grown and milled at the Arboretum. We'll bring you an update when this is up and running. For more information, visit the following websites:
www.greenwoodcourses.com
www.classichandtools.co.uk
www.hopespringschairs.com
www.westcountrycoppice.co.uk.

One of Jason Mosseri's stunning Windsor chairs

Building a beautiful Cotswold dry stone wall around the perimeter of the site was far from easy with the sun beating down for days on end

There were also plenty of specialist tools and books on offer, as you'd expect

DVD REVIEW: ULTIMATE BANDSAW SET UP & MAINTENANCE



For many woodworkers, the bandsaw is often the first machine they buy. Not only is it less intimidating, safer and quieter than other workshop equipment, but it's pretty versatile. From cutting accurate joints such as dovetails, bevels and tight curves to simply sawing logs for firewood, there's not much it can't do as a saw. Like any machine it needs to be set up correctly to get the most from it, though. Following on from his excellent range of hand tool DVDs (Series 1), furniture maestro Peter Sefton has progressed to Series 2, focusing on woodworking machinery. Starting with the bandsaw, I should point out that this is the first of three DVDs dealing solely with this machine, the subsequent pair concentrating on Advanced Techniques – we'll take a closer look at those in a future issue.

Most of the instruction takes place on a huge Felder bandsaw in his Furniture School's machining shop (a replacement for a previous Hammer machine), although the principles are the same. He occasionally refers to an older Kity bandsaw standing alongside, which is probably more appropriate for most smaller workshops. Incidentally, this was a lovely machine, sadly no longer available… However, to begin he points out similarities, rather than differences between the two models.

Machine anatomy

Anatomy of a Bandsaw is rather like a visual glossary, consisting of a guide to doors, guarding, microswitches, mains isolators, bandwheels, speeds and drive mechanisms. Some of this may seem basic if you're a bandsaw owner, but there are useful nuggets here, such as how to adjust the tilt on a lower bandwheel (a last resort when blade tracking is a problem).

Moving on to blades, he points out that most difficulties are caused by poor quality manufacturing or blunt teeth, rather than by the machine itself. An explanation of how to calculate blade length for an older bandsaw (when a user manual may have been lost) is handy for those buying secondhand. I loved the tip in the Blades Management sequence – using coloured magnets (a sort of traffic light system) to identify the sharpness of used blades when stored for future use, but not ready to be discarded. Sample blades are neatly examined, with Peter recommending no more than four patterns and sizes to cover almost every cutting requirement.

The importance of a good blade weld is discussed, with a useful demo using a hacksaw to illustrate beam strength. Choosing the correct tooth size is neatly covered using a sprinkling of walnut sawdust to show how easily small gullets can become clogged on deep timber.

I'm probably not alone in retaining the same blade in my bandsaw for almost every sawing task. Rather than swapping it for a more appropriate width and tooth pattern, the teeth get blunt and cutting becomes inefficient. With knuckles suitably rapped, we move swiftly on!

Bandsaw commissioning

I'd hazard a guess that few bandsaw guides or DVDs include how to check whether a bandwheel is correctly balanced or not. Peter explains how you can do this at the bench or on the saw itself with rare earth magnets, especially handy if you've bought an old machine that's seen better days. Again, not something that should be attempted unless you're having problems, but interesting all the same.

Finally, adjusting upper and lower blade guides are examined in detail, with tips on avoiding drift when cutting. Also tips on checking the fence for accuracy, with a brief look at after market bandsaw fences, too.

I almost missed the Extras section, which is a real bonus. Covering bandsaws for small workshops, machine layout, dust extraction (in some depth), rust prevention and folding blades, there's some very useful information here.

If you're already familiar with Peter's style, you'll know what to expect: extremely clear instruction, professional camera work and everything carried out with safety being the first priority. This particular DVD would be perfect for novice woodworkers looking to buy their first machine, though there are gems here for the seasoned machinist, too. The full set of three bandsaw DVDs costs £49.97, which represents nearly six hours worth of viewing. Alternatively, you can buy them as digital downloads. A comprehensive guide indeed…

THE VERDICT

Produced by Peter Sefton and Artisan Media

Price: £19.99

Web: www.woodworkersworkshop.co.uk

Rating: 5 out of 5

WEEKEND PROJECT
ADJUSTABLE SHELVING

Tools you'll need: Router, drillstand, jigsaw, sander

CLEVER STUFF

Phil Davy's adjustable shelving is fitted to the uprights without screws

Turning a spare bedroom into a small office is likely to lead to several decisions. Would it still need to be used as an occasional bedroom in the future, for example? Should fixings be temporary rather than permanent? In this case I needed plenty of shelving without it having too much of an industrial feel. This meant no standard powder-coated steel supports and brackets, though the shelves still needed to be adjustable to accommodate box files, magazine holders, reference books and so on. After sketching one or two ideas I decided a system of sliding brackets would look interesting, but the challenge would be to fix them to the uprights, without screws ideally. I built a mock-up of the bracket first to check the design would work and be sturdy enough to support what could be some considerable weight. Although it's not essential to make a mock-up, you will need to build a jig for accuracy when producing the bracket sides.

Depending on the number of shelves you need, there may be quite a few of these and they would be tedious to shape individually.

Make a template from scrap MDF or ply. You can use this to experiment with a profile that has pleasing curves. The template should be 20mm deeper and taller than the finished bracket size, so it can be used as a jig for both routing and drilling. Adding 20mm softwood locating stops along both rear edges gives you the actual bracket size. Overall dimensions for these finished brackets are 255mm high and 250mm deep. These were designed for shelving 280mm deep.

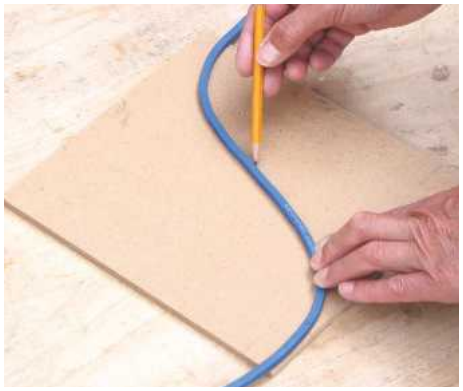
Softwood sandwich

Each bracket is simply a sandwich of 45 × 20mm finished softwood, the same size as the uprights. You'll need to remove a smidgeon from the width of each upright to enable the brackets to slide freely up and down. Around 0.5mm should be plenty, even if painting the uprights. The sides are made from 6mm-thick oak-veneered MDF, but these brackets would look great in birch ply, creating a contemporary flavour. You could paint the uprights in a contrasting colour, particularly if installing the shelving in a child's room.

Saw all the side pieces oversize, then stack them up in the jig for routing. I shaped six at a time, so you'll need a ½in router for this depth of cut. Use a bearing-guided flush cutter for shaping, running off the edge of the template.

Each bracket is held in place with two 6.5mm pine dowels. The ends of these are chamfered so they can be inserted in the bracket and right through the upright. Holes should be slightly larger in the uprights (7mm) so that dowels are not too tight. Drill the two holes 200mm apart. For making the shelving adjustable you simply need to decide on alternative heights. I bored a second pair of holes in the uprights 80mm higher than the original pair. If you're worried about the brackets relying just on dowels for strength, screw through each vertical spacer into the upright behind. I found this step unnecessary, though.

Once you've sawn the MDF shelves, seal and paint surfaces to match the uprights. Screw down through the MDF into the brackets for rigidity.



1 Draw a suitable outline of the bracket full size using a flexible curve or freehand. Make the template from 6mm MDF

2 Cut the template with a jigsaw on the waste side of the line and clean up the curves with a sanding drum

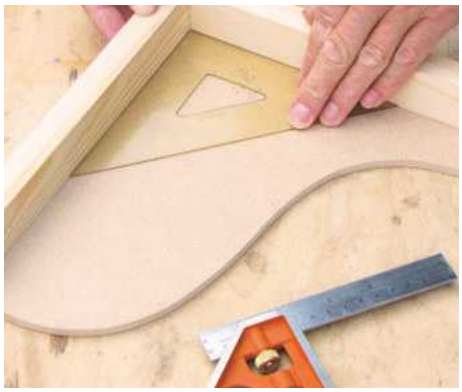
3 Building an accurate mock-up will enable you to check the overall size and determine dowel spacing

4 Mark and drill holes in the bracket and through the upright. Saw the dowel to length, taper ends and test fit

5 Draw around the template onto veneered MDF or similar material. The grain will look better if it is running vertically

6 Carefully saw each bracket side, allowing 2mm or more for waste. Plane the top and rear edges of each piece square

7 Cut softwood spacers to length, and the horizontal one slightly over length. Proceed to paint and glue up each bracket



8 Pin 20mm softwood stops to the rear edges of the template to make a jig for routing. Check these are square

9 Stack several side pieces into the jig and cramp. Using a flush-trimming bit, rout curved edges following the template

10 Plane the straight edges of each bracket flush and check for square. The gap enables the bracket to slide on the wall upright

11 Using a finely-set block plane, trim back the horizontal spacer flush with the front edge of the bracket

12 Cut the end cap slightly oversize from solid hardwood to match the veneer. Glue to the front edge of the bracket

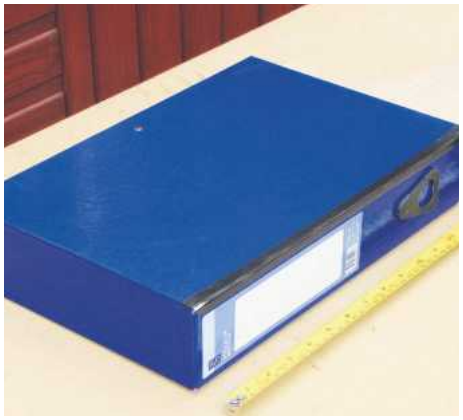
13 When the glue has dried, trim the end cap flush with the sides of the bracket, keeping the plane flat

14 Lightly chamfer curved edges with a bearing-guided router bit. End caps look neater if the edges are radiused

15 Carefully mark and drill dowel holes in the jig. Cramp the bracket in position and bore 6.5mm holes

16 Sand brackets with 240 grit abrasive. Dampen surfaces, then lightly re-sand them when dry

17 Cut remaining dowels to length with a fine saw. Chamfer or radius the ends to make them easier to insert



18 Measure the height of box files or large books to determine shelf spacing, allowing space at the top

19 Uprights need reducing in width to enable the brackets to slide. Plane off no more than 0.5mm

20 Cramp uprights into the jig and bore holes for dowels. Remove from the jig and drill again with a 7mm bit

21 Lightly chamfer edges of uprights and finish with two coats of suitable paint to match the bracket

22 Brush on a coat of Rustins Finishing Oil to brackets, wiping off the excess after a few minutes

23 Check brackets and dowels at each position. If too tight, drill uprights with a slightly larger bit

24 Cut 18mm MDF shelving to size and round off the front corners if necessary. Notch rear edges for the uprights

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SET ON A PEDESTAL

Inspired by the design of a similar pedestal bowl in oak, **Les Thorne** sets about turning his own version, but this time in ash with added details

My inspiration for these articles comes from many sources, but I suppose, like most people, the internet as opposed to the printed word is now my top source of information and inspiration. I was looking for a pedestal bowl design to use in an upcoming demonstration when I came across the slightly strange but very unique oak bowl shown in **photo 1**. I have little idea as to the age, but I would suspect that, due to the patina, it's somewhere in the region of a couple of hundred years old, perhaps more. If I saw this in a competition nowadays I doubt I'd give it a second look, but its charm comes from the quirkiness of the stem and the deep colour of the oak, which makes you want to pick it up and stroke it.

If you do the odd craft fair, you'll find that pedestal bowls will sell very well and are great fun to make, combining spindle turning and faceplate work. When I'm making pieces such as this, I try to get the shape to seamlessly transition from base to stem, and then from stem to bowl. It's very easy to make the work look like three different pieces of wood glued together, so therefore it's always worth waiting to glue the components in place until you are totally happy with the final design.

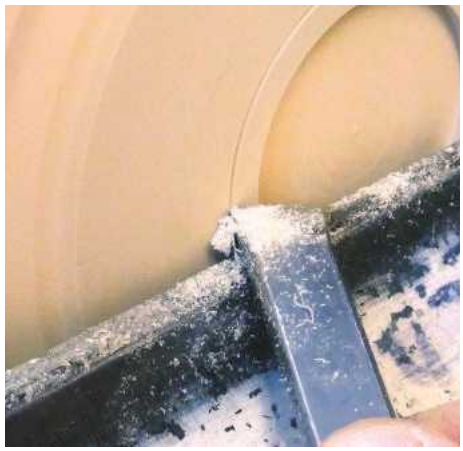
1 What do you think of the design? I'm really not sure, so I decided to radically change it but maintain the twisted stem, albeit using a different shape

2 I chose to use ash for my piece. The size is up to you but it will need to be in proportion. A good starting point is the base being a third the diameter of the top. The length of the stem will be worked out later

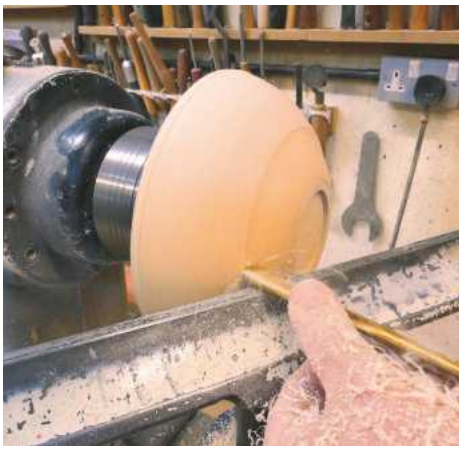
3 Start by mounting the bowl section up using a screw chuck or faceplate. The initial work is done with a pull cut using a bowl gouge – note the handle held low to keep the tool cutting the wood

4 The angle of the gouge means that the tool will remove shavings in a cutting rather than scraping manner; this keeps the tool sharper for longer and is an all more pleasant experience

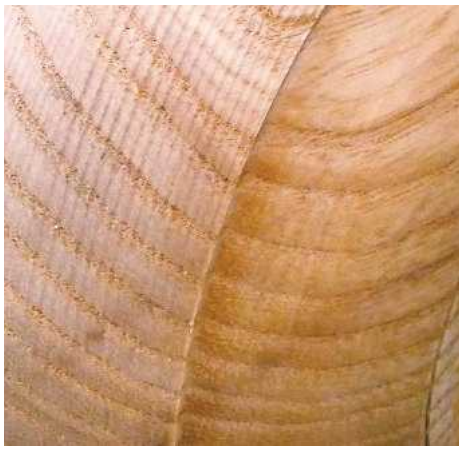
5 I very rarely use a recess in a bowl to hold it, but in this case it will become the mortise for the tenon on the stem. Dovetail jaws require an angled cut; the skew is ground at about 10°, which is the correct angle for the job



6 Make a mark with the skew, which will be the diameter of the fillet at the top of the stem. This will also be the starting point for the curve of the bowl



7 Most of the shaping is completed using a 10mm Celtic grind bowl gouge; this type of grind allows the tool to be pulled towards me. Finishing cuts are completed with the 6mm bowl gouge, using a traditional grind with a push cut



8 The small cut combined with the bevel in contact with the surface of the wood gives a perfect result. The photo here shows the before and after results of the two techniques

9 A small detail on the rim will add a little something to the design. When turning work such as this, it is important that you try to always cut with the grain. Here, in order to get the best finish, I am cutting a cove in the opposite way than I would if undertaking spindle work

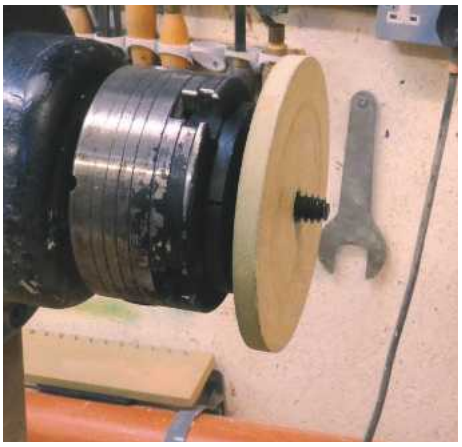
10 The safest way to sand the outside of the bowl is to present the abrasive between 6 and 9 o'clock. I also try and encourage people to grip the wrist with their free hand, which offers more control

11 The bowl is hollowed out to an even wall thickness. I decided that trying to go too thin would be a mistake, so kept it to around 12mm. If you get the gouge working effectively, the shavings will exit in a most satisfying way

12 The detail on the rim is taken over the top and into the inside of the bowl. I wasn't quite sure what tool or technique was going to give me the best finish, so in the end I cut a small groove with the skew, using it as a point tool

13 The slight undercut was completed by carefully pulling the gouge towards the rim with a scraping cut. You only need a small step – just enough to hook your fingernail under

14 I did have to keep checking the thickness of the bottom with a pair of callipers as I found there was a hole in the base of the bowl. Once I was happy with the curve, I then power sanded the inside from 120 through to 400 grit



15 Turning the base is the next stage. The piece of ash I used was quite thin, so I shortened the length of the screw chuck by using an MDF spacer. Make sure you are using at least half of the screw otherwise the fixing will not be secure enough

16 The base is trued up with the gouge before going over to the 10mm multi-purpose tool, which will be used to flatten off the bottom. A fine scrape is all that's needed

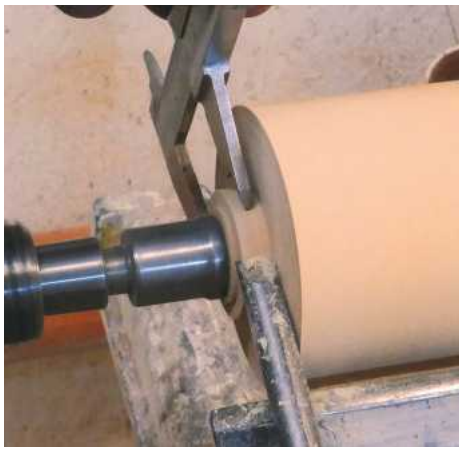
17 Cut a dovetail and then remount the base in the chuck. The hole for the stem is drilled halfway through the blank. I use a bar in the chuck to stop the drill chuck spinning in the tailstock

18 I tend to shape small faceplate work with my signature gouge – like the bowl, pay attention to grain direction. A couple of fine fillets at the shape's transition points will make the base look really special

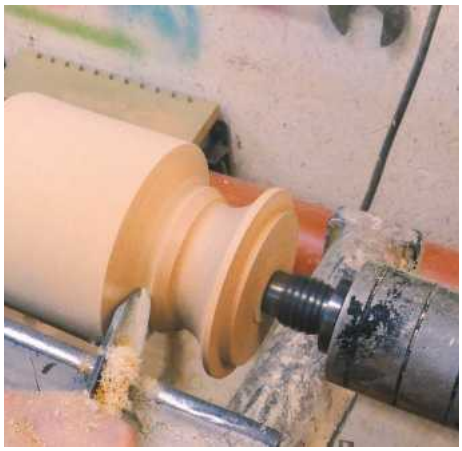
19 To get some idea as to the length of the stem, I just hold the two pieces up to each other. I find that you generally need to go shorter on a pedestal bowl and longer if it is a display stand

20 I mounted the stem between centres and made it round with the spindle roughing gouge. I trued the ends up with the multi-purpose tool, which is not essential, but it does give you an idea of where to work from

21 Two spigots, one for the bowl and one for the base, need to be measured out and turned as well as the diameter of the details next to them



22 Use Vernier callipers and a parting tool to achieve an accurate size; this will need to be a really good fit for maximum strength. The ends of the Verniers have been rounded over to stop them grabbing the revolving wood

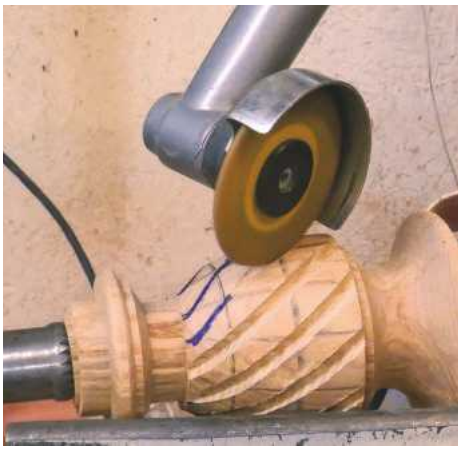


23 The fun part is the shaping. I decided to stick to a tried and tested shape that I have been turning for many years. The short bevel of the signature gouge fits perfectly into these narrow coves

24 The bead at the bottom of the stem has to 'marry' perfectly to the base. I think this is about spot on, but it's worth removing the stem and checking to make sure it's right

25 Marking out the twist is pretty straightforward. I indexed the lathe 12 times, putting a pencil line on each section before dividing the length into three roughly equal sections

26 Using a felt tip pen, draw a slightly curved line from the bottom to the top, crossing three squares as you go. The lines will signify where to cut – you could try less if you prefer thicker lines



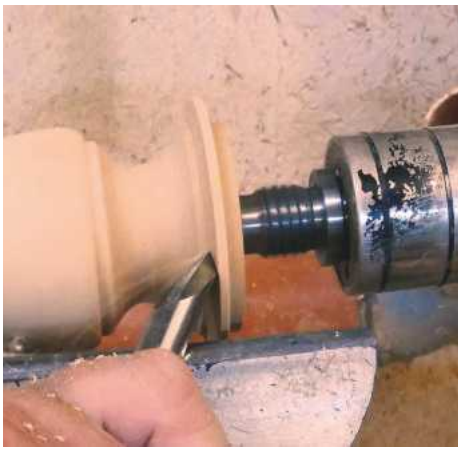
27 There are many ways to cut twists, but by far the quickest is to use a rotary cutting tool – I use a rasp in my Proxxon angle grinder. I have one hand on the handwheel of the lathe and I make sure to rotate the wood towards me as the cutter is advanced

28 Once I've cut the slots, I shape the tops of the lines with a rotary cutter. To maintain full control of the cutter, rest your hand on the toolrest. Be careful not to remove too much timber at this stage

29 Now comes the laborious part – the sanding. There is no substitute for a lot of hand work when doing twists. I like to use really good quality paper-backed abrasive rather than the normal cloth type favoured by woodturners

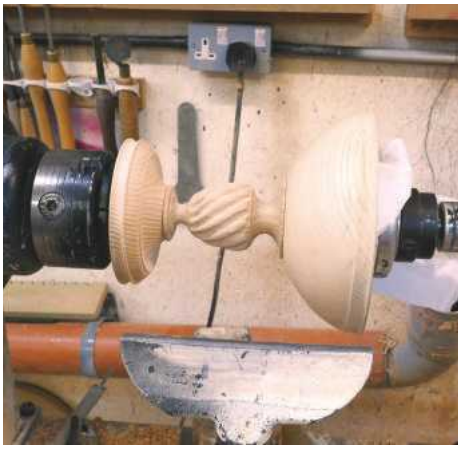
30 The sharp abrasive should leave a really good finish. I decided to leave the final shaping cuts until after I had completed the shaping and sanding of the twist

31 If the twist was larger I could sand it with my Sand-O-Flex mounted in a drill; this is a brilliant piece of equipment designed to sand mouldings, but even with its soft brushes, on this piece it would take off too much wood



32 The final shaping is completed using a gouge. The cut under the fillet is done with the bevel starting at right angles to the spindle. In order to achieve the safest and best cut, ensure to keep the bevel in contact with the cove all the way through the shape

33 The spigot that's going into the base was a touch too small in diameter, so I made some slicing cuts with the point of a skew; this spreads the wood, which increases the diameter



34 When you are happy with the shape you can glue the three parts together. The lathe acts as a perfect clamping device, although I did need to protect the inside of the bowl

35 When the glue is dry, the lathe becomes the perfect device for holding the bowl while you apply the sprayed finish. I chose to go for a gloss finish but a satin lacquer would also work well

36 The completed pedestal bowl in ash should look something like this

LETTERS

LETTER OF THE MONTH

BESPOKE BIRD TABLE

Hi Tegan,

My wife asked me to build her a bird table to go with two bird boxes I made. I knew exactly where to get ideas! The table is built using the plans shown in one of your recent magazines (*GW*331). I used offcuts of cedar from one of my benches. The post is not as substantial as the one suggested in the plans, so I braced it at the bottom for extra strength.

Matt's colourful bird table was inspired by Clint Rose's recent article

My wife didn't want the planters built on the side of the post as shown in the article, but she did want a perch that she could hang feeders on instead. Once finished, I painted it with Cuprinol Garden Shades in Lavender, which was left over from my bench project.

The birds have taken to it straight away. A pair of blue tits that nested in one of my boxes produced eight eggs but only four chicks survived. We were overjoyed when the parents brought the remaining chicks to feed at the new table! I enjoyed building the table and it provided a quick project that allowed me to practise using my table saw and bandsaw, and at last my measuring and marking skills seem to be improving!!

Regards, **Matt Russell**

Hi Matt, we absolutely love your take on Clint Rose's bird table with planters, although you obviously decided to omit these on your design. It's so great to see how people take ideas for projects shown in the magazine and add their personal flair to them. I love the colour you've chosen to paint it and we're so pleased to hear that your feathered friends also approve! We hope the magazine continues to feature lots more inspirational articles.

Best wishes, **Tegan**

MORE WHIMSICAL CREATIONS

Hi Tegan,

I thought I'd share a couple of my whimsical creations with you and your team.

Bird feeder

This outdoor bird feeder is made completely of recycled 'stuff'. Even the roofing screws that secure the floor were from a demolition. The cantilevered base was from the floor of a 'loft' and covered in pigeon droppings. I used part of an 8m Agave americana flower spike (such spikes were originally used in the production of surfboards) as the uprights, including the two holding the 'mushroom' tops. The mushroom tops were from a broken globe of the world, and are painted with old Gesso and opened 'sample' paints. The unseen shelving bracket that assists the screws in supporting the base/floor was from a demolished 'cubby house's shelf' and the post was also a throwout. The position was chosen between two pink cheesewood trees as these attract honeyeaters and provide protection from cats and hawks, etc.

Ranald's unusual bird feeder is made completely of recycled 'stuff'...

Fish tank

The indoor 'cave' was made from all 'new' materials. Timbers for the legs were purchased at a wood show and are slabbed pear tree sections. The front is camphor laurel, which is a cross-section from the bottom of a bole near the root area of the tree. Originally when I 'had to have' that piece, my idea was to make a table top: I wanted to keep the natural pimply edge of the slab but I had young children who were bound to be harmed by curiosity or accident with that. After seasoning for a couple of years, I was inspired by an old *007* movie to make a cave with fish 'underground' and not kids from Thailand.

I gingerly and fearfully cut the slab in half and reversed these halves to achieve the best aesthetics, then carefully marked out and trimmed off the four still rounded ends, allowing enough length for the fish tank and pump I had purchased. I still had no idea if my creation would work, but I was going to give it my best shot and at last it was taking shape when the pear legs were dry placed beside them. One of my friends in the local woodworking club almost burst into tears when learning of my cutting the 'table top' in half. Bits of the pear tree were removed to gain interest and to provide matching wood for plugs. Perfect symmetry was not the idea here and would have been folly to try, but it needed to look natural and balanced (at least to me).

My idea for the feet was a remake on the legs for a table I made many years before. I had some smaller sections of camphor with a natural-edge (that I had intended to use for shallow bowl turning) so I set about resizing, cutting and shaping them for their new purpose.

The tank support needed to be strong enough to hold 100s of kilograms, but didn't need to, nor did I want it to be seen, so I constructed a solid laminated 19mm pine carcass with a lower shelf for fish food, scoop, water cleansing drops, etc. This way I could use batten screws through the solid pine carcass ends to support the whole thing. I painted it flat black to make it disappear to the eye.

Usually I would give a coat of finish, after sanding and before assembly, but in this case I only sanded the planed surfaces to a fine grit (about 320). I would still have tweaking (for levelling) to do on the feet and maybe elsewhere for aesthetics/balance once assembled.

Assembly was also a challenge but I managed using homemade 200 × 75mm (8 × 3in) saw stools, Triton SuperJaws, a house post for support (extra pair of hands) and my trusty Record floor cramps, blocks of scrap wood, G cramps, F clamps, 100mm batten screws, roofing screw gun, spirit level, 50mm batten screws for carcass to leg attachment, etc. I cut plugs to cover the batten screws: these need to be (and were) cut off, block planed, and sanded. A job I will never, ever do on my own again.

Once assembled, I tweaked the feet with a belt sander in order to have the

whole item level. Next, I placed tank and pump on the stand and all was good, so I filled the tank slowly to check proper balance. I tried to rock and roll it but I'd achieved perfection, and, most importantly, it was safe. I then emptied and removed the tank and pump for finishing. I opted for a low sheen/matt – I really wanted the beauty of the grain to shine through. The first coat was extremely glossy, which confused me as the timber only gets a glossy look after about 1,000 grit or finer sanding. I sanded it back somewhat and purchased another tin.

… and his fish tank, made using slabbed pear tree sections, is certainly a thing of wonder

It was better. I later used the original Polyurethane only to learn it had been incorrectly labelled and was in fact a full gloss. I left the first coat to dry for a couple of days and then heard a change in weather was due in a day or so. To beat the rain I decided to bite the bullet and use a spray gun. Four coats of wet on wet were applied. A sixth coat has always dogged me with oil- and water-based finishes, so I didn't try to add it.

A year or so later the pump died and the same model was no longer available. I purchased a slightly better one but had to 'improvise' as it did not fit between the tank and the leg. I routed out a slot, above the height of the tank end, to enable its insertion and use.

I hope this has at least entertained you and at best you love it as much as I do and 'most' of my visitors. One of my woodworking friends said the usual "wow" and added: "It's an engineering masterpiece", while another commented: "It's not traditional. Where are the dovetails and mortise & tenons?" To each their own: in wood, I love traditional and fanciful.
Kind regards, **Ranald Millar**

Hi Ranald, thank you for sharing these unusual projects with us – I'm in awe of the fish tank and have never seen anything quite like it before! Thank you for sharing so many details and it's obvious your passion for woodworking and working with these materials is what drives your creativity. Best wishes, **Tegan**

WOLF DRILL FROM NEW ZEALAND

Dear Editor,
I was interested in the 'star letter' shown on page 64 of the June issue of *The Woodworker* regarding the Wolf drill. I am enclosing a photo of my Wolf drill (sec no. 85614, type A, 200/250) by Wolf Electric Tools Ltd., London. It was painted a silvery bronze colour and my dad bought it for me in around 1951–52 at Ashburton/South of Christchurch, but I can't remember the price. It still works but I have now committed myself to battery models.

I just thought you may be interested in seeing it. I enjoy the magazine.
Regards, **Ken McDonald**

Hi Ken, thanks for taking the time to send a letter all the way from New Zealand! It's great to know that Wolf Electric Tools' influence can be seen all over the world, and this is another great example. Let's see if we can keep this thread going – we look forward to discovering who else still owns a model after all these years!
Best wishes, **Tegan**

Ken's Wolf drill is still going strong, although he now prefers to use battery models

READERS' HINTS & TIPS

BriMarc TOOLS & MACHINERY | veritas Innovation in tools

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

USING SPRAY PAINTS MORE EFFECTIVELY

Hi Tegan
Like most home woodworkers, I occasionally use spray paint from a can. Note that the use of the word 'occasionally' as this is the nub of the problem.

The recommendation is to invert the can and spray to clear the nozzle, but eventually the contained gas is too low in pressure to make use of the remaining paint (often more than half a can).

A piece of sleeving inserted into a female nozzle, ready to attach to the top of the WD40 can

I noticed that many of the paint nozzles invariably had male spigots, which fitted into the top of the paint can, so I tried using a bicycle pump, with a football adaptor, to blow out the nozzle using a short piece of electrical PVC sleeving to finish the coupling. This worked after a fashion, but not always successfully.

A WD40 can and a typical male paint nozzle with the required 'interface' sleeving

Then I discovered that WD40 cans have a female nozzle, which fits onto a male spigot on the can, exactly the same size as that on the paint nozzle. So a short length of sleeving connects the two and a quick blast of WD40 clears the paint nozzle without losing any gas in the paint can. The sleeving is soft enough to enable a fingernail to depress the WD40 spigot, or if very short (10-15mm) is rigid enough to simply press the nozzle in the usual way. I was also delighted to discover that the female nozzles on some paint cans will enable the sleeving to fit inside.

After using this technique for some time now, I have not noticed any spoiling of the paint finish as the WD40 has invariably evaporated by the time I need the paint again.
Regards, **Bernard J Greatrix**

Hi Bernard, thank you for your useful tip – making products go further is definitely something we champion here and without people like you who come up with these novel ideas, where would we be? No doubt many other readers will find this tip handy and will hopefully we able to save some money on spray paints in the future. Best wishes, **Tegan**

WRITE & WIN!

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

BY HAND OR

Peter Bishop tackles a hoary subject as he asks whether or not, as woodworkers, we favour powered tools and machines over more traditional hand methods

Now here's a subject that might provoke some interesting responses! Are you one of the stick-in-the-mud traditionalists, often called a Luddite, or a progressive user of the latest technology? Or is there a middle road that takes us smoothly through to a satisfactory conclusion? Let's see what my personal take on the situation is.

Power prevails

Firstly let's all agree that whatever we do within our working of wood experiences, we should try not to impact negatively on our environment. Some things are within our control and some not. There are various arguments suggesting that harvesting trees using horses to extract logs is much kinder and less detrimental to the environment, and no doubt this is true. Unfortunately the volumes of timber required to satisfy our modern day needs ensures that this method will not be used except in a handful of cases. Can you imagine those sawyers, in pre 19th century times, not jumping for joy when they found out they no longer had to spend all day in a stinking, muddy hole cutting logs into lumber? I can't. Perhaps this is too simplistic an approach. Those old sawyers might have resented the introduction of powered saws that took their jobs away? Power prevailed. I've only ever seen a couple of examples of pit sawing. Most of those have been on historical programmes or drawings in books. I know which method I'd prefer.

The draw of powered planing equipment

Is this primary discussion of hand versus power relevant at all these days, I hear you ask. Should

A photograph from 1940 showing draft horses hauling a massive load of logs

MACHINE?

we not be concentrating on the latter stages of individual component manufacture and finish? Well, yes, of course we should, so let's move from the sawing stage and focus on preparation beyond this.

Hand planing can be cathartic but is it better than using a powered planing machine? I'd like to dismiss, out of hand, the portable, hand planing machine. These have their uses, and I do use mine quite often, but as a precession tool for square planing they are not really an option. I'm not saying it can't be done, but I'd hate to have to rely solely on this method of preparation alone.

What about squaring up and sizing with a hand or machine plane? I'd say this comes down to a couple of primary considerations: how much have you got to do and how much time do you have? In a commercial sense there's no choice. Trying to

Self-propelled harvester at work

Peter Follansbee practising pit sawing

A horizontal bandsaw conversion mill

produce a volume of planed material by hand can only be done with a planing or moulding machine. Therefore, by hand, we're not looking at this end of the production line but more at the bespoke 'hand' crafted single piece designed for a specific customer or limited clientele.

Taking a continuous shaving from the edge of a piece of wood with a fore or jack plane is more than satisfying. The motion that produces the thin, curled shaving would indicate that all the component parts of your hand plane were in tip-top working condition. The blade honed to razor sharpness; the cap iron perfectly placed and squared across; your stance and position allowing the sweep of the plane, in one motion, to be carried out – what joy! The remembered sights and smells from my childhood visits to our local carpenter's shop are conjured up as I write this. There's only one problem; I could never flatten, straighten and square by hand to save my life!

Faced with my inadequacies, I have no choice but to turn towards powered planing equipment. Are you like me? The processes are just the same. Firstly, plane the face flat and true. From this the edge can be planed square, then parallel to width and thickness to finish off – job done. I could probably spend all day trying to produce half a dozen identically squared pieces by hand yet this can be achieved in a matter of reasonable minutes using my trusty over & under planing machine. For me there is no choice and for my clients there is also no choice. There is no way on earth my clients would pay me to waste time planing stuff up by hand!

Using these long fore plane beasts must be hard work

Square planing on an over & under planer

A selection of solid wood mouldings

Moulded profiles

I suspect that the last statement above might significantly influence my further observations. Or do they? The simple art of square planing can now be set aside. Moulded profiles are next. Once more the high production moulding machines available to volume producers can make infinitely variable shapes and sizes. Within reason your imagination is the only limitation upon the outline of the output from these machines. The key here is that the cutters which produce the profiles can all be individually made. The only restraining factor, once again, is cost. In a high production, commercial environment there is not much room for individualism. That's why when we go to our local timber or builders merchant for a length of pre-moulded skirting board, they are all very similar from company to company.

Most of us will now produce our shaped mouldings using profile cutters in a router or spindle moulder. The latter has the capacity to have infinite variety while the former is restricted by the few manufacturers of the profiled cutters. With a router we can, of course, use a variety of different cutter profiles to produce some shapes that are slightly variable. But that is not always as easy as it sounds. Here comes the 'by hand' alternative. I'm sure, as workers of wood, we have all seen the hand moulding planes that have long gone out of fashion. Their advantage was similar to the modern moulding machine. The only limitations on the type of profile they can produce is from the maker's imagination and, dare I say it,

A range of router profile cutters

A selection of wonderful old moulding planes, courtesy of David Barron

inclination. Which came first, I wonder – the shape of the cutting blade or the plane body into which it is mounted? I'd say the blade.

This then leads on to the skills required to produce such tools. Not only do you need to shape and sharpen the cutter iron profile but to then produce the wooden body into which it must fit. I suspect we are then back down to the old criteria: how long does it take to make and use the tool or tools? There is a shortcut today. If I had my time again, I might start to collect a wide range of hand moulding planes often found at car boot sales, auctions or online. There is a major issue associated with this, however: you still have to be able to sharpen the blades!

The jointing process

Moving on to the jointing process. I, probably, as can be seen in most woodworker's workshops, have a wide range of chisels and saws to hand. If I have an odd mortise & tenon joint to make, I might well pick up my square and marking gauge, set out the joint and cut it by hand. This means, to me, that I'll chop out the mortise hole with a chisel and then cut the tenon, in the main, on my bandsaw to fit. Is this by hand, then? I'd probably only hand-cut the hole if my mortise machine had a chisel set in it that was too large.

Cutting mortise & tenon holes commercially involves machines. There are single and multiple chain, chisel and oscillating mortise machines. These are complemented by tenon machines that can be single- or double-ended with the capability to cut matching scribed profiles as well. All cost money and all are aimed at volume production of some form or another. I have a single-head mortise machine that I operate 'by hand'; I also tend to cut my tenons on a pull-over crosscut saw or, sometimes, using my bandsaw. These are not the only tools that will do the job but, when it comes to this type of work, I'm fully converted to using machines.

Where to next?

I suspect I could now pontificate on a variety of functions from boring and drilling, veneering and detailing, sanding and scraping, through to marking and measuring, etc. For all these there are alternatives available to us. The question is, which satisfies our needs in the best way? There is no one single answer to this. I firmly believe that those old craftsmen, in Thomas Chippendale's workshops say, would have welcomed the addition of powered tools to their stable. They used the latest technology available at the time and would have jumped at the chance to simply plug and play with a powered tool. The result would have been the same: beautiful hand-crafted work that was designed to last for a number of generations. I fear that will not be said about most of the rubbish produced and sold through the high street stores these days. This stuff is a bit like a new car; as soon as you've bought it, you've made a loss.

So, I'm a firm believer in using power tools when they make life easier, simpler and, if in business, more profitable. As long as they satisfy our customer's needs, then I welcome all those new developments as they come along. A bit of food for thought. If you've got time to put pen to paper or finger to keyboard, then do let our Editor know what you think.

A mortise machine in action

Cutting a tenon by hand

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FOOT IN THE DOOR

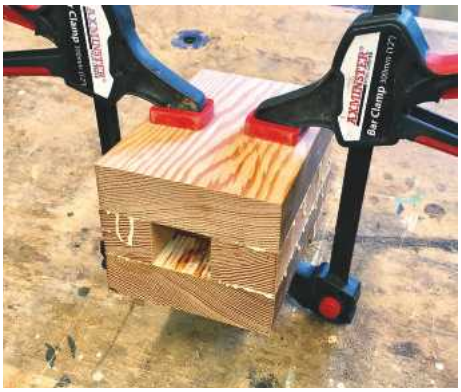
If you have lots of offcuts lying around and a few other staple supplies, have a go at making **Rick Wheaton**'s door stop

2018 has been one of those summers where doors are open most of the time. Coincidentally, a neighbour gave me a hoard of lovely old 150 × 45mm planks (thanks Adrian!) and as he was also plagued with slamming doors, I made him a couple of these simple door stops as gifts.

Because Adrian's planks were pretty thick, three of them were ideal, but other timbers – thinner planks or a chunky block – would work just as well, and are much more interesting than a wedge!

1 This really is an 'easy piece' – the photo here shows all you need: your chosen timber, some glue, a short length of rope and (if your finished door stop is a bit light) something weighty such as a bit of old lead flashing

2 Here you can see the plank cut into three identical lengths. You can hide a fault (such as these two holes) by using it for the middle length. As shown (if you think you'll need the lead) cut a section out of this middle piece, which can be done quite roughly



3 You can now clamp the three pieces. The more accurately you can clamp, the less sanding you'll have to do afterwards, and now is a good time to cut a few pieces of lead to fit the hole

4 2mm flashing can be cut with scissors: push the pieces into place and fix them with a punched in nail

5 The only slightly tricky bit is drilling the holes and gluing the rope. Drill a few test holes in a bit of scrap – the rope wants to be a slack fit, not too tight – and decide if you want a loop (two holes) or a knot (one hole). If you go for a loop, drill two holes close together but not touching, then use a Forstner bit to form a shallow well. Mark the required depth of rope with a bit of tape to make sure it's pushed all the way in – I suggest the holes are at least 100mm deep

6 A 13mm hole is perfect for my rope, and smeared with PVA glue it's a good fit. Glue will inevitably splurge (technical term) around the holes, as shown here, but the well stops this being an ugly mess – in fact, use lots of glue to fill the well halfway up. This makes the top look really neat and of course you want plenty of glue to run down around the rope. At this point you'll need to let the pool of glue dry, maybe for 24-48 hours. The first time I tried this I was surprised how well it looked. Finally, some fine sanding and oil will bring out any grain, and your doorstop is good to go

TIPS

- Soft ropes, such as nylon or cotton, are a bit floppy for this job. Best is a stiffer rope such as polypropylene, which is very common and available in many bright colours
- If your doorstop moves too easily on a carpeted floor, stop it sliding with coarse abrasive stuck underneath

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Admiring a Victorian pigeon decoy in his ownership, Peter Bishop decides to create his own modern trio in walnut and uses painting techniques to give an 'aged' effect

PLUS ▪ Gilly the rocking giraffe – part 2 ▪ Sharpening: setting safely & effectively ▪ Making go karts ▪ Log tote ▪ Me and my workshop – Ron Lawson ▪ **On test:** Bosch GWS 18V-125 SC Professional cordless angle grinder

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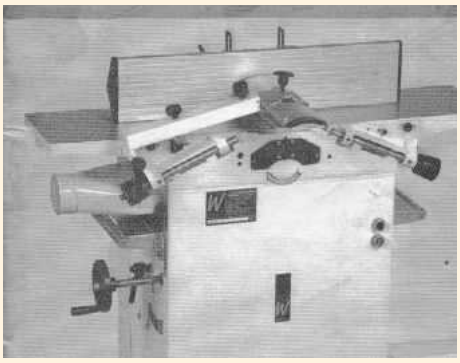

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Our great advantage

I can only think of furriers. No-one else comes close. Potters deal with mud. Leather workers with skin. Candle makers, fat. Weavers, sticks of willow. Glass blowers, melted sand. Artists, powdered earth. None of these materials is, by itself, very interesting or especially beautiful (though all Nature is beautiful in its way). Each lends something to the craft, of course. Craftsmanship is about understanding materials and using them in ways that demonstrate their qualities. But silver is hard, takes detail, and is fully reflective and, um, that's it. One lump of stone looks remarkably like another. Perhaps marble.

So there is fur and there is marble. What other raw material has anything remotely approaching the phenomenal visual attraction of wood? Which other craftsperson receives such a leg up in their work? Who else operates in an area of outstanding natural beauty? Textiles can have beauty, but they are a product of their own craft, and start off as cotton fluff, flax, or the poor sad unspinning of a cocoon (whose beauty is destroyed in the process). Jewellers, I suppose, with their technical ability to release from a blob of mineral a crystal of pure form. But that's not quite the same, and not a lot different in aesthetic terms from pouring concrete into a mould. Florists. Yes, florists if you can call floristry a craft. Or gardeners. But no; arranging is not creating. It's not the same at all.

Fur is unfashionable for good reason. Marble is cold and hardly versatile. There isn't a lot you can tastefully do with either: they are no competition, so we win. Our raw material is truly beautiful, and head and shoulders above all others. This isn't arrogance, for we play only a small part in producing that beauty. The skill of the forester, the sawyer, and the keenness of our blades make a difference, but even without these (and especially so, some might say, as green timber is riven and cleft according to its own rules, not ours) wood is magnificent.

Take a tomato

Maybe not all of it. Think of tomatoes. Tinned are alright for everyday cooking, but they need to be reduced and concentrated before they add very much to the meal. Furniture made of sheet materials is bland unless its lines are refined. Standard shop bought tomatoes are watery and tasteless; you have to zing them up with basil and a splash of balsamic. Fast grown softwood is characterless and you have to be more considered in your design. Speciality tomatoes have taste but soon you're paying way over the odds. Forest grown hardwoods are a definite improvement, and for many people, the best they will use. It is easy in these days of convenience shopping to forget what a real tomato tastes like. For this you need a greenhouse. A fresh tomato salad needs little adornment. Every taste is an explosion. The richer the materials, the less important your contrivance. Good salad needs only a dribble of oil. If you over-dress it, you'll disguise the very materials you wish to exhibit.

It will look as if you've done less work. Pieces are well cut and nicely arranged, but not, you might think, worth a Michelin star. That's until you taste it. When you do, you will be amazed. You won't necessarily know why. That little addition; that little detail. That moulding running round the table top. The delicate curve that is barely noticeable. Stopped chamfers cut with engineering accuracy and uniformity. Perhaps a dash of the unexpected just to keep you on your toes. The single Kalamata olive.

Only fellow workers might truly appreciate your skill and ingenuity. Other people find their attention drawn towards the material itself. Your work does not seem to be the main event. That honour belongs to the timber itself. And the pay-off? When a customer comes in, stops, rocks back slightly on his or her heels and says 'Wow, what a fantastic piece of wood' (then almost inevitably reaches out a hand to stroke it) your sale is half-made.

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