WOODWORK TURNING TOOL TESTS FEATURES

# The Work September 2024 September 2024 Control of the Control of

& Good woodworking

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- FEATURE: WESTONBIRT AN ARBORETUM LIKE NO OTHER
- ANDREW HALL'S BEGINNERS' GUIDE TO WOODTURNING PART 3
- PROJECTS: SHELVING UNIT ROCKING CHAIR RESTO BATH PANEL

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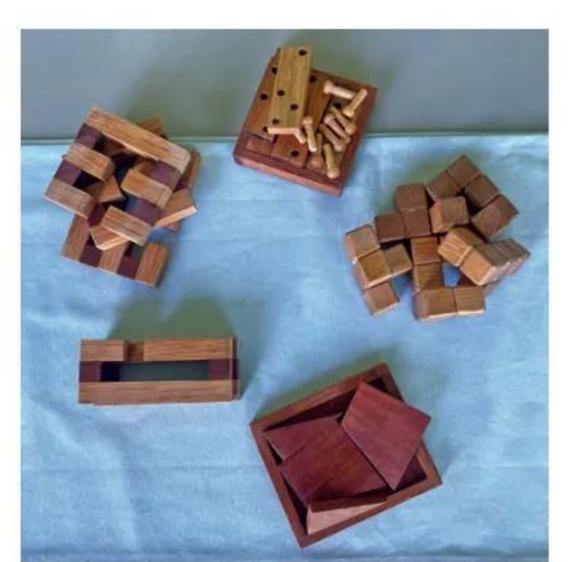


I'm always astonished by the continued support and enthusiasm of our readers, many of whom have been buying the magazine since before I was even born! Through its myriad forms and changes – in terms of staff, title and structure, for example – our readers have always remained loyal, continued to champion the cause, and most importantly, remained enthusiastic about woodworking in its various disciplines.

Now, I may be biased, but it's my belief that WW readers are a special breed and over my nine years of working on both this title and Good Woodworking, I've always been buoyed by the well wishes and positivity sent our way, be that through emails, hand-written letters and also having had the opportunity to meet a few of you in person. These are all experiences that I hold very dear and will cherish forever.

#### A very special reader

I wrote about one such meeting in the December 2023 issue, having met the incredibly talented Jack Cluer and being shown around his very well-equipped workshop. The consummate host, it soon became apparent that Jack was also terribly modest in terms of his talents and skill level. Not just a woodworker, his background is one that encompasses an engineering apprenticeship, teaching as well as serving as an editor. A man with an exceptionally technical mind, there doesn't seem to be any limit to his talents and I absolutely loved talking to Jack and hearing the stories, all of which were fascinating. Jack and myself have remained in contact on a regular basis and I was incredibly touched to learn that my visit was considered a highlight of his year. The pleasure really was all mine and Jack kindly keeps me abreast of the projects he's working on – which mostly include wooden toys – all meticulously



A selection of wooden puzzles, made by Jack Cluer...



... along with a wonderful turned pen

#### Pen & puzzles

When Jack enquired as to my favourite colour, the last thing I expected was a gift, and especially as he'd sadly suffered a recent fall. However, to my amazement, it wasn't long before Jack was back in the workshop and picking up the projects he'd previously been working on, one of which was the beautiful turned pen that I received in the post. Displayed in a wonderful box, the pen is a joy to use and I'm incredibly humbled by the thoughtful gesture. I will treasure it. But that's not all, as well as this, the parcel also contained four different wooden puzzles – 'Five Piece Block', 'Bedevil', 'The Cruiser', and 'The Peg Pile - all made by Jack's fair hands. According to him, these also required making up several jigs in order for the precise cuts to be carried out. Taken from Brian Menold's book, Wooden Puzzles, these are things of beauty and again, I was incredibly touched by this kind token. I've enjoyed sitting in the garden and having a go at trying to solve these, but they aren't for the faint-hearted! I was reassured to learn that Jack also struggled to crack them, and he usefully provided the solutions to each, in sealed envelopes, which I was instructed to only open if absolutely necessary! Hopefully I won't have to resort to having to take a peek...!

A big thank you to Jack, and indeed to all those of you who write in and share your stories as well as giving feedback on how you're enjoying the magazine; it really does mean a lot.

#### **Exploring Cornwall**

In terms of other goings on this month, I've been enjoying getting out and about and exploring more of the wonderful places right on my doorstep. While I do love the coastal landscape, you can't beat the tranquility of a forest and being among the rows of Douglas firs recently, I felt a definite sense of calm. This particular forest – Burley Down in Devon – is owned by Forestry England and open to the public. I was also lucky enough to visit Cadgwith Cove – a truly quintessential little Cornish fishing village – that's located on the famous Lizard Peninsula Coastal walk. Going back to this issue, however, it certainly is an exciting one and as well as the 2024 Chippendale Furniture School graduate showcase, there's a whole host of other interesting and inspiring content to look forward to. Enjoy!



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ON THE COVER

20 CHIPPENDALE INTERNATIONAL SCHOOL OF FURNITURE 2024 GRADUATE SHOWCASE

Featuring a multitude of international talent, join us as we celebrate the exquisite work of the Chippendale School of Furniture's 2024 Professional Course graduates

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WORKSHOP

We've teamed up with Wood Workers Workshop once again to give five lucky readers the chance to win one of these versatile Milescraft GlueMate450 glue bottles



See page 16 for further details



### PROJECT DIFFICULTY 1-5

Each project in this issue includes a difficulty rating from 1-5, so you can readily see whether or not a particular one is suited to you. While it's good to try and push yourself and develop skills, workshop safety should always be a main consideration and we urge you not to attempt a project/use specified tools or machinery, if you're unsure how to do so in a safe manner. A wide range of safety information is available online and a good place to start is www.hse.gov.uk

- 1 Very easy; only requires basic tools
- 2 Simple to make; only a few tools required
- 3 Aimed at beginners-intermediate; some specific equipment/tools required
- 4 Aimed at intermediate-advanced; sound woodworking knowledge required in addition to a wide range of hand/power tools
- 5 Advanced skills/knowledge required; a wide range of specialist equipment is needed to complete the project

# Woodworker & Goodwoodworking **SEPTEMBER 2024**

#### **PROJECTS & TURNING**

#### 34 Beginners' guide to turning: part 3 - Faceplate turning, bowls & platters

Andrew Hall looks at the techniques that make use of his remaining 'Magnificent 7' tools

#### 40 Get plugged in to a new idea



Peter Scaife finds a way of working that's based on - wait for it! electricity

#### 48 Four-legged friend

Taking the matching set of cabriole legs made last month, Colin Simpson completes his footstool

#### 56 Material prejudice

Dominic Collings wises up to the benefits of carcassing with MDF as he makes a bookcase

#### 72 Rocking renovation request

Peter Vivian goes back to basics and proceeds to give a historic item a new lease of life

#### 77 Bathing belle

Phil Davy glamourises his bath by replacing its shabby panel with an attractively beaded new one

#### 80 Turning the air blue

Les Thorne shows how to lift a plain sycamore bowl by applying airbrushing techniques

#### 84 Waste not, want not

Tony 'Bodger' Scott transforms an old lump of wood into a wastepaper bin for his home office

#### **ON TEST**

14 Milescraft GlueMate 150 & 450 glue bottles

#### **TECHNICAL**

#### 18 Simple but precise

Short offcuts can come in very handy, especially for projects such as Michael Huntley's table lamp

#### 19 Changes during the Industrial Revolution & how these shaped the timber industry

Continuing his analysis of historical developments and their effect on the timber industry's development, David Smyth moves on to looking at the Industrial Revolution and the role it played

#### 30 Mitres & grooves

Michael Huntley shows you how to cut right-angled corners and grooves

#### 47 The race is on...

Michael Huntley shares his nine-point guide to achieving gluing success at speed

#### 64 Workshop safety & drum sanders

Geoff Ryan learns some important safety lessons and implements a number of critical modifications

#### 70 Bog standards

Fine work on ancient bog fir calls for a careful strategy and some cunning plans by Jeff Gorman

#### 75 Hand-carved chessmen

Bernard Greatrix presents his figurines inspired by the Lewis Chessmen

#### REGULARS

3 Welcome 8 News 68 Letters & readers' tips **76** Around the House **85** Marketplace 87 Next month

#### **FEATURES**

#### 39 A blast from the past

We never cease to be amazed – and sometimes amused – by the extraordinary breadth and variety of material that *The Woodworker* has published during its 123 years. Here, we take a look at examples from 73 and 48 years ago

#### **42** Ship-shape & Bristol fashion

Stephen Simmons takes his maker's history to the west of England

#### 44 A carpenter's chips

Phil Whitfeld looks back to the humble beginnings of English carpentry

#### 51 Miniature melody

Despite its small size, David Edwards' tiny replica wooden violin has a high price ticket...



#### 52 Westonbirt – an arboretum like no other

Situated in Gloucestershire, Westonbirt, The National Arboretum, which boasts 15,000 specimens and 2,500 tree species from all over the globe, is perhaps the most important and widely known of its kind in the UK, as Paul Greer discovers

#### 86 History of the screw

Michael Huntley presents his timeline documenting the screw's long history

#### 90 Take 5

This month's selection features a piece by 2017 Chippendale School of Furniture graduate Andrew Cockerill; a mesmerisingly hand-carved ornament by Edek Dłutoręki; and a tool chest design by Mike Weber, which is constructed entirely by hand



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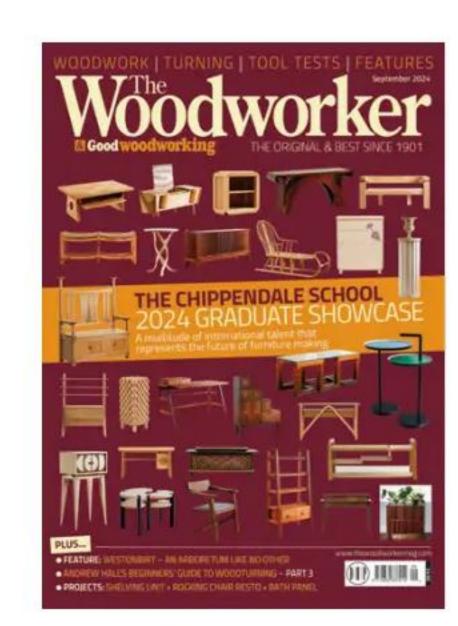
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# NEWS In brief...

# FESTOOL ANNOUNCES NEW EXOACTIVE FUNCTIONS AVAILABLE VIA THE WORK APP

Festool is expanding the functionality of its active exoskeleton, the ExoActive EXO18, using the Work App. Launched in 2023, the ExoActive makes light work of strenuous overhead tasks, giving the user an extra boost of strength before arms get tired, as well as removing load from the neck. As test results show, users are impressed with Festool's new helper, which is further evidenced by a recent iF Design Award win.

The Festool Work App is delivering optimum functional extras for everyday work with the ExoActive, but what exactly does it do and how is support provided?

"The ExoActive reduces load on users' front shoulder muscles, which would otherwise feel the burn all day. This allows arms to be extended for longer periods, thus reducing time pressure and stress levels when setting the screw connection or producing a more even spray pattern," comments Karl Preiser, a German test customer for the 2023 ExoActive test study.

The ExoActive is an active exoskeleton that's powered by an 18V battery. A revolution for the building trade – whether dry mortarless construction or painting, sanding, installation, on both walls or ceilings – the ExoActive actively lends a helping hand, by providing support during overhead work, when using power tools, traditional hand tools or even bare hands. Consequently, with body stress reduced, users can work without fatigue, allowing greater focus on work quality, which ultimately results in increased effectiveness and job enjoyment.

#### New additional functions with the Work App

With the free Festool Work App — available for Android and iOS — the ExoActive will, in future, be even more customisable in order to suit specific applications and requirements — all via the smartphone touch-screen for added convenience. For example, the app can be used to show step-by-step instructions detailing how to adjust the ExoActive to suit a user's body size. The app also makes it easier to set the appropriate working mode — in either Flex or Fix mode. Fix mode provides support in a fixed position of around 100° in front of the body — for example, during longer installation work in one place, and in Flex mode, the position can be selected with complete freedom. Both modes are suitable for static work in the same position. For asymmetrical work, the ExoActive offers

For asymmetrical work, the ExoActive provides one-sided power support on the right or left arm via the Work App

Festool has expanded the functionality of its ExoActive EXO18 using the Work App

support on one side for either the right or left arm – for example, when using a cordless drill. With the app, the ExoActive can be easily adjusted to suit the work situation in question. But that's not all – it also displays charge status, calls up operating data such as the level of support, as well as providing access to software updates and tutorials on how to use the ExoActive most effectively.

#### Results from the customer testing study

"To find out exactly how our new exoskeleton will be used in practice, we conducted an international test study in seven European countries between May and October 2023," explains Dominic Ender, Product Manager at Festool. "This gave around 300 test customers the opportunity to put the ExoActive through its paces on construction sites. The results were very positive all round, showing great enthusiasm for the active support, especially in the case of overhead work." The final results indicated the following:

- 79% felt less physically exhausted;
- 74% felt their workload had been eased;
- 71% needed fewer breaks;
- 72% gave positive feedback on the operation/adjustments during work;
- 70% gave positive feedback about the adjustments to their body shape;
- 56% stated a higher quality of life.

#### Integrated into the Festool 18V system

The ExoActive is supplied along with all accessories in robust packaging that, in addition to protecting the product, also functions as a raised storage area. Powered by an 18V battery, the ExoActive exoskeleton is also compatible with the entire Festool 18 Volt System. For further information, see the website: www.festool.co.uk.







### Timber Suppliers Directory – September 2024

Adhectic Ltd (Berkshire)
Tel: 01235 5
Web: www.adhectic.co.uk

A Harrison (Northants)
Tel: 01536 725 192
Web: www.aharrisonwoodturning.co.uk

Albion Timber (Sheffield)
Tel: 07580 627 921
Web: www.albiontimber.co.uk

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: 01621877400
Web: www.brookstimber.co.uk

C&G Barrett Ltd, Cilfiegan Sawmill (South Wales) Tel: 01291 672 805 Web: www.cilfiegansawmill.com

Clive Walker Timber Ltd (West Yorkshire)
Tel: 01132 704 928
Web: www.clivewalkertimber.co.uk

**D Emmerson Timber** (Lincolnshire) **Tel**: 01507 524 728 **Web**: www.emmersontimber.co.uk

Earlswood Interiors (West Midlands)
Tel: 01564 703 706
Web: www.earlswoodinteriors.co.uk

English Woodlands Timber (West Sussex)
Tel: 01730 816 941
Web: www.englishwoodlandstimber.co.uk

Exotic Hardwoods (Kent)
Tel: 01732 355 626
Web: www.exotichardwoods.co.uk

EO Burton, Thorndon Sawmills (Essex) Tel: 01277 260 810 Web: www.eoburton.com

Eynsham Park Sawmill (Oxfordshire)
Tel: 01993 881 391
Web: www.eynshamparksawmill.co.uk

FH Ives (Essex)
Tel: 01268 732 373
Web: www.fhives.com

Fulham Timber (London)
Tel: 0208 685 5340
Web: www.fulhamtimber.co.uk

**G&S Specialist Timber** (Cumbria) **Tel**: 01768 891 445 **Web**: www.toolsandtimber.co.uk

Good Timber (Northamptonshire)
Tel: 01327 344 550
Web: www.goodtimber.com

The Hardwood off cut shop (Essex)
The Wood Yard, Canterbury Tye Farm,
Doddinghurst road, Brentwood, Essex,
CM15 OSD
Tel: 01277 205990
Web: www.hardwoodoffcuts.co.uk

sales@hardwoodoffcuts.co.uk

Horndon Timber Products
Unit 8-9 Orsett Industrial Park
Stanford Road, Orsett, Grays
Essex. RM16 3BX
Tel: 01375 679 999
Web: sales@horndontimber.co.uk

Interesting Timbers (Somerset)
Tel: 01761 241 333
Web: www.interestingtimbers.co.uk

ISCA Woodcrafts (South Wales)
Tel: 01633 810 148/07854 349 045
Web: www.iscawoodcrafts.co.uk

Joyce Timber (London)
Tel: 0208 883 1610
Web: www.joycetimber.co.uk

Lincolnshire Woodcraft (Lincolnshire)
Tel: 01780 757 825
Web: www.lincolnshirewoodcraft.co.uk

Nottage Timber (South Wales)
Tel: 01656 745 959
Web: www.nottagetimber.co.uk

Ockenden Timber (Powys)
Tel: 01588 620 884
Web: www.ockenden-timber.co.uk

Olivers Woodturning (Kent)
Tel: 01622 370 280
Web: www.oliverswoodturning.co.uk

Oxford Wood Recycling (Oxfordshire)
Tel: 01235 861 228
Web: www.owr.org.uk

Stiles & Bates (Kent)
Tel: 01304 366 360
Web: www.stilesandbates.co.uk

Scadding Timber (Avon)
Tel: 01179 556 032
Web: www.scadding-son-ltd.co.uk

Scawton Sawmill (North Yorkshire)
Tel: 01845 597 733
Web: www.scawtonsawmill.co.uk

S.L. Hardwoods (Croydon)
Tel: 020 3051 4794
Web: www.slhardwoods.co.uk

St. Andrews Timber (Scotland)
Tel: 01316 611 333
Web: www.standrewstimbersupplies.co.uk

Surrey Timbers Ltd (Guildford)
Tel: 01483 457 826
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

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)
Tel: 01798 861 611
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# New UP18DA Cordless Air Inflator from HiKOKI suitable for van tyres outdoor activity prep

Designed to make the inflation process effortless, HiKOKI Power Tools has launched the UP18DA Cordless Air Inflator. From car and bike tyres, to sports equipment and pool accessories, this new product is engineered to make inflation



quick and easy. Compact enough to be kept in the back of a van, reach for this cordless inflator on and off site, which will prove particularly useful during the summer months when outdoor sports and camping become more popular.

The inflator features a 'high-pressure' mode, which is perfect for efficiently inflating tyres, and a 'high-volume' mode, that's ideal for air mattresses and pool floats. This versatility ensures that whether you need robust pressure or substantial volume, the UP18DA has it covered.

Users can set the desired target pressure for precise inflation and deflation, which is critical for optimal performance and safety of inflatable products. The inflator automatically shuts off once the target pressure is reached, preventing over-inflation. Equipped with a large backlit display and oversized operation buttons, the UP18DA is designed to be used in any environment.

Compatible with HiKOKI 18V and Multi Volt batteries and including a 12V car adaptor, this tool is as mobile as it is powerful. Weighing just 3.5kg and measuring 328 × 185 × 259mm, it's built for on-the-go usage without sacrificing performance.

As with many HiKOKI Power Tool products, the UP18DA Cordless Air Inflator comes with a five-year warranty, subject to terms and conditions. For further information, see www.hikoki-powertools.co.uk.

# It's all about the roots! The Zephaniah Forest: 65 trees for 65 years



Benjamin Zephaniah loved trees and nature and wrote poems about how important they were

Benjamin Zephaniah – dub poet, musician, actor and activist – was a Birmingham symbol of creativity and freedom, propelling Brummies further onto the international stage with his prolific and profound poetry.

Universally recognised for his unique approach to his craft – being third on the list of Britain's favourite poets – having been offered along the way a British Honour, and the status of Birmingham Poet Laureate – both of which he turned down -Zephaniah's death shook the foundations of the local and wider community.

That's why his youngest brother – David Springer – contacted Birmingham TreePeople on behalf of the whole family at the Benjamin Zephaniah Family Legacy Group, in the hope of carrying on this iconic legacy through a love of trees and nature.

With its good number of tree-pit locations, Newtown's Burbury Park has been identified as the ideal home for The Zephaniah Forest: a 65-strong conglomerate of poetry-tagged, community-consulted, and communally planted trees, to commemorate the life and works of Benjamin Zephaniah

# MIRKA® introduces new Groove Interface for its DEOS II 343CV electric sander

Mirka UK is introducing a new Groove Interface for the DEOS II 343CV electric sander, which can be paired with its Abranet® or Abranet® Ace net abrasive to sand door and window mouldings quickly and without dispersing dust into the environment.



Available in two sizes, the Mirka® Groove Interface options both have 12 pre-cut 12.5mm segments, allowing users to adjust to the width of mouldings being sanded. The 75 × 100 10mm Medium allows precise



sanding of grooves and indentations while the 75 × 100 6mm Soft offers precise sanding for detailed work.

Neil Newbrook, Business Sector Manager Wood, Mirka UK, says: "The Groove Interface eliminates labour-intensive hand sanding, significantly speeding up the process of precise and detailed sanding. The pre-cut segments ensure consistent and uniform results across

the entire moulding surface, effortlessly adapting to various moulding widths. Combined with our market-leading Abranet® abrasives, dust extraction capabilities are assured, thus keeping the workspace clean."

To find out more about this new product, visit www.mirka.com/en-gb.

- 65 trees for the 65 years of his inspirational life.

Alongside Benjamin's dedicated family members, Birmingham TreePeople plan to work with other prominent individuals from across the city as well as nature, community and arts groups, so this mini forest can be planted in his name,



and over the years, it'll have the potential to grow further.

The trees will be tagged and documented using TreePlotter software, alongside a Tree Trail to follow the newly planted ones, with dedicated poems associated with each. This means that 65 poems will be needed for the 65 trees, the first of which has already been written. The TreePeople want to work with the arts and poetry community to achieve this, with possible themes being Benjamin himself, the idea of memory and how we remember, as well as all that's connected to Mother Nature.

During the next tree planting season, which coincides with National Tree Week at the end of November, community planting days will be organised, as well as live poetry readings and music events. The final planting day for this project will be a private ceremony with Benjamin's family members to plant the ultimate tree, marking the one-year anniversary of his passing.

Birmingham TreePeople is currently in the process of fundraising for The Zephaniah Forest; the initial crowdfunding link is **www.spacehive**. com/grow-the-benjamin-zephaniah-forest. Support and involvement of other organisations with the community memorial project is especially welcome, to create a legacy forest for a legend in the heart of his home city. For further information, visit www.birminghamtreepeople.co.uk.



# FESTOOL

# SYS-AIR.

The air purifier for workshops and construction sites.

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The air purifier filters harmful airborne dust from the air which is not caught despite professional extraction. This prevents the dust from settling on the surroundings. Thanks to its compact Systainer format and light weight, it is suitable above all for mobile applications. Its powerful, two-stage filter system cleans the air completely. The smallest dust particles and other pollutants are filtered out of the air, which can otherwise lead to serious illnesses.

Available from October 2024.

More information www.festool.co.uk





# Craft Festival Wales / Gŵyl Grefft Cymru

# – special guest & full demonstrator list announced

The full list of demonstrators and workshops for the inaugural Craft Festival Wales / Gŵyl Grefft Cymru has now been announced, which includes renowned potter, bestselling author and The Great Pottery Throw Down judge, Keith Brymer Jones.

Craft Festival Wales is funded by the UK Shared Prosperity Fund through the Levelling Up campaign, which is administrated by the Cynnal y Cardi team, Ceredigion County Council, Arts Council of Wales QEST, and will be held over three days at Cardigan Castle from 6–8 September 2024.

The event will showcase an exceptional handpicked selection of 80 makers from across Wales and the UK – including jewellery makers, potters, furniture makers, textile artists, glassmakers and many more - all selling their finely made unique products directly to the public.

#### **QEST & Heritage Crafts**

Craft Festival is also honoured to present makers and demonstrators from prestigious organisations QEST (Queen Elizabeth Scholarship Trust) and Heritage Crafts. There'll be over 20 demonstrators in total.

Craft Festival Wales is organised by Sarah James MBE and Nina Fox, who also organise the multi award-winning Craft Festival in Bovey Tracey and Craft Festival Cheltenham. Craft Festival was founded in 2004 and is a non-profit making organisation, which this year celebrates its 20th anniversary. The event has grown from 2,000 visitors to over 10,000 since its inception, and has become one of Europe's most prestigious craft events.

#### Demonstrators & workshops

Ann Catrin Evans — Iron, Gold and Silver Jewellery Axe & Paddle – Primitive skills expert

**Kate Glanville Ceramics** – Hand painted tableware and tiles

Little Barn – Handmade wooden furniture

Llio James – Contemporary handwoven products

Michelle Griffiths – Sculptural textiles for fashion/interiors

Michelle Mateo Crafts - Baskets made from splint wood

On The Wing Artist – Poet – Wordsmith – Maker

**Rosa Harradine** – *Handmade brooms and brushes* 

St.Dogmaels Pottery – Hand thrown ceramics

**Lee John Phillips** – *Green wood spoon carving* 

The Department of Small Works - Jobbing letterpress print





#### Two free events

Two free events, which form part of Craft Festival Wales, will run throughout September. Significant Forms, curated by Peter Bodenham and presented at Cardigan's contemporary art gallery, Canfas, is an exhibition of museum quality ceramics from Wales. The exhibition features an exciting mix of makers who regularly show their work internationally. Entry to this exhibition is free and it runs from 6 September–8 October.

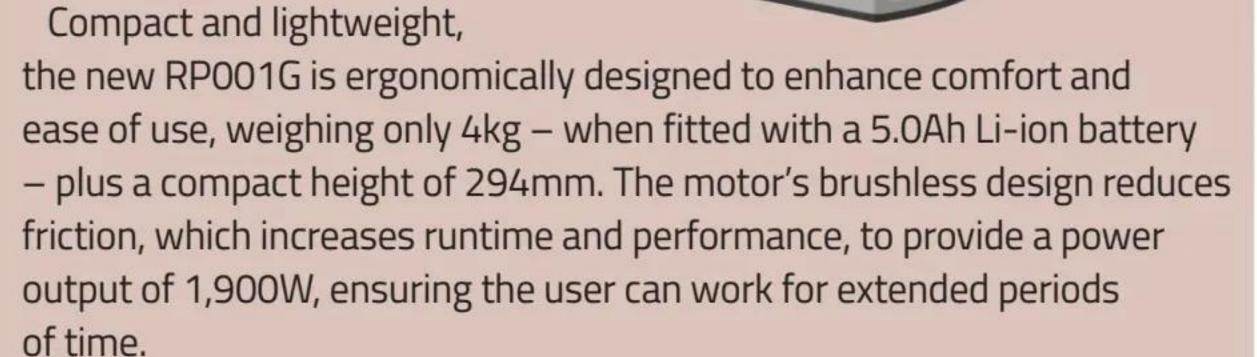
Craft Trail, in partnership with Oriel Myrddin, presents commissioned work by six emerging makers. This new work takes inspiration from the collections held by The National Contemporary Art Gallery of Wales – a major new initiative, sponsored by the Welsh Government – developed and managed through a collaboration between Amgueddfa Cymru, the National Library of Wales and Arts Council of Wales. Trail venues are Mwldan, The Albion by Fforest, Crwst, Cardigan Bay Brownies, Awen Teifi, and Make it in Wales / Stiwdio 3. The Craft Trail runs from 30 August-20 September.

> For information on the event and to buy tickets, see www.craftfestival.co.uk/Wales.



# Makita launches new RP001G 40VMax XGT cordless plunge router

Makita has launched an all-new, highpower cordless router. The RP001G 40VMax XGT ½in brushless plunge model provides an excellent combination of high efficiency and lightweight design, with the ability to cover 80m of MDF on a single charge, plus an outstanding plunge cutting capacity of up to 60mm.



makita

The RP001G is also designed with soft start and electronic brake, limiting recoil to prevent damage, while its constant speed control reduces the chance of a drop in cutting speed, maintaining a clean cut on the workpiece. Its three-stage depth stop allows the user to quickly switch between pre-set depths for efficiency while working and the micro cutting depth can be adjusted in 1mm increments, ensuring the cutting depth remains precise and accurate. The tool also features useful twin LED job lights to provide improved illumination when working on detailed projects.

The RP001G features Makita's AWS Bluetooth technology and can be wirelessly connected to Makita's AWS enabled dust extractors to ensure work environments remain clean and safe. The router is compatible with a 12mm or ½in collet chuck.

Kevin Brannigan, Marketing Manager at Makita UK, commented: "We're delighted to announce the launch of our new 40VMax XGT plunge router, which has an outstanding power performance to ensure user efficiency, while also offering accuracy and precision on detailed projects. This powerful new addition to our XGT range offers an innovative alternative that eliminates the need for inflexible corded alternatives, allowing woodworkers to achieve even greater levels of precision."









GlueMate 450

# MILESCRAFT GLUEMATE 150 & 450 GLUE BOTTLES

Jonathan Salisbury looks at the GlueMate 150 and 450, available from Wood Workers Workshop, which promise to offer a better way of storing and dispensing adhesives



The wide filler neck



The 150 is very compact; squeeze here!

But I've never found that they work very well. The tip of the spout usually needs cutting to obtain the right size hole, but then the cap never seems to fit very well. Glue often dries up in the small nozzles, making squeezing more difficult and regular unblocking a necessity; for the quantity purchased, they're also relatively expensive.

Buying in bulk is cheaper, but it's not feasible to pour small amounts of glue directly from a five litre container. Decanting PVA into a small



Glue is forced between these two chambers

pot and using a spreader is possible, but that's not always convenient and there's usually some left over to either clean up or allow to dry, which is also wasteful. A bottle is still best in most cases.

The GlueMate 150, and its larger sibling the 450, are Milescraft's version of a solution to the need for a refillable, squeezable glue bottle, which can be used to dispense the correct amount – no more, no less – exactly where it's required.

#### How they work

What makes them different from the traditional bottle is that they're divided into two sections:



Easy to see when glue is on its way



A rubber cap covers the screw...

the reservoir and a dispensing tube. Adhesive can be bought in bulk and easily decanted into each bottle via the wide necks. When squeezed, the glue is forced down to the reservoir's base, up the tube and through the nozzle; the bottles are transparent, which allows you to see how much glue is on its way and when it's going to reach the end. There are two types of applicator tip – a 'biscuit' for a wider bead and a 'point cone' for precision spots and finer beads. Each comes with a securely-fitting cap to prevent glue from drying out. The filler cap has a screw thread on top that arrives covered with a black rubber cap; this thread can be used to store the unused applicator tip, ready for use.

#### Why they're better

Glue is only dispensed when the bottle is squeezed and, since any that doesn't make it out of the tip gets sucked back into the tube when the pressure is released, there are no drips; apart from a small amount that dries around the cap, there's no wastage. The bottles are very flexible and therefore easy to squeeze, and they work when upright or on their side, pointing downwards or upwards. You don't need to turn them upside down and, in any case, they wouldn't work if you did.

Another advantage is that the glue being dispensed is as far away from the filling point as it can be. In most bottles, the neck is below the nozzle and, since this point is where the glue is likely to dry out first, there are often blockages to deal with. After several weeks of use, there's no sign of lumps in either bottle; the caps and screw lids do a great job of sealing out the air.



... onto which the spare tip can be kept ready for use



... which is good for edge gluing

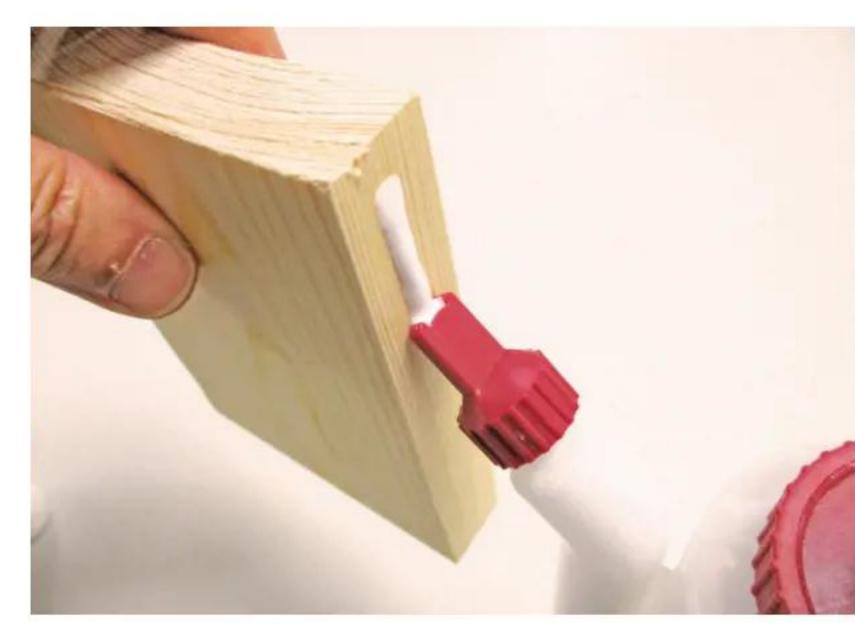
The only dried glue was a little around the cap on the outside of the applicator tip, and this was easy to clear as it didn't form a good bond between the plastic surfaces.

#### **Spares**

The only replaceable parts on the Wood Workers Workshop website are the applicator tips, although Milescraft also list the tip caps and screw-top filler cap. I'm sure that, if taken care of, they'll never need replacing.

#### Conclusion

When it comes to squeezing PVA onto wood, there are few alternatives to the original bottles. The convenience of not having to use those little opaque bottles that PVA is often supplied in has to be one of the deciding factors when value is being determined. In addition, by making overapplication easier to avoid, less glue is wasted. The 150 is ideal for small jobs or getting into tight spaces, while the 450 lasts longer before refilling, making it more suitable for gluing up



The biscuit tip produces a wider bead...



The cone tip is for narrower beads...

larger projects. At £6.95 and £8.45 respectively, they're no bargain (being made in the USA, the price is higher than in their homeland due to the costs of transport) although certainly superior to the 1 litre bottle the glue was supplied in.

For a busy woodworker with a lot of gluing to do, however, the ease of use and reduced waste is worth paying for.

#### **SPECIFICATION**

- Holds up to 150ml or 450ml
- Works with most glues
- Double chamber system for gluing at any angle
- Narrow application tube helps to control flow and apply precise amounts
- Won't drip or spill
- Wide mouth for easy filling
- Fine cone applicator for fine beads
- Flat biscuit applicator for wide flat beads
- Replaceable tips available

**Typical prices:** GlueMate 150 – £6.95; GlueMate 450 – £8.45; replacement biscuit or cone tips – 50p

Web: www.woodworkersworkshop.co.uk

... and better for precision spots

#### THE VERDICT

#### **PROS**

 Easy to dispense the right amount of glue in the right place; interchangeable tips can be used for a range of applications; less wasteful – unused glue is drawn back into the bottle; sealed bottle prevents glue from drying out; saves money – glue can be bought in bulk

#### CONS

None

RATING – *PERFORMANCE*: **5** OUT OF **5** RATING – *VALUE*: **4** OUT OF **5** 

#### COMPETITION

# 

We've teamed up with Wood Workers Workshop to give five lucky readers the chance to win a large capacity, advanced Milescraft GlueMate450™ glue bottle

The GlueMate450™ by Milescraft – available from Wood Workers Workshop – is the perfect glue accessory for everyone. From master craftsmen to first-time DIYers, this 443ml capacity advanced glue bottle makes for quick and accurate application. The large size holds sufficient glue to make it your everyday go-to gluing solution.

#### Two-chamber design

The secret is the two-chamber design. When pressure is applied, the glue is sent from the bottom of the storage chamber up through the smaller application chamber. This allows you to control the flow and deliver just the right

amount of glue required. Vertical application is also made possible, meaning you can put glue anywhere, at any angle!

#### Two different application tips

Included with the GlueMate450™ are two different application tips: a fine point cone applicator allows you to lay down a fine bead of glue on narrow boards or in dowel holes and other joints; the flat biscuit applicator tip has a wide profile, which makes it ideally suited to biscuit joints, or just spreading a wider bead of glue on bigger boards, for example.

#### **Features**

- Double chamber system allows for gluing at any angle
- Narrow application tube helps to control flow and apply precise amounts of glue
- 2 × applicator tips for various applications
- Holds 443ml of wood glue or other liquids

For further information on products available from Wood Workers Workshop, visit the website: www.woodworkersworkshop.co.uk.









#### HOW TO ENTER

To be in with a chance of winning 1 of 5 Milescraft GlueMate450 glue bottles, visit www. thewoodworkermag.com/ category/win and answer the multiple choice question below:

QUESTION: What volume of glue is the GlueMate450™ able to hold?

A: 500ml

**B: 443ml** 

C: 240ml

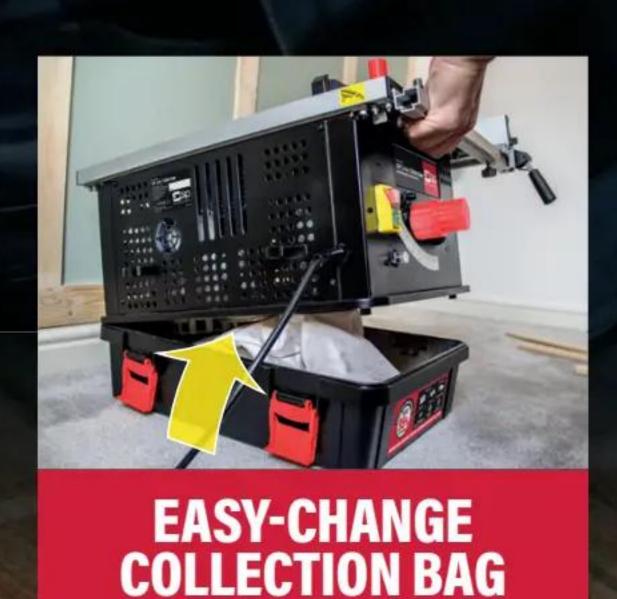
The winners will be randomly drawn from all correct entries. The closing date for the competition is 13 September 2024. Only one entry per person; multiple entries will be discarded. Employees of David Hall Publishing Ltd and Wood Workers Workshop are not eligible to enter this competition

# INTRODUCING THE... SIP 2-IN-1 TABLE SAW



WITH INTEGRATED DUST EXTRACTOR







**CUTTING TABLE** 





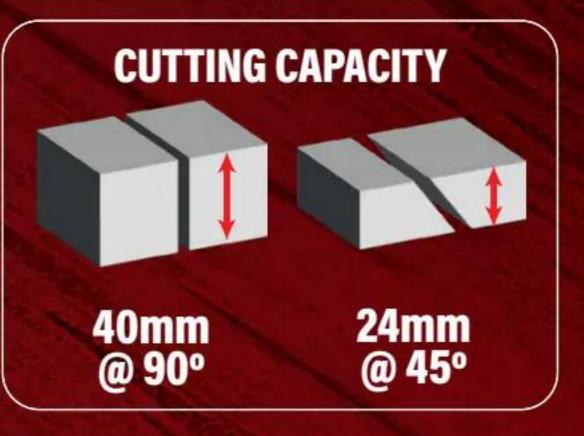
SIP 2-in-1 Table Saw with integrated Dust Extractor

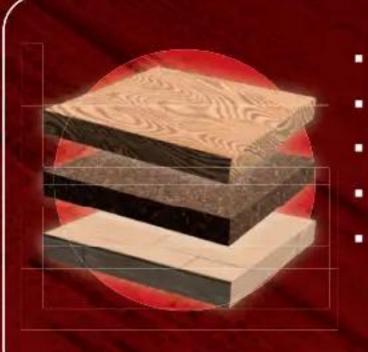
- Ideal for professionals working in domestic or commercial premises
- Aluminium cutting table slides & extends out to 550mm x 650mm
- Comes with easily adjustable mitre gauge and tilting saw blade











- SKIRTING BOARDS ARCHITRAVE
- PANELLING
- FLOOR BOARDS WOOD, MDF **COMPOSITES &** LAMINATES



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@sipindustrial

# SIMPLE BUT PRECISE

"When top craftsmen make something simple, it's still precision made"

Short offcuts can come in extremely useful, especially for projects such as this lovely table lamp, as **Michael Huntley** shows

hen you have a workshop tidy-up, as I recently did, you're inevitably left with lots of short offcuts. Don't just put them on the woodburner; take the best and make a little something out of them. The lovely table lamp shown here is a very simple design, but one that tests your hand planing skills.

All the chamfers must match and the squares sit dead centre on the ones below. The stem has a taper, equal all round, which is mortised into the base and bored for a flex. The description is easy but getting a good one if you're not a regular hand tool user is quite a challenge.

Because it's so small, each facet stands out on its own and has to look 'right'. Of course, this wasn't a problem to the maker because he worked to this accuracy every day.

#### **Useful offcuts**

So make it a lot easier for the amateur by relaxing and using some offcuts, which don't matter. If it does go wrong, they can go on the fire and you can start again. That way you build confidence without hurting your wallet.

The base is 22mm thick and 50mm square and the stem is 100mm tall; it tapers from 22-35mm. The timber is cherry and the finish is wax. You can buy lamp fittings from Lamps and Lights: www.lampsandlights.co.uk. Don't forget to secure the stem soundly when you drill and it's probably best to drill before tapering in case all goes pear-shaped and the drill wanders!

A 'long series' drill coming in from each end should do the job, and don't forget that you can probably swivel the head of your drill press to arrive at a longer throw, but you may need to do some packing up and ensure all is secure.

I can't take credit for this little lamp base, which was made by Bert Upton, foreman at Edward Barnsley's workshop and teacher of Alan Peters OBE, especially for my wife, who just happened to be Bert Upton's niece.



# CHANGES DURING THE INDUSTRIAL REVOLUTION & HOW THESE SHAPED THE TIMBER INDUSTRY

Continuing his analysis of historical developments and their effect on the timber industry's development, **David Smyth** moves on to looking at the Industrial Revolution and the role it played





he first census in this country was taken in 1801, during a pivotal period in our history. At the time, Britain had 10.5 million inhabitants, but over

the course of the next 40 years, its population grew by over 50% to nearly 16 million in 1841. This population explosion was due to many different factors, all of which were influenced by the industrial revolution, that'd been gaining pace since the latter half of the 1700s. The growth of large-scale industry and manufacturing heralded many changes to our lives and wider society, not least the transition from a mainly rural to a largely urban population.

#### **Building boom**

During the Victorian period there was a huge increase in building, as towns became cities and expanded to cater for the influx of people, along with the growing industries.

This era also marked the beginning of a change in material use, from natural materials such as wool, timber and stone, to synthetic and man-made ones, most notably iron and later steel. Timber had previously been considered the backbone of construction, creating the trusses and supports used to build huge medieval cathedrals and palaces. In 1781, however, the world's first cast-iron bridge was constructed over the River Severn, one of the key moments at the beginning of the Industrial Revolution. Coke was rapidly replacing charcoal as the fuel of choice for smelting iron, which adversely affected demand for wood fuel, though due to the overall increase in demand from the growing population, Britain's forests remained in decline until the turn of the 20th century.



Removal of import duties in 1721 opened up timber trade with the West Indies



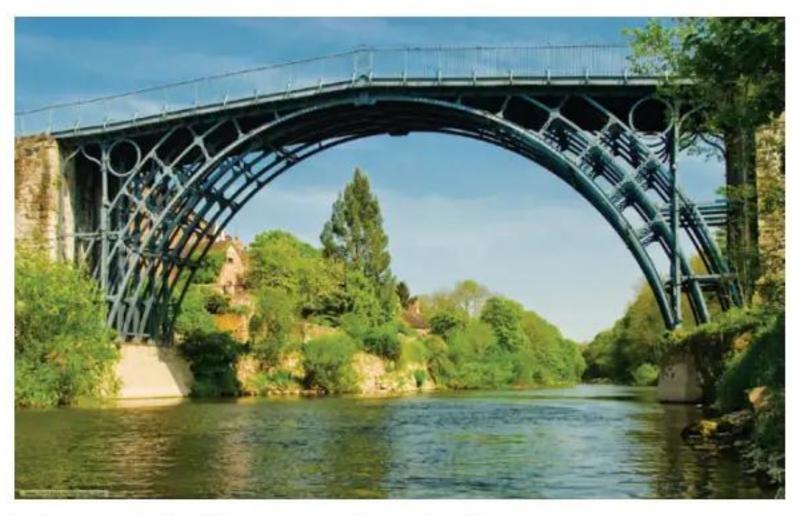
Mahogany was prized for its striped grained patterns and workable qualities

#### The role of mahogany

These changes had many influences on the timber industry. By the 17th century, the timber import trade was well established, and the market structure was now being fine-tuned. A system whereupon foreign agents would sell to importers, who in turn supplied retail merchants, was established and is the same model used by the industry to this day.

As ever, politics played a crucial role in timber price and supply, and a law change early in the 18th century was instrumental to the success of one of the most famous species of all...

The 'king' of furniture making timber, mahogany, interestingly began its relationship with these shores as a cheap joinery material, though this soon changed. While historically most of the imported timber was destined for construction and ship building, as the 18th century progressed, increasing amounts of decorative timber was making its way into the country for furniture making purposes. The Naval Stores act of 1721 – which was introduced to promote the use of ship materials such as tar and pitch from North American colonies – had the added benefit of also removing duties on timber produced in the West Indies. This in turn led to a huge increase in the value and volume



The world's first cast-iron bridge was completed in 1781



Two timber workers felling a tree on the Atherton Tableland, North Queensland, 1890–1900

of mahogany being imported into this country, and by 1788, it'd reached a whopping 30,000 tons per year.

#### Soaring value

Sadly, however, the supply wasn't to last, and as early as the turn of the 19th century, the best mahogany was reportedly becoming increasingly scarce. Supply moved elsewhere – first Cuba, then Honduras and later Mexico – as well as deeper into the South American continent. But as the years went on, these alternatives were to various extents considered inferior. Trade continued throughout the 19th and 20th centuries and during this time, it was the dominant species for fine furniture making. However, commercial supply from natural forests did eventually cease, and by the end of the 20th century, all three true mahogany species were placed under CITES protection.

While the early stages of capitalism was fighting its way through successive boom and bust periods, the value of timber soared. During the 1800s, in Western Europe and the United States, timber prices were shooting up an average of 100-200% each decade, and it wasn't long before cries were being heard from early conservationists for the remaining forests' preservation.

#### **NEXT MONTH**

Next month, David takes a closer looks at the history of the New World's old growth forests and the role these played during the 19th and 20th centuries

# CHIPPENDALE INTERNATIONAL SCHOOL of FURNITURE

# 2024 GRADUATE SHOWCASE

Featuring a multitude of international woodworking talent, we celebrate the exquisite work of the Chippendale School of Furniture's 2024 Professional Course graduates

he Chippendale International School of Furniture 39th Graduate Exhibition & Fine Furniture Sale took place in June and showcased the students' exceptional talents. Every year, expectations are high for a display of fine furniture crafted by the year's graduating cohort of talented makers.

From Thursday 13 June to Saturday 15 June 2024, visitors had the exclusive opportunity to witness an array of exceptional pieces meticulously crafted by those on the intensive 30-week Professional Course.

Known for its international reputation for kick-starting the careers of skilled woodworkers, the Chippendale School's Professional Course equips aspiring furniture makers with the essential skills and knowledge needed to thrive in the industry, covering everything from design techniques to marketing strategies.

The 2023/24 course cohort boasted 30 exceptionally talented students hailing from all over the world, from the Dominican Republic to Germany, Holland, France, Canada and the USA.

Kevin Tronel from France was among this year's spotlighted makers, whose matching pair of Mid-Century easy chairs and vinyl record cabinet, both made from oak, are a perfect example of the joy in putting a contemporary twist on a traditional style.

Also gracing the exhibition was Maria Hensley from the UK, presenting her hallway bench in oak and Danish woven cord. Attendees also had the opportunity to marvel at the striking fluted column cabinet in sycamore made by Chlomo Hutcheson from Edinburgh.

#### **FURTHER INFORMATION**

To find out more about the Chippendale School's intensive 30-week Professional Course, see www.chippendaleschool.com/ cabinet-making-courses/professional-course

# COLTEN PALMER Canada

of Canada, Colten developed an interest in woodworking during his secondary school 'shop class. Over the years, he participated in several furniture making short courses while working in the construction industry. Colten's passion for woodworking ultimately led him to Scotland, where he enrolled on the Chippendale School's Professional Course.

Having completed the course, Colten now feels well-equipped with the knowledge and practical skills needed for a successful woodworking career.

In his free time, Colten enjoys Brazilian jiu-jitsu, sketching, ramen, long walks on the beach, and the smell of freshly cut grass.



Pmail: coltenmjpalmer@gmail.com

# LAURA POWER

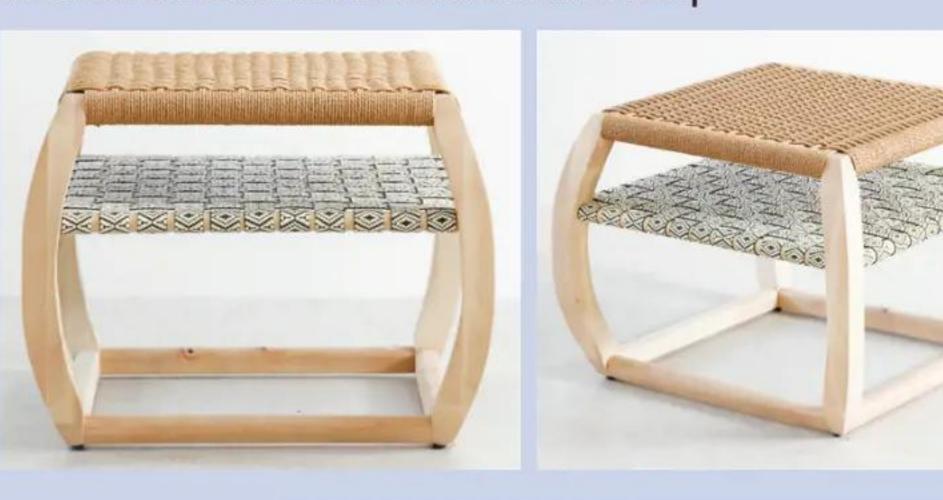
Laura Maia Power grew up in a home education community. She was surrounded by various makers and explored different skills such as green woodwork, woodturning and weaving from a young age.

In her early 20s, Laura embarked on an epic cycling adventure around the world with a friend. During a Christmas in India, she discovered a family-run block print clothing factory and met local artisans, an experience that sparked her passion for traditional skills.

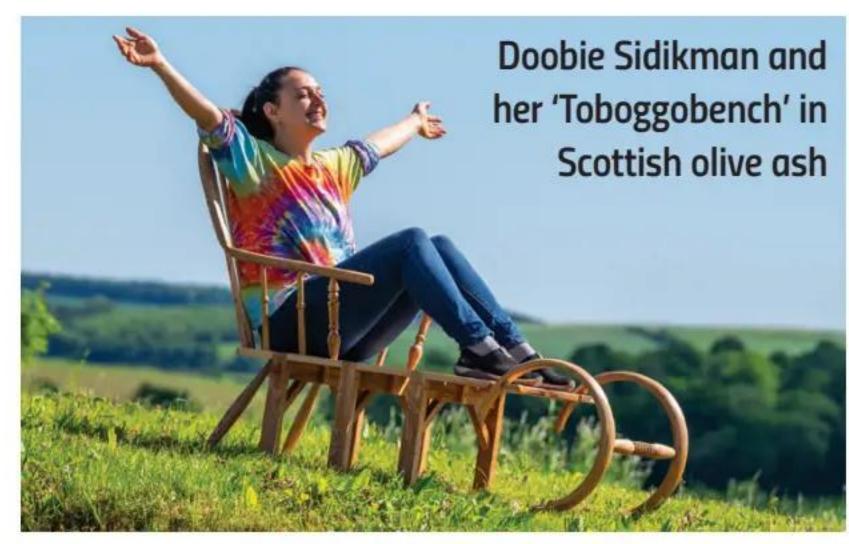
To further her expertise, Laura enrolled on the Chippendale School's Professional Course. She aims to make everyday items beautiful.



Danish cord seat stool with woven book shelf



Instagram: @crossedlegdesigns







#### Louis WILSON London

Having previously worked as a bike mechanic, in addition to being a lighting and sound engineer, Louis decided to combine these technical skills with his creative side and pursue the long-held dream of working with his hands.

During his time spent studying at the Chippendale International School of Furniture, Louis designed and crafted a modern bookcase with a secret compartment. He also explored his love of music by hand-crafting two integrated wooden speakers.

Upon graduating, Louis hopes to fuse his passion for woodworking and music by starting a business focused on designing and creating bespoke wooden sound systems.

Instagram: @louis.furnituremaker Email: louis2267wilson@gmail.com

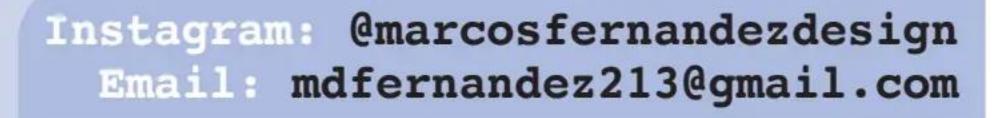
#### MARCOS FERNANDEZ Dominican Republic

At the beginning of the course, Marcos was a newcomer to woodworking and furniture design. Since then, he's fallen in love with wood and the myriad forms it can take.

Drawing inspiration from both the natural and imagined worlds, Marcos designs dynamic, geometric forms. In addition to furniture-making and design, Marcos is also passionate about using woodworking as a medium for creating sculpture and art.



'Cuatro', American white ash  $-450 \times 450 \times 1,200$ mm. Ash makes for a beautiful canvas and through the power of water-based wood dyes, Marcos was able to create an ombré effect on this piece. Due to the square lengths of the piece's height and width, the beautiful glass top can be placed on any of its four sides - hence, 'Cuatro'



#### NOAH BAKER USA

Having travelled all the way from the Pacific Northwest, Noah has come to The Chippendale International School of Furniture to explore their passions as a woodworker, designer and maker.

Previously, Noah attended an introductory course at the Port Townsend School of Woodworking, WA and gained experience working for a company that specialised in building sash windows and doors.

Inspired by the intersection of beauty and functionality, Noah aims to establish themselves as a maker through their custom furniture business, Auklet Studios. Noah's long-term vision includes creating a cooperative workshop space to promote accessibility and community for all individuals interested in pursuing this craft.



# DAN BUTCHERS UK

Before attending this course,
Dan worked as an accountant
but yearned to get out from
behind his desk and make things.
This desire led him to work for
a furniture making business
that specialised in pieces for
pubs and restaurants.

Seeking to further develop his skills, Dan visited the Graduate Exhibition at the Chippendale School back in 2022, which inspired him to enrol on the Professional Course himself. Dan is now planning to set up his own business focusing on making home offices, office furniture and other custom home-fitted spaces.



'Curvy Bench'

– yew and

Danish cord

anna's

TUTOR GROUP





Instagram: @gladeside\_furniture
Email: gladeside.furniture@gmail.com
Web: www.gladesidefurniture.co.uk

#### KEVIN TRONEL

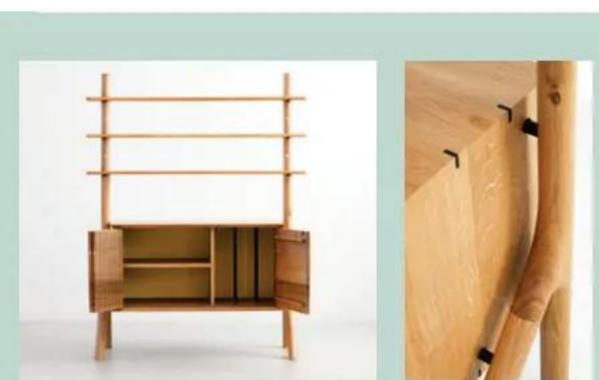
#### France

Born in Nantes, France, alongside the mighty Loire, delicious Muscadet, and famous LU biscuits, Kevin admits that he's always been intrigued by woodworking.

Love and life brought him to Paris, and then to Scotland, where he honed skills in business management, design and marketing. During a visit to an auction house, Kevin spotted an iconic teak sideboard, and his passion for Mid-Century Modern was ignited.

Founding L'Atelier 20, Kevin leveraged his self-taught talents to carefully restore hundreds of sideboards, chairs and dressers. This hands-on experience taught him how masters like Robin Day, Finn Juhl and Hans Wegner approached furniture design.

While refining his craft at The Chippendale School, Kevin launched Wedge Designs – a brand that infuses a contemporary twist into the beloved Mid-Century style he so greatly admires.



MARKETING AWARD



'Ligérienne Unit' – solid European oak, featuring dark fumed oak accents, designed to elegantly house a record collection and turntable



Instagram: @wedgedesigns mail: info@wedge-designs.com Web: www.wedge-designs.com

# MARIA HENSLEY

Maria has always been interested in product design, making and DIY, so pursuing a career in furniture making was a natural choice. After discovering the Chippendale School, she decided that the Professional Course was perfect for her, and she hasn't looked back since.

Maria's furniture designs are largely inspired by interior challenges she's encountered in her own home. Maria ensures that her creations incorporate a variety of techniques and joinery methods to maximise her learning and practice during the course.

After graduating, Maria hopes to work for a furniture making workshop to further develop her newly acquired skills, with the ultimate goal of starting her own business in the future.











'Sid' — European oak and Danish cord

Instagram: @mimz\_marvellous\_woodworks
Email: ml.hensley18@gmail.com

#### SIMON MONTGOMERY Edinburgh

Before attending the Chippendale School, Simon accrued over 20 years' experience in the IT industry, serving most recently as Technical Director for Edinburgh-based CompanyNet.

Simon devoted the previous seven years of weekends and evenings to extending and transforming his family's home with bespoke joinery and furniture. This motivated him to enrol at the Chippendale School of Furniture to refine his craft and follow his dream of starting a business.

Simon established Go Merry Studio, focusing on designing and crafting beautiful yet functional furniture using innovative and sustainable materials. Simon lives in Edinburgh with his wife and three boys who're useful to have around when unloading and loading orders!

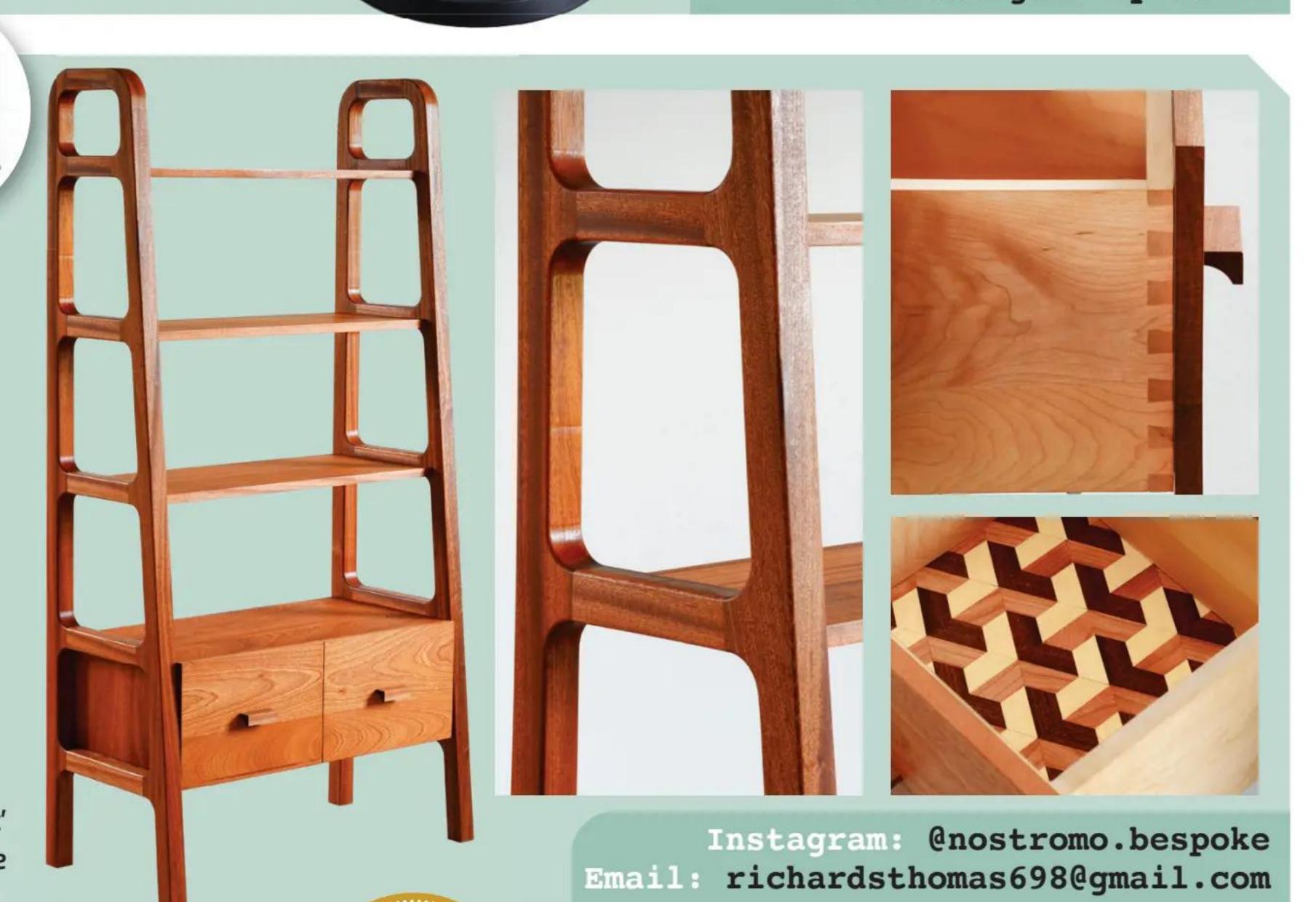


#### TOM RICHARDS

After 15 years in the hospitality and catering industry, Tom made the decision to embrace his creative side and learn the craft of woodworking. A fondness for making things and a brief foray into carving led him to discover the Chippendale School of Furniture.

Post graduation, Tom plans to continue to learn as much as he can about the industry, starting with growing his own woodworking business, Nostromo Bespoke, making commission-based, bespoke furniture from Myreside Studios.

'Mandolin Shelving Unit' – African sapele



# BARNEY HAGGER

Barney has spent his entire career in various construction trades, but his true passion lies in working with wood. This enthusiasm became a reality when Barney embarked on the Professional Course at the Chippendale School.

Having inherited his grandfather's vinyl record cabinet, Barney undertook the long yet rewarding process of rehoming it in a more contemporary cabinet. His second piece is a contemporary desk, loosely inspired by the Windsor chair's principles. He's also crafted a bench woven in Danish cord.

Barney plans to launch his new business, VOLO, in his hometown of Leighton Buzzard, Bedfordshire.



BEN'S TUTOR GROUP

'The Windsor desk' –
inspired by a Windsor
chair – the piece is
an ash and Wych elm

writing desk with wedged through tenons. A steam-bent crinoline acts as both structural support and a foot rest while working. Two drawers on either side with a central cubby. Ash dowelling used as drawer runners and drawer stops

'The Sonus Radiogram' – record player unit that merges the elegance of modern woodworking with vintage electronics. Featuring intricate woodwork with flowing patterns that integrate seamlessly across its surfaces. The top of the unit opens to reveal the original electronics from a 1967 HMV Radiogram, providing both functionality and a nostalgic touch. This blend of artistry and technology highlights the craftsmanship involved in repurposing vintage components within a contemporary design, making it not only a functional music player but also a statement piece of furniture

Instagram: @volo\_furniture
mail: barney@volofurniture.co.uk

#### BEN SIMS Scottish Borders

Ben is a furniture maker based in the Scottish Borders who's had a deep appreciation for wood from a young age. After secondary school, Ben enrolled on a joinery and carpentry course, where he fell in love with making. Although the course provided him with the fundamentals, he soon sought a greater challenge. Now wanting to focus on more refined work, he turned his attention to furniture making and design.

Ben decided to enrol at the Chippendale School and hasn't looked back. He's excited for the future and intends to set up his own furniture making business at Myreside Studios.



'Hidden Gem Modular Cabinetry' – American white ash, ash and oak veneer – fully arrangeable units and easily expanded upon



Instagram: @amadeus woodwork Pmail: amadeuswoodwork@gmail.com

#### CHLOMO HUTCHESON Edinburgh

From circus performer to furniture maker, Chlomo spent his childhood immersed in craft accompanying his mother on business trips to India and Morocco, and later working with sister Phoebe at her Edinburgh store, Dahlia.

Chlomo received a broad education in fine art and craft at Edinburgh Steiner School. After graduating, he studied acrobatics at Circomedia Bristol, then returned home to join the family business, Bohemia.

Chlomo's work champions traditional design with a contemporary twist, creating functional pieces of heirloom quality. Upon graduating from the Chippendale School, he'll join his sister in creating Rowan & Rose, a business inspired by a love for slow craft and nature. Together, they'll produce handmade furniture and botanical artwork.







@rowanandrosedesign Instagram: rowanandroseedinburgh@gmail.com Web: www.rowanandrosedesign.com

#### JEAN-PHILIPPE CLARK USA

Furniture making wasn't something Jean-Philippe ever considered as a possibility. For most of his career, he worked as an outdoor educator and conservationist, valuing hands-on learning and craftsmanship.

This career led to a curiosity about how humans and tools have evolved together to create magnificent things. Woodworking was a natural progression, which quickly developed into something between a hobby and an obsession.

Post-course, Jean-Philippe plans to bring his newfound expertise back home. In addition to running a custom furniture business, he's eager to seek out opportunities to blend his loves of both the craft and education.



'Arts and Crafts Settle' -European oak, Scottish oak and copper – designed for smaller entryways standing at 1,300mm tall × 1,000mm long × 450mm deep. The drawer features a pierced out oak leaf backed by polished copper and hand-cut dovetails. This piece was made using a blend of both traditional and modern techniques and methods. Inspired by early 20th century furniture makers who were bringing the work of craft back to the maker's hands

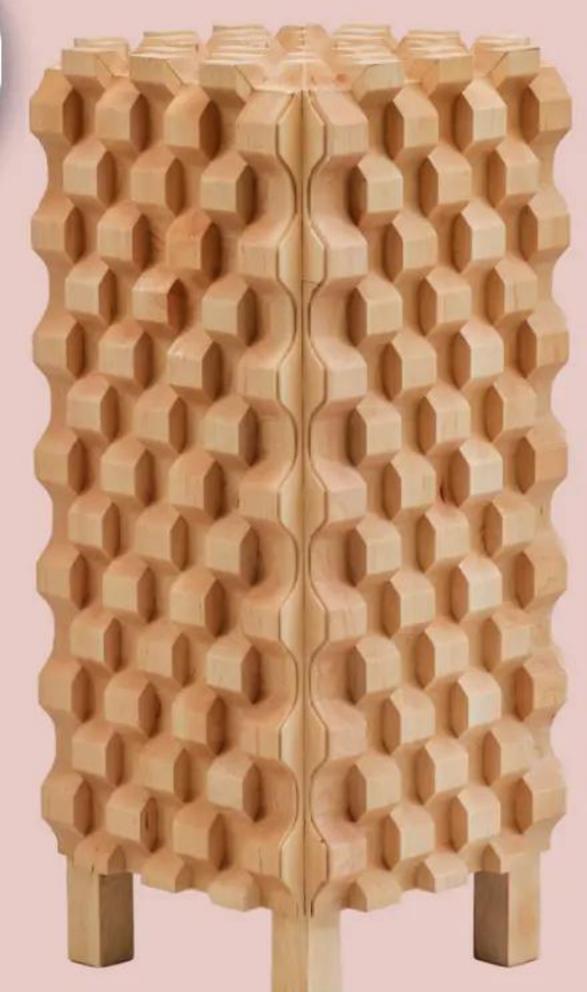
Instagram: @jclarkfurniture Email: info@jclarkfurniture.com Web: www.jclarkfurniture.com

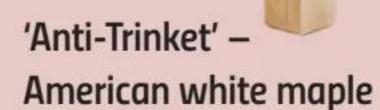
# LAURA DOROTHY

Laura studied Illustration at
Leeds Arts University where she
developed valuable design skills and
a love for making. After graduating,
Laura realised that she wanted to combine
her illustrative style with woodworking.

She apprenticed at a local sash window-making firm and in doing so, gained a solid foundation in bench joinery before enrolling at the Chippendale School.

Laura's work is centred around the importance of play in design. Her pieces created on the course are inspired by deterrent paving slabs commonly found at train stations and major roads. She's now established her own furniture making company, Tree of Wonderful, which is based at Myreside Studios.







STUDENT'S CHOICE AWARD

'Doorstop Cabinet' European oak and oak veneer



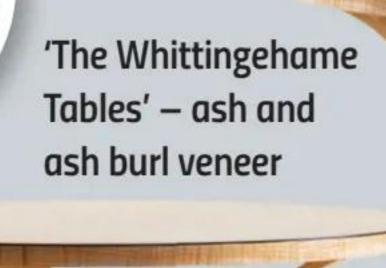
Instagram: @treeofwonderful Email: treeofwonderful@gmail.com Web: www.treeofwonderful.com

#### DAVE FARCHT USA

Dave served the US Government for over 20 years, first as a Border Patrol Agent on the US/Mexico border and later as an advisor for the Department of State and the US Military in Iraq and Afghanistan.

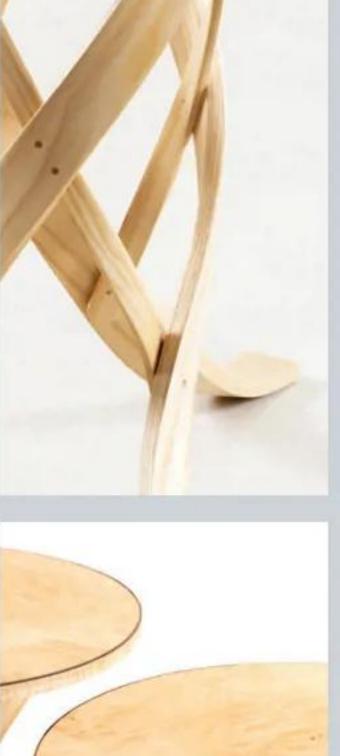
When Dave found the time, he dabbled in amateur woodworking, a craft that both his father and grandfather enjoyed. After a nudge from his wife, Dave took the plunge into making woodworking his career.

In 2023, Dave established Honored Heirlooms Woodworking in Falls Church, VA, USA. Following graduation from the Chippendale School, he'll focus on accepting commissions for pieces of fine furniture.



'Choco Bear Sideboard'

African sapele



GRAHAM'S TUTOR GROUP



Instagram: @honoredheirlooms mail: dave@honoredheirloomswoodworking.com Web: www.honoredheirlooms.com

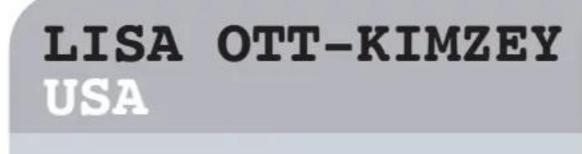
#### HARRY HEALE UK

Harry joined the school immediately after completing his A-levels, having studied product design and business studies to pave the way for his time at the Chippendale School. His dream of building and designing furniture is now becoming a reality.

Harry's designs see him exploring the various textures

in wood. For example, the front of his sideboard in African sapele resembles the texture and tone of chocolate. He now intends to work part-time for an established workshop, while developing a portfolio for his newly launched venture, Lazy Bear Furniture.

Instagram: @lazybearfurniture
Email: harrison@lazybearfurniture.com
Web: www.lazybearfurniture.com



Lisa was drawn to furniture making in her quest for functional creativity. She came to the Chippendale School to learn how to design and build gorgeous, unique furniture that stands the test of time, and judging by the piece pictured here, she's certainly suceeded in doing just that.

Inspired by her love of plants and colour, as well as a passion for reviving old items, Lisa's goal is to add a little – or a lot – more colour and vibrancy to the world.



sapele
- four
tambour
doors, three
built-in pots
with two
storage
shelves



Instagram: @vibrantlyott Email: vibrantlyott@gmail.com

#### MATILDE MITCHELL-WILKINSON UK

Matilde graduated from Newcastle University in 2022 with a First-Class Honours degree in Fine Art and three university prizes. During her time there, she primarily worked with clay and metal.

During her time at the Chippendale School a love of making threedimensional sculptural forms from natural materials led Matilde to apply her artistry and skill to the design and hand-crafting of beautiful, timeless pieces of fine furniture.





'Luna Cabinet' - American white maple, maple and walnut veneers

Instagram: @lom\_designs\_ Dmail: lom\_designs@outlook.com

#### MATT HARDY Newcastle-Upon-Tyne

Matt has spent the past several years working as a musician in an industry that's taken him across the UK. While satisfying his creative instincts, Matt felt drawn to furniture making as a way to exercise complete control over his creative process, from conception to completion.

Matt is drawn to making playful yet functional furniture, with inspirations from Mid-Century design and Bauhaus concepts, resulting in his own contemporary designs.

After graduating, Matt intends to launch his own bespoke furniture business, Spelk, a name that echoes his roots in the North-East as the Geordie word for a splinter.



#### ARTHUR BROOKE Northern Ireland

Arthur has always loved working with his hands, beginning with bronze sculptures and silver jewellery. He later discovered a love of working with wood and promptly enrolled on the Professional Course at the Chippendale School.

Arthur's oak coffee table draws inspiration from nature, reflecting the annual growth rings found in trees and the ripple effect of raindrops on water. For his second project, he adopted a different approach, concentrating on traditional cabinetmaking, with one eye on getting into the kitchen furniture market after completing the course.

Arthur's business, Brock Designs, will focus on making wood and metal infused furniture for a wide range of purposes.



Pmail: info@spelk.co

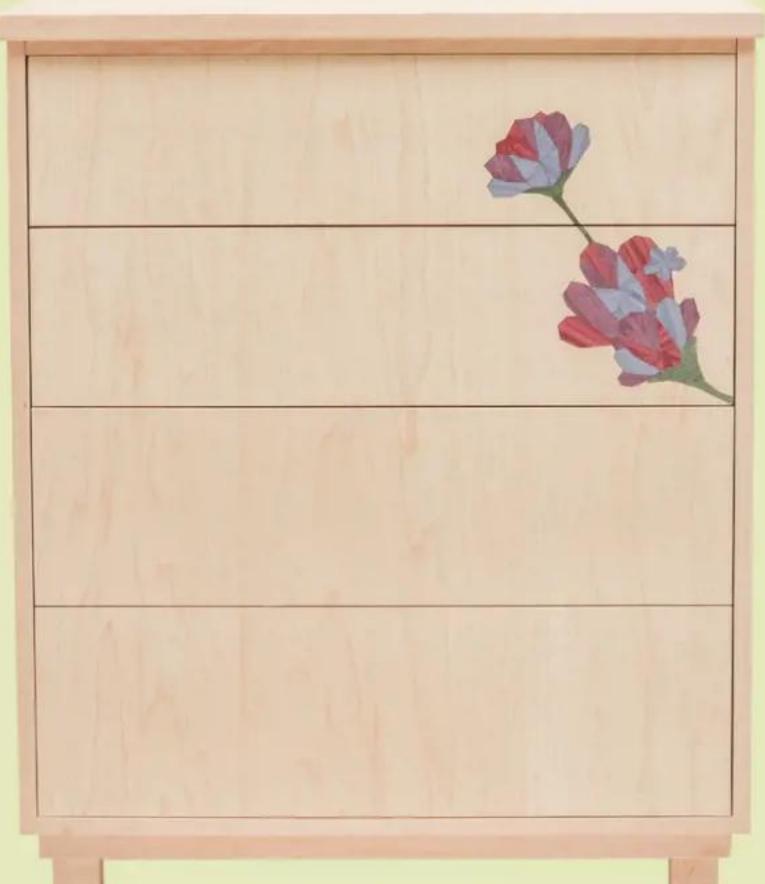
Web: www.spelk.co

#### JENNY OLDENBURG Germany

Having worked within the German police force for 20 years, in recent years, Jenny felt a growing need for a more positive and creative work environment. Discovering the art of building furniture and mastering techniques such as marquetry and gilding opened up an entirely new world for her. Now, Jenny can't wait to start over again in an entirely new career as a furniture maker.

She's currently seeking employment opportunities in and around London.

'Lus Na Tùise' – American white maple, maple veneer and dyed tulipwood veneers





Instagram: @jenny.goes.furnituremaking
Email: jennifer.oldenburg@gmx.net

# MAISIE V.W. FRAYN UK

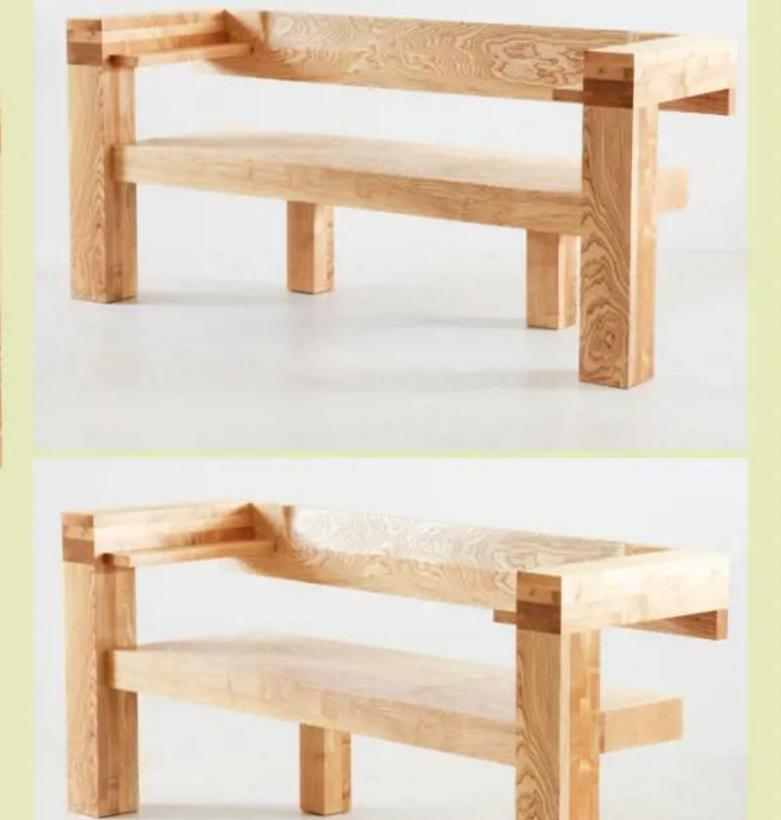
Having previously worked in the construction industry as a builder and decorator, the Chippendale School's Professional Course is Maisie's first foray into the world of fine furniture making.

It was a confirmation of what
Maisie had always suspected
– that working with her hands
to create beautiful, tangible
objects from wood would
be immensely rewarding.

Using all she's learnt, Maisie's now looking to find employment in the East Lothian area as a furniture maker, so that she might continue to refine her skills while utilising established strengths.







Dmail: maisiefrayn@hotmail.com

# MICHIEL VRENEGOOR The Netherlands

Michiel, a former officer in the Dutch merchant navy with over 15 years' experience at sea, anchored in Edinburgh five years ago and set sail on a career transition from the sea to the art of furniture making.

With a sharp problem-solving acumen and meticulous attention to detail honed through years of navigating the seas, Michiel has seamlessly transferred these skills to his woodworking designs.

After graduating, Michiel will establish his own business, Fidra Furniture, at Myreside Studios. Inspired by both innovation and tradition, he envisions crafting bespoke freestanding furniture as well as fitted pieces that seamlessly blend into any space.





BEST DESIGN AWARD

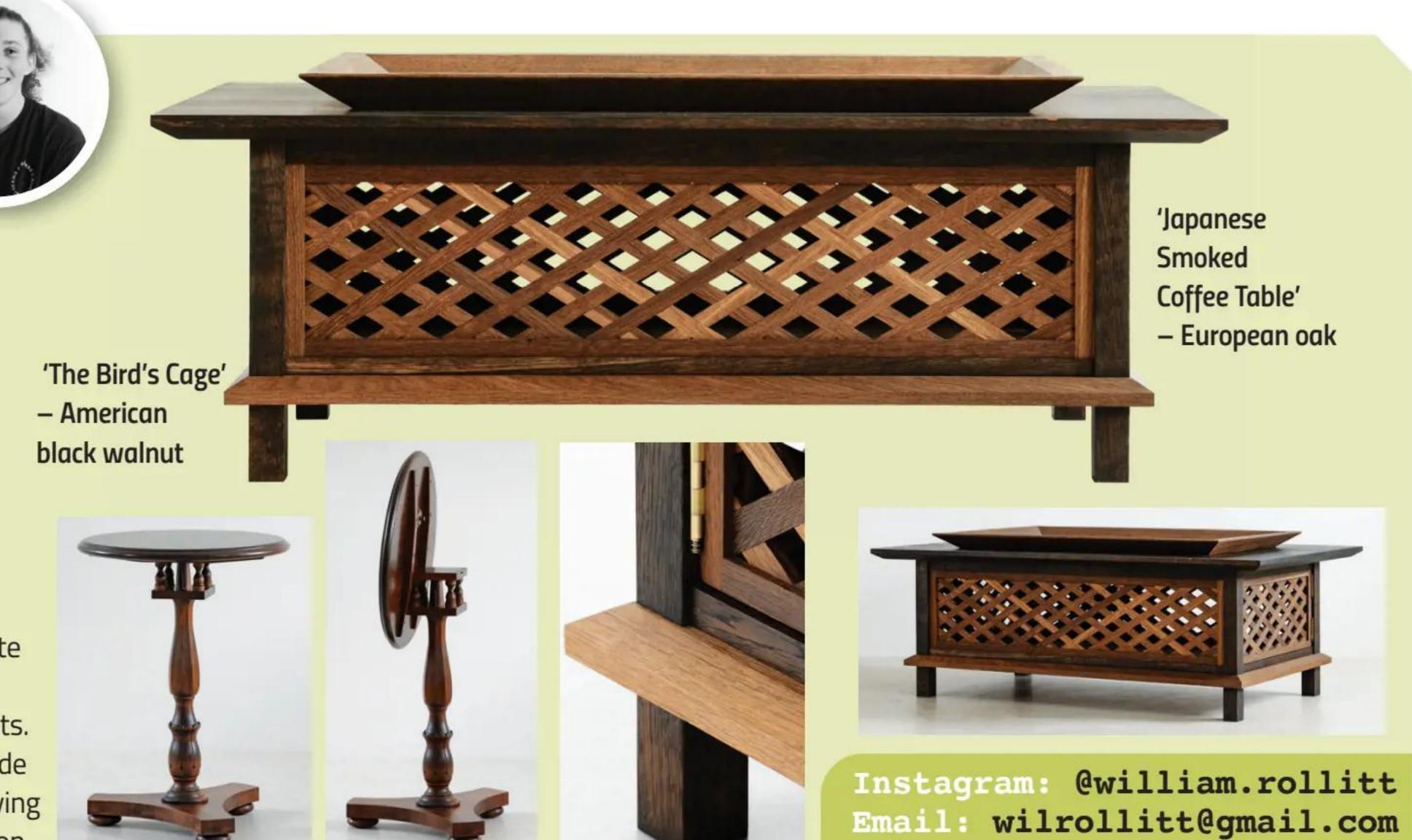
'FitzRoy Cantilever
Chair' in American
black walnut,
upholstered with
British wool. The
full cantilever design
was made possible
by reinforcing the
frame with four
layers of carbon fibre,
thus creating a very
strong composite

Instagram: @fidrafurniture
Email: contact@fidrafurniture.co.uk
Web: www.fidrafurniture.co.uk

# WILL ROLITT

Will discovered his love for furniture at a young age having grown up surrounded by amazing pieces of furniture and antiques. After a couple of years doing this, Will found that he wasn't satisfied with making pieces where he'd no input on design and aesthetics. This led him to the Chippendale School of Furniture, where he was able to further both his design and making skills.

After the course, Will plans to create amazing bespoke pieces of furniture for both private and commercial clients. He's going to be staying on at Myreside Studios initially, before hopefully moving back home to set up his own workshop.

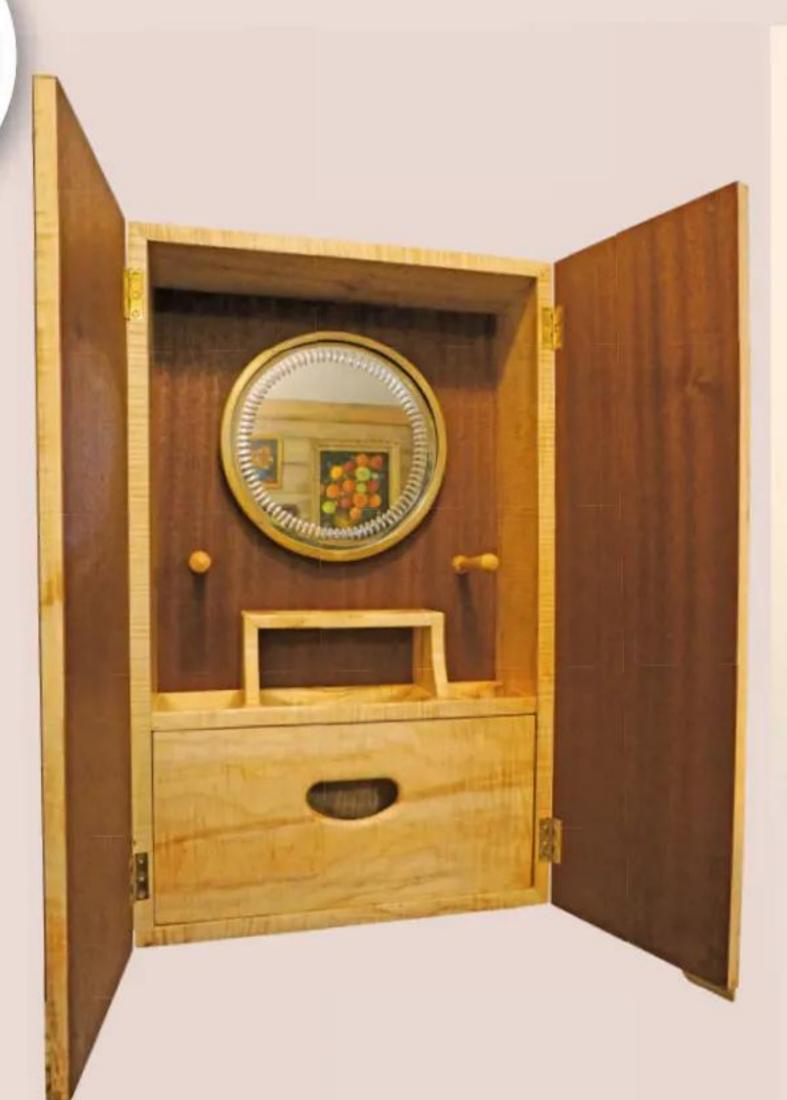


# BOB KLEPFER USA

Bob lives and works in central Virginia, USA. After completing grad school, he initially pursued a career in academia, later transitioning to defence and other related industries. Last year, Bob embarked on a third career by enrolling on the Chippendale School's Professional Course.

Like countless others, Bob worked from a hobbyist workshop for decades as space, money and time permitted. In his current 'shop, he's worked on restoring cars, antique tools and furniture for himself, friends and family.

Upon returning to Virginia, Bob plans to transform his hobby into a business, accepting commissions for custom furniture and restorations.





'Eleanore' – rippled sycamore, African sapele and sapele veneer



MATTY'S

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#### DOOBIE SIDIKMAN

Israel

Doobie is a young woodworker with a passion for crafting and creating. Raised in a household that encouraged creativity, she developed a profound love for arts and crafts, believing in her ability to bring any idea to life.

Always eager to embrace challenges and push the boundaries of her craft, Doobie looks forward to continuing her journey as a woodworker, exploring new techniques, collaborating with other artisans and sharing her love for woodworking with the world.

Whether she's building a business centred around her craft, pursuing further education, or simply finding joy in the act of creation, Doobie's committed to following her passion and making a mark in the woodworking sphere.



## RYSZARD 'K' KWIATKOWSKI

Before enrolling at the Chippendale International School of Furniture, K worked as a CAD/CAM engineer within the Aerospace Industry.

Wanting to trade his office desk for a workbench, K decided that wood had easier grain to follow than metal. Inspired by the natural beauty of locally sourced timber, K plans to establish his own workshop in

the East Midlands, focusing on crafting custom furniture from UK-grown wood.

'The Major Oak' – made entirely from oak; legs and arches in American white oak and the remaining structure in Scottish oak. This piece focuses on bent laminations and traditional joinery techniques







Instagram: @notts\_and\_all Email: info@nottsandall.co.uk Web: www.nottsandall.co.uk

#### LEA SCHMIDT Germany

Originally from Germany,
Lea spent the past decade
in Dublin, working in customer
and technical support for various
software companies. Realising
that her career lacked creativity,
passion and fulfilment, Lea
decided to leave the sterile office
environment behind. It was time
to get her hands dirty and pursue
a trade that resonated with her
heart and soul.

After graduating from the Chippendale School, Lea aims to find employment with an established furniture making business, continuing her path of learning and exploration in the craft.







'Steps to Storage' – a modular storage unit with four drawers and a cupboard. Sapele with veneered panels – mahogany, pomele, cherry, tulipwood, Macassar ebony and sycamore

Instagram: @woodworking.magpie Email: woodworking.magpie@gmail.com

#### ROB BOLDUC Canada

Following 35 years of military and public service,
Rob took a two-year Heritage
Carpentry and Joinery program.
Fulfilling a secret desire to be a lumberjack, he went on to attend an Urban Forestry program, resulting in his last four years working as a tree surgeon.

Taking his love of wood to new heights, Rob enrolled on the Chippendale School's Professional Course. His fine furniture designs focus on celebrating the natural beauty of the materials he works with. Rob finds immense satisfaction in the process of selecting the perfect piece of wood for each project, appreciating its unique grain patterns, colours and textures.



'Regal Dressing Table' – American black walnut and burr walnut veneer

Instagram: @figuredenthusiasm Email: contact@fidrafurniture.co.uk



#### Michael Huntley shows you how to cut right-angled corners and grooves

he next stage in the development of skills is to be able to cut at an angle and make a recess, in other words mitres and grooves. Mitres are used to make neat right-angled corners, and grooves allow you to fit panels to a carcass.

The simplest mitre to make is a 45° one. You can use the combination square to set this out (photo 1), then drop a perpendicular down the two sides and cut to the line (photo 2). As in previous cutting exercises, watch the two kerfs developing as you cut: one on the horizontal; one on the vertical. If you just cut two plain mitres (photo 3) you have a problem because the only joint available is a butt joint, and this variety isn't very strong, so you need to find a way of joining the two mitres together. The least expensive is a bridled mitre.

In this joint, the mitre is only cut one-third of the way through and a tenon left in the middle of one piece, the lower one-third being mitred to match the upper one-third. The mating piece

has a mitre cut in the usual way but with a slot or bridle left for the tenon to fit into (photos 4-6).

You could also use a loose tongue, biscuits or dowels. There are many ways of joining and strengthening mitres depending on the purpose for which the item has been made, and your budget. Some helpful drawings are shown in Hayward's Woodworking Joints.

#### Vertical mitre

So far we've considered what might be called a picture frame mitre. What if you want a vertical mitre to join, for example, skirting boards or a plinth? Vertical mitres are usually cut using a mitre box if no machine is available, and you're not used to cutting them freehand. This is a workshop aid that consists of a substantial vertical rear fence attached to a baseboard. The rear fence has a 45° kerf cut in it (photos 7 & 8). The piece being mitred is clamped to the rear fence and the saw worked down using the guide slot (photo 9). Obviously, for accuracy, the guide slot must fit



2 Cramp and saw to the line, ensuring your kerf is always in the waste



3 A couple of passes with a plane and the butt mitres are finished, but dowels or biscuits are required



4 For the bridled mitre, remember to mark the saw cuts from the same face





**5** Chopping a slot for the tenon

the saw you're using. This is why commercially made mitre guides can produce sloppy results.

You also need to be aware that there are left- and right-hand mitres, which means you'll need two guide slots. By far the best approach is to practise on some scrap and get used to cutting every variety of mitre freehand.

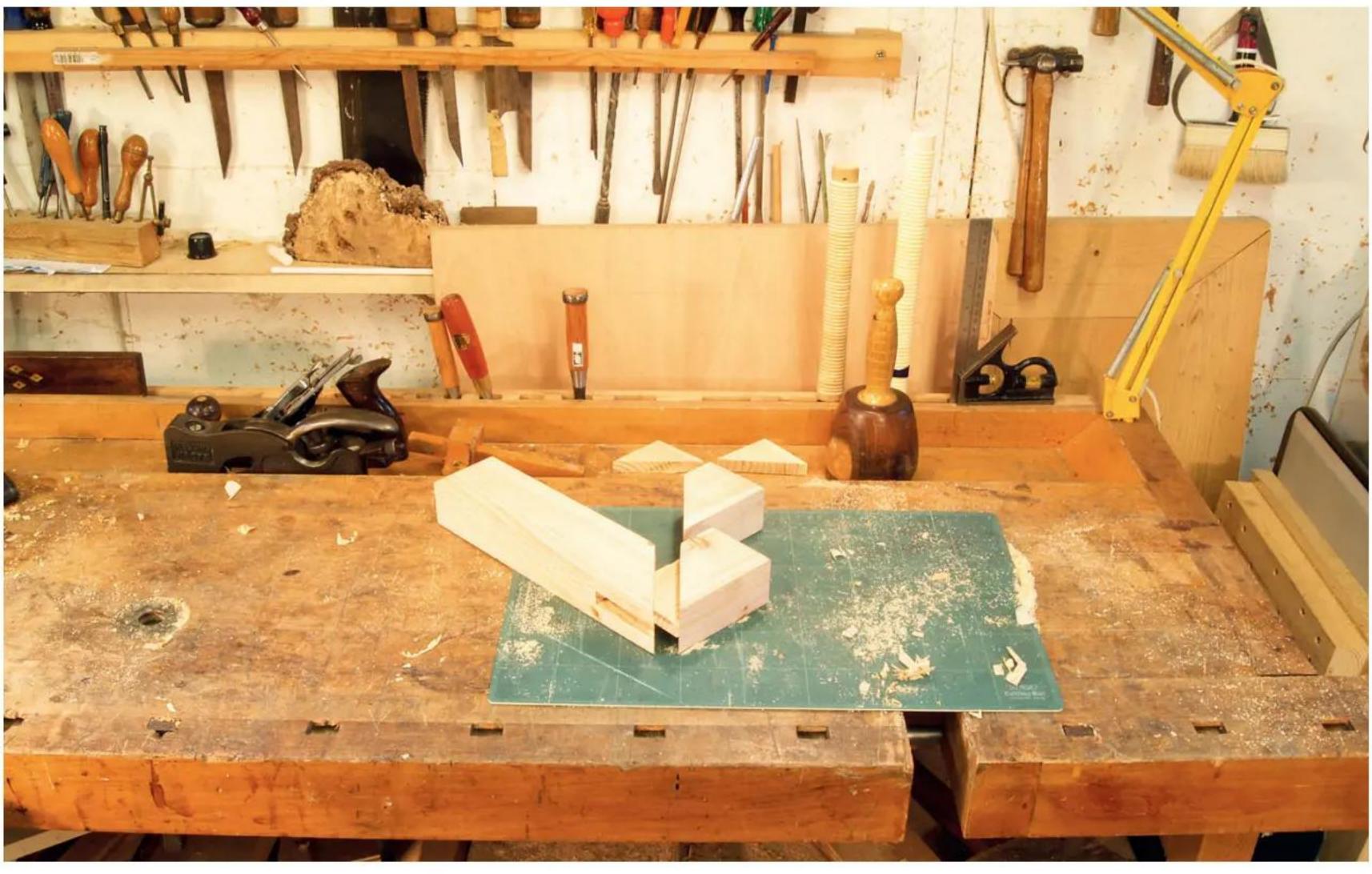
If you leave them a tad overlong, these can be planed in. There are special jigs for just such planing and your shooting board can be adapted. Just do an online search for 'mitre-shootingboard' and you'll discover an amazing array of examples.

#### Non-standard angles

The rule for non-standard angles is that the mitre must bisect the angle. Interesting things



7 Planing in the sawn mitres for a home-made mitre box. This is MDF, which I don't like because of the dust, but is perfect for jigs because it doesn't warp. However, ensure to take dust precautions when using it



6 Bridled mitre disassembled in front; plain mitre behind

happen when working as a restorer because it's very rare that an old piece of furniture is dead square all round. Until you're very experienced, always make up two practice offcuts at 45° and offer them up to get a feel for how the moulding will fit. Try to fit the front – visible – moulding first, then when it's secure, offer the side pieces up over-length, plane the mitres in if necessary, then trim off any excess; this will be out of sight at the item's reverse.

Odd things will happen with curved mouldings: you may end up with a gap in the moulding's middle. It's counter-intuitive but one of the pieces needs to be cut concave and one convex. Of course, you can't make that cut with a saw; it has to be cut over-length and chiselled, planed or sanded in. The geometry of mitred mouldings

> is quite complex and needs a whole chapter to itself. Of course, you need a sliding bevel and protractor.

## Simple dovetails

It's worth learning to cut correctly at

all possible angles. The ability to cut at an angle allows us to make mechanical joints that can only be pulled apart in one direction – there's even a subtle joint that needs equal pressure at 90° to get it apart, but it's not a foundation course joint. The principle is that the joint's wider at the far end and can't be pulled through a narrow slot (**photo 10**). This is a dovetail joint.

Almost every student I've taught has made dovetails the wrong way round at least, hopefully, only once! This is why I'm taking time to show a single half-lap dovetail that you can practise time and again. Full stage-by-stage dovetails will be covered in a future article, but I do like to get students practising their angled cuts early on!

#### Grooving

The other process needed to significantly widen your woodworking range is grooving. If making a mortise & tenon frame – and that's how furniture developed in the 16th century – you probably want to put panels in the frame (photo 11).

To do this, you'll need to run a groove. If working with the grain, which is what you'll be doing, you use a special plane (photo 12). In the past, every workshop or maker had specialist planes for all



8 Fitting the mitre box's reverse. Ensure it's square; note the hammer. It's easier to locate a component by tapping gently as opposed to pushing

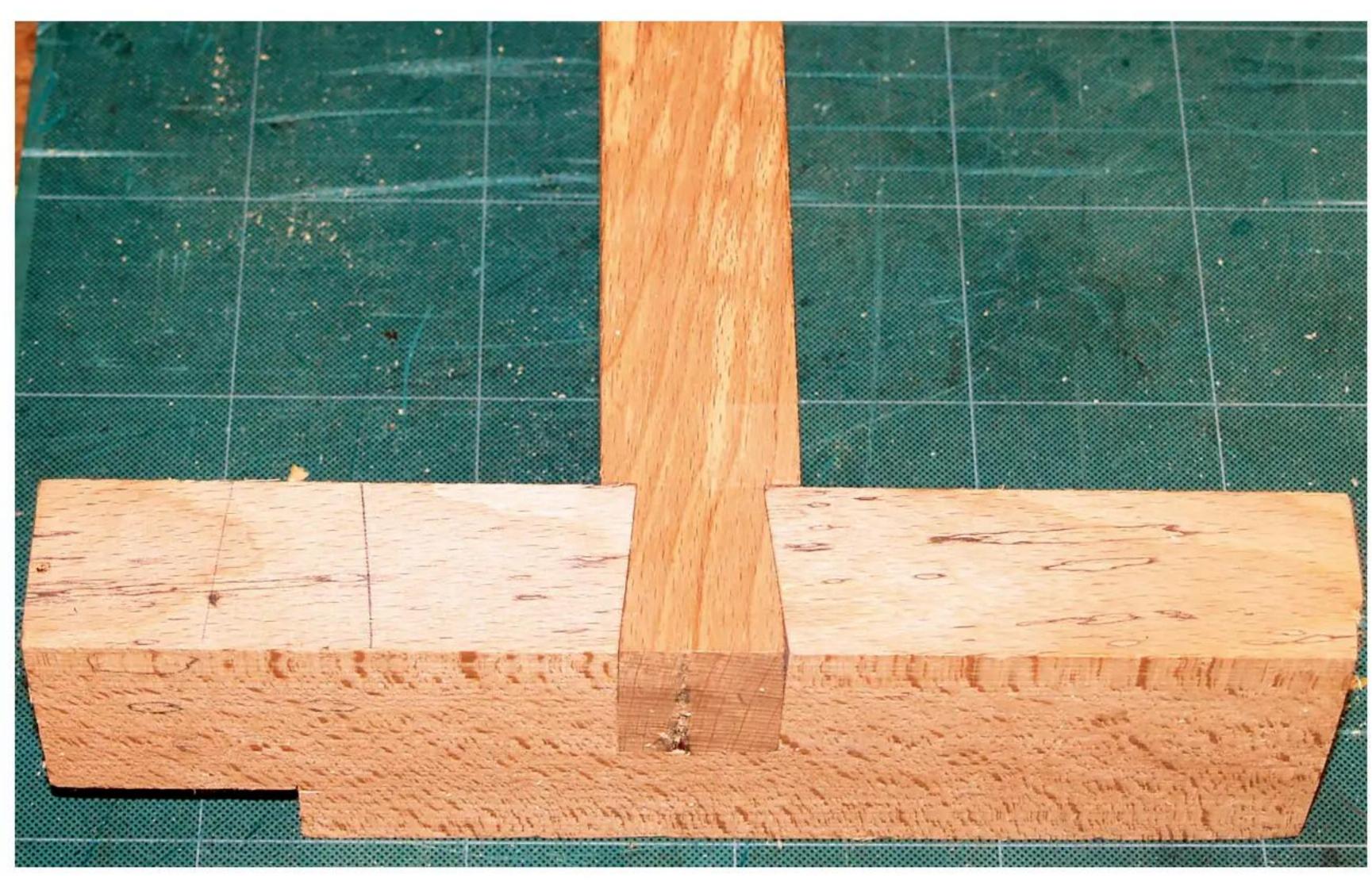


9 Mitre box in use

sorts of grooving tasks. There's a movement afoot these days for 'HTO' workshops – Hand Tool Only. This is fine and I support it, but the purchase cost of these planes for a beginner can be prohibitive.

I therefore recommend buying a good-quality electric router and using that for grooving until you've purchased all the other hand tools required to complete the tool kit. Before buying a router, read a good beginner's router book such as those by Anthony Bailey or Alan Holtham. They'll guide you through which router is suitable and the accessories needed. I love my trusty old DeWalt ½in router. I use a ½in – and therefore more expensive – router because it has more power and will accept bigger router bits. You may not need this capacity – it depends on your work.

The reason that panels were fitted in overdeep grooves (**photo 13**) is because the panels would expand and contract with the seasons, and the deep groove allowed them to move without splitting. That's why you must never glue a fielded panel into a groove. Fielding just means tapering the edge with a plane in order to get it to fit the groove. By the way, polish the panel before inserting it, otherwise when



**10** A simple dovetail. The tail can't be pulled through the opening's narrow neck in the cross-piece. Get some scrap and practise this over and over again

it shrinks, you'll have a tell-tale line of unpolished wood at the side edges.

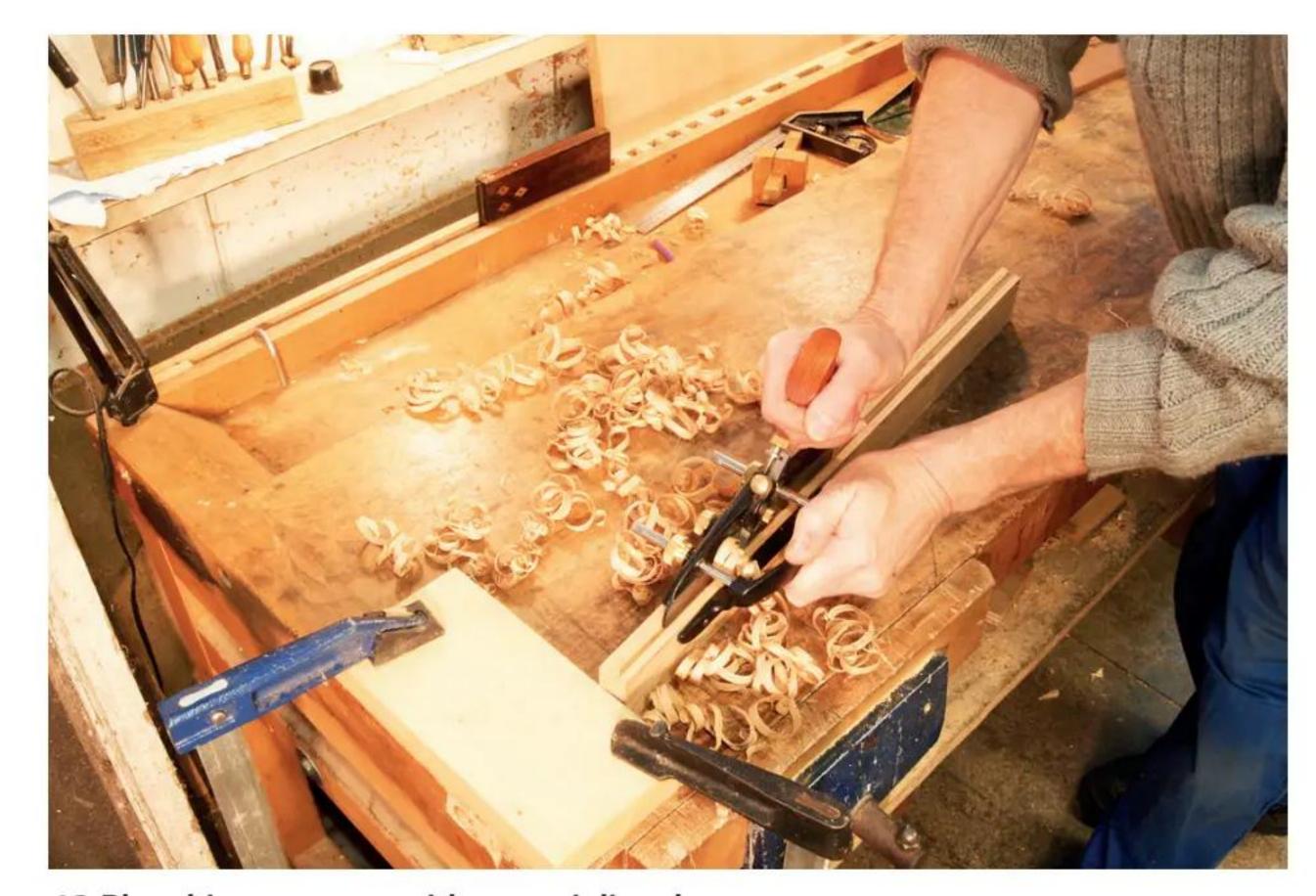
If you're working across the grain – for example, letting shelves into a wide upright – then you can cut the groove's edges with a saw and chisel out the waste. You could also use a hand router, which is a cheap and very useful tool. But bearing economy in mind, the job could also be completed with an electric router.



11 Frame & panel construction in a blanket chest

#### **UNSAFE PRACTICES**

Magazines are always debating whether we should even discuss 'unsafe' practices, but I do feel it's worth mentioning that in the old days, grooves were often cut on a table saw. This meant having to remove the crown guard, which, in the UK, is considered an unsafe and illegal practice. So if someone tells you they used to do it that way, don't attempt to replicate this. Nowadays, you can use specialist guards such as a Shaw or tunnel guard to keep the timber firmly in place and to prevent the chance of hands contacting the blade. You can also use SUVA guards. Whatever system you use, however, the riving knife must still be in place in order to prevent binding. However, the logic of the HSE regulations is that you should use the safest method for the desired cut. And for grooves and rebates, the safest method is the spindle moulder or router table. So if you want to machine grooves, ensure to use the correct machine with the correct guarding, and also ensure to get proper training



12 Ploughing a groove with a speciality plane



13 A fielded panel inserted into the groove; note that it doesn't extend to the groove's bottom

In part 3 of this series, Andrew Hall looks at faceplate turning, bowls and platters, which makes use of the remaining four tools from his 'Magnificent 7' line-up

he only crossover tool between the spindle turning and bowl turning set is the 3mm parting tool - No.3. There may be occasions where a spindle gouge might be used when turning a bowl to produce a bead on the side or rim.

A major safety tip here – and probably the most important safety advice that can be given - is that the spindle roughing gouge - abbreviated to 'SRG' – must never be used on a bowl or platter blank. The reason for this is due to the fact the spindle roughing gouge is made up of a flat piece of steel, forged to a curve, which has a tang. If used on a bowl or platter, this could snap if the tool catches whereas the bowl gouge is made of a cylindrical piece of steel; this is far stronger and the tool's grind – especially in the case of the swept-back variety – is less likely to catch.

The faceplate, when viewed from the side, has a locking register stud, which secures faceplate to spindle. All good quality chucks also have register studs for the same purpose, which is handy when sanding in reverse.



3 A worm screw or screw chuck – the most common method of holding a side-grain blank – which fits into the chuck jaws

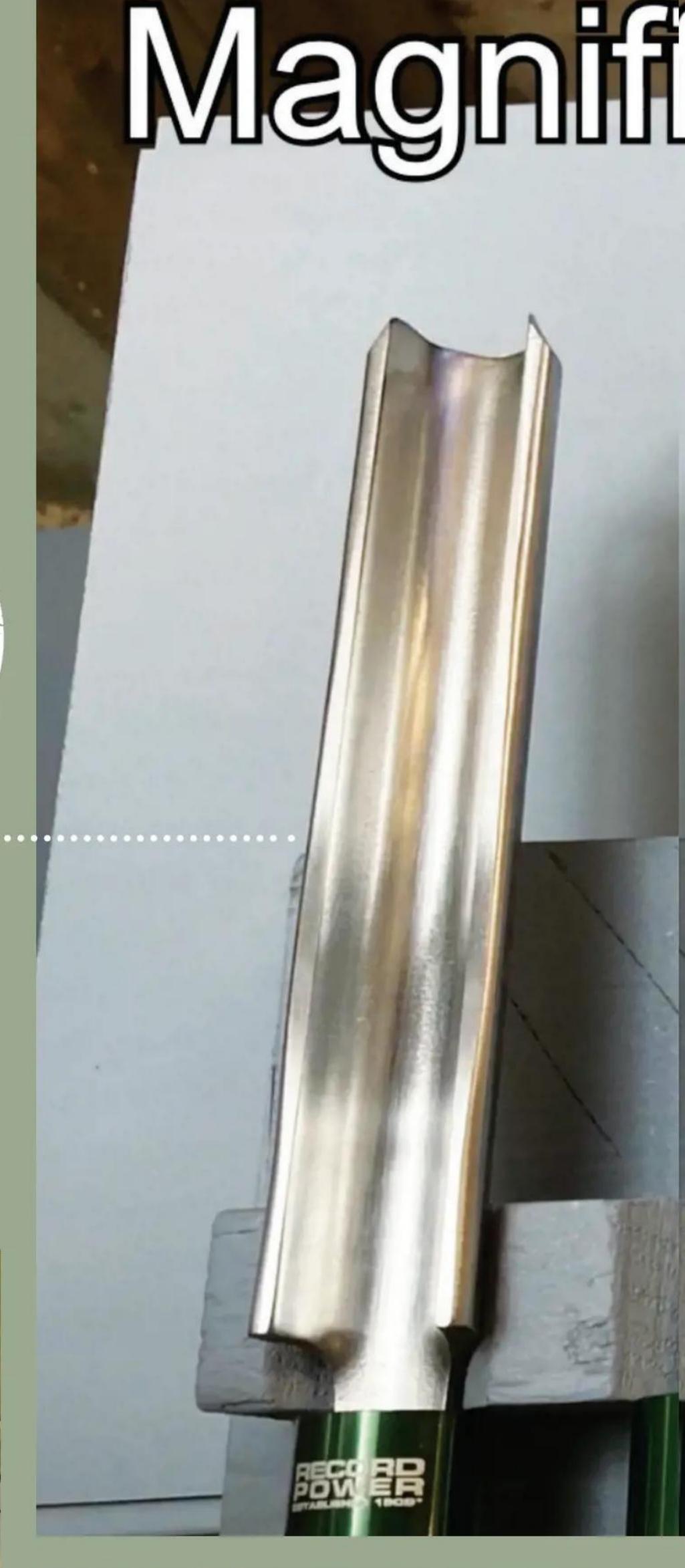


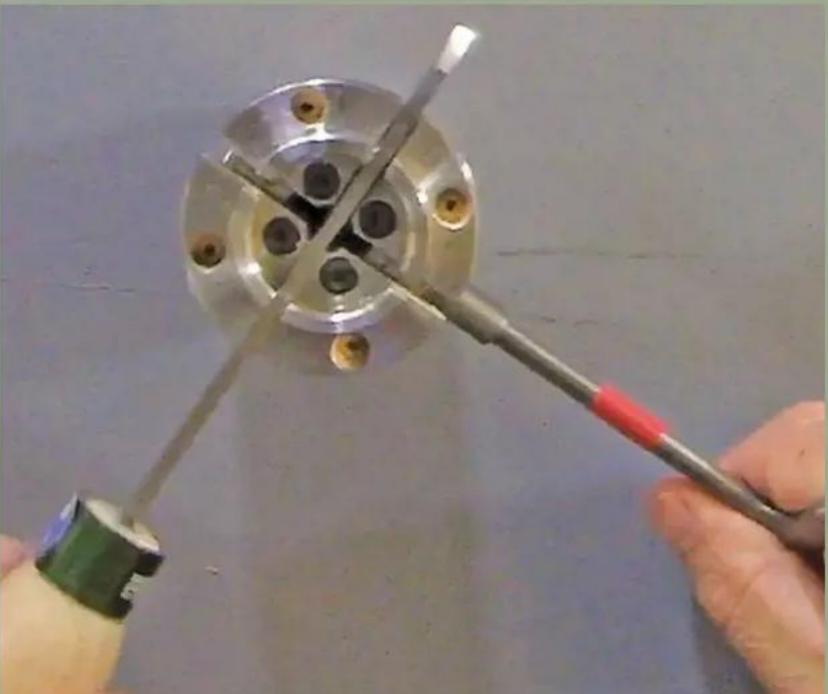
4 Most are 9mm, so I drill a 7mm hole with a cordless drill, the correct depth of the screw chuck, which will allow it to be screw mounted on the lathe



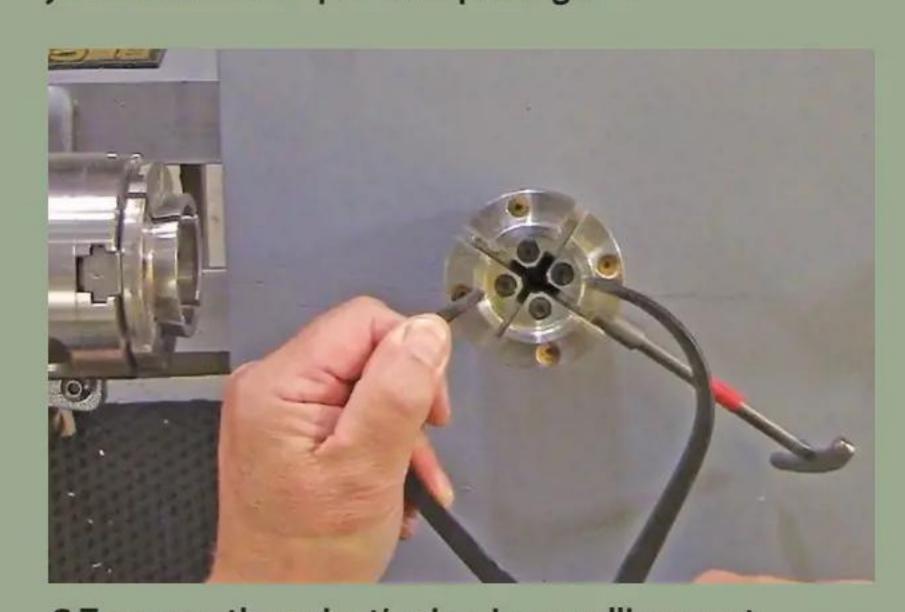
#### Worm screw or screw chuck

The most common method of holding a side-grain blank is using a worm screw or screw chuck, which fits into the chuck jaws (photo 3). These are generally supplied with the chuck. Most are 9mm, so I drill a 7mm hole with a cordless drill, the correct depth of the screw chuck, which will allow it to be screw mounted on the lathe (photo 4). In order to do this, I recommend marking the depth on your drill bit using masking tape.

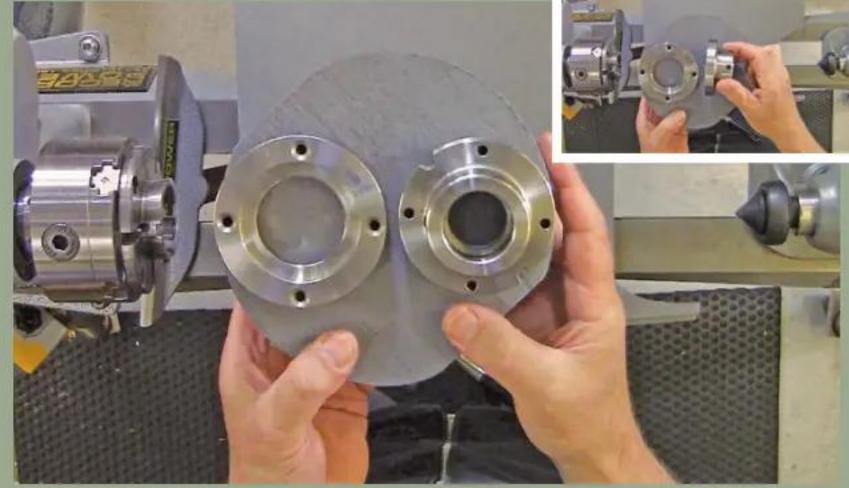




5 To achieve the optimum circle size, I open the jaws to the size of a 3mm parting tool



6 To gauge the spigot's size, I use callipers set to match the jaws' internal size...

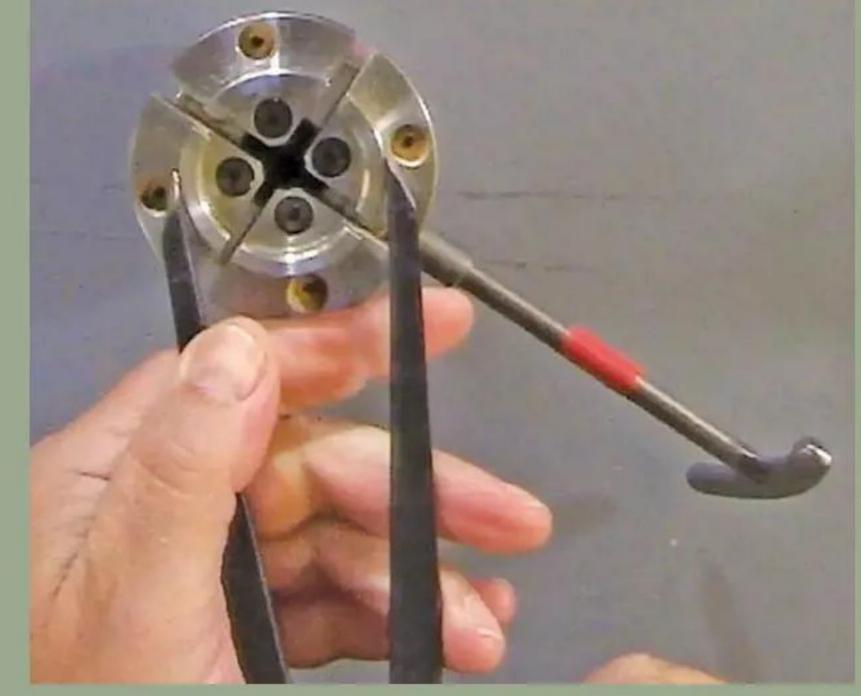


2 Chuck shown to the left, a faceplate ring in the centre, which would fit securely onto the jaws, and a faceplate to the right

#### Chucks & faceplate rings

Photos 2 & inset show a chuck to the left, a faceplate ring in the centre – which would fit securely onto the jaws – and a faceplate to the right. Both faceplates will be screwed to the blank using appropriate size screws according to the blank's diameter. In these examples, I've used 25mm good quality Spax or TurboGold screws. Don't use cheap screws as I did when I first started out. I learnt the hard way that they snap easily when used in wet wood.





7 ... and to size the recess/dovetail, I use dividers set to the jaws' external measurement

#### **Blank holding methods**

The most successful method of holding a blank on the lathe is with the optimum circle either cut into a recess/dovetail or a spigot/ tenon. In order to achieve the optimum circle size, I open the jaws to the size of a 3mm parting tool (photo 5). When it comes to gauging the size of a spigot, I use callipers set to match the jaws' internal size (photo 6), and for sizing the recess/dovetail, I use dividers set to the jaws' external measurement (photo 7).



8 The bowl gouge is often – and in this case, the swept-back variety – is positioned on the toolrest in either the 10 or 2 o'clock position. The clock face is a great aid for indicating the tool's position



10 The toolrest is positioned 6mm below the quill, at 30° and 2 o'clock



9 Using the gauge with a underhand grip – i.e. the thumb on the top to offer bevel support with the fingers wrapped underneath – I begin turning from left to right in order to true up the blank



11 Lock the tool into the side of your body and turn from right to left, then left to right to centre, removing 2mm of material until the blank is true and flat across the surface

**12** Continue this process until the blank is flat across the surface and at its maximum diameter



**13** Using a pencil, mark the face to show how much material is required to true up a flat surface on the bowl's base





14 Using an overhand grip with the tool firmly locked to your side, draw the gouge out to true up the base's surface. The tool is in the 10 o'clock position and cutting with a third of the wing down from the tip



15 Alternatively, a push cut can be used, riding the bevel. The tool is held with an underhand grip supported by the thumb at the 2 o'clock position, again locked into your side, moving from the outside of the blank to centre



16 The external and internal pencil marks indicate the size of the recesses/dovetail and that of the spigot/tenon



17 For the first bowl, I've decided to cut a recess/ dovetail using a 3mm parting tool, 3mm deep. The recess needs to be a nice, flat, clean cut and can be achieved by positioning the toolrest 6mm below the centre, holding the tool at 30° and carrying out an arcing cut



18 Using a pencil, divide the distance from the recess/dovetail to match the bowl blank's maximum diameter



**19** True up the surface on the bowl's top, 10mm on the blank's edge, using the same method as for the base. This time, however, use an underhand grip, supporting the tool and cutting with the top third of the wing



20 Imagine there's a piece of wood between your hand and body that's preventing you pulling your arm into the body. In a smooth transition, cut a curve from a line on the surface to one on the edge



you're able to produce a nice fluid curve



22 Once you've achieved a pleasing curve, cut the edge and bottom of the bowl using a fine finishing cut, ready for sanding



23 Check that the bowl's bottom is slightly undercut; this way, it'll sit nice and flat on the table's surface



24 Support the hand and use all the necessary extraction and safety equipment as shown in part 1, and proceed to sand through the abrasive grits



25 Sand through 80, 120, 180 and 240 grit. As this will be a utilitarian bowl intended for actual use, it only needs to be sanded to 240 grit before receiving a food-safe finish



26 Reverse the bowl blank and secure it with the jaws in the recess/dovetail. The bowl gouge has the flute open at the 12 o'clock position. If the tool is presented to the material, it can skate back and produce a dig-in



27 The best way to prevent skate back is using an underhand grip, supporting the tool with your thumb close to the bevel, while positioned at 2 o'clock



28 Cut a series of 'V' cuts using this technique to create a position for the tool's bevel to rest on, cutting deeper into the bowl



29 Continue working down the depth of the bowl until you've produced a nice, even, curved surface. Keep the tool in the same position, locked into the body, to create a fluid curve



**30** In this instance, the surface produced by the swept-back bowl gouge was good and I could've gone on to sanding. However, this isn't always the case and can depend on the material used, which for this project, was beech



31 To produce a better finish, a traditional bowl gouge can be used with the flute positioned at 1 o'clock. It's a good idea to experiment with the tools and find out which works best for you



32 Alternatively, the negative-rake scraper can be used and may produce a better finish. The scraper must be used either horizontal or with the back hand elevated so that it's on a raking cut. In the case of a traditional scraper, it must be elevated. I prefer a negative-rake, which is where the bottom two thirds of the scraper is ground to 60° and 30° on the top edge



33 Using the swept-back ground bowl gouge, produce a shear cut on the bowl's edge. To produce a shear cut, the flute's top third is used with the tool flute almost closed and the handle lowered down to a 60° angle. The bowl is now ready for sanding



34 Reduce the cutting speed by one-third and sand from the centre outwards, going through 80, 120, 180 and 240 grit. Ensure to support your wrist, wear the correct safety equipment and use extraction



**35** This bowl was turned to a constant wall thickness of approximately 8mm and to check it, I used a set of scissor callipers. Any callipers can be used, but a figure-of-eight set can also be useful



however, we'll produce a tenon for holding the blank in the chuck

That's the bowl completed, and now we can turn a platter following the same process. This time,

**36** Find the centre of the platter blank using a centre finder and mark this with a hole, which is produced using a bradawl



37 I used the same method for holding the platter as with the bowl, but this time with a spacer; this allows the material to be held by drilling the hole half the depth of the platter blank



38 Using the dividers, I sized the optimum circle size and marked the tenon diameter with a pencil



39 Work from left to right halfway across the blank, then right to left in order to prevent breakage on each edge. True up the blank to as large a diameter as possible, in this case using the swept-back bowl gouge



40 True up the platter blank's surface with a draw cut, leaving a pencil line for the spigot



41 Using the 3mm parting tool, cut a spigot/tenon to match the chuck jaws' optimum size, creating a slight dovetail; this will allow you to achieve 360° of contact



42 Using the swept-back gouge and lowering the back hand, cut a chamfer one-third of the platter width, leaving an edge of approximately 10mm



43 As with the bowl, sand through the grits to 240



44 Reverse the platter blank and cut a series of 'V' cuts; this allows bevel contact as well as preventing skate back



**45** Clean up the edge with a draw cut down to a thickness of 6mm



46 Using the same process as for the bowl, turn the centre to two-thirds the depth of the platter thickness



47 Sand through the grits to 240, again remembering to support the wrist and using all necessary safety equipment



48 Using a plywood disc with an anti-slip mat...



**49** ... turn the spigot/tenon down to a 10mm dowel size using the swept-back bowl gouge



**50** Using the sanding arbor in a cordless drill, sand the button to a flat surface on the platter's underside



51 I used Chestnut Products' food-safe finish as the bowl and platter are utilitarian. I applied two coats of food-safe oil, leaving 24 hours between each coat, before buffing up with a safety cloth

#### **YOUTUBE LINK**

A YouTube video to accompany the article can be found here: https://tinyurl.com/bdej4mu7

#### **NEXT TIME**

In part 4, which will appear in the November 2024 issue, Andrew will move on to looking at basic hollow form turning and the tools used for producing these

We never cease to be amazed - and sometimes amused - by the extraordinary breadth and variety of material that The Woodworker has published during its 123 years. Here, we take a look at examples from 73 and 48 years ago



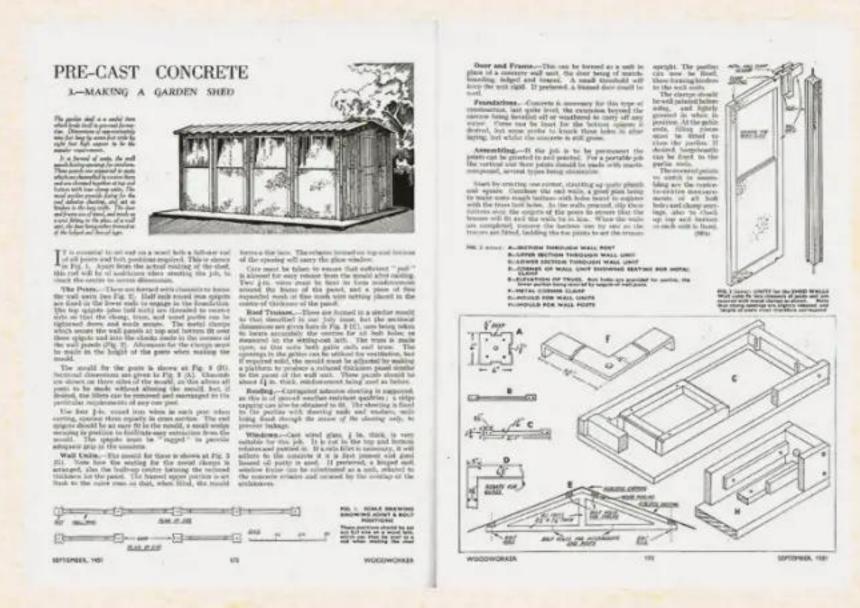
which featured a cigarette-proof Formica top

#### SEPTEMBER 1951

The Festival of Britain had just closed as this issue of the magazine appeared, and its opening article echoed the theme of modernism that was the Festival's hallmark. It was a simple round coffee table with beech legs and a shallow plywood drum that supported the plastic top. This was a 24in diameter Formica circle, which was the first of the plastic laminates we now take for granted, but back then, it wasn't commonly used in the home. According to the article, at that time, there was also a cigarette-proof Formica grade available, which incorporated aluminium foil to diffuse the heat. Apparently it was demonstrated at exhibitions by a table on which visitors were invited to stub out their cigarettes!

#### Traditional projects

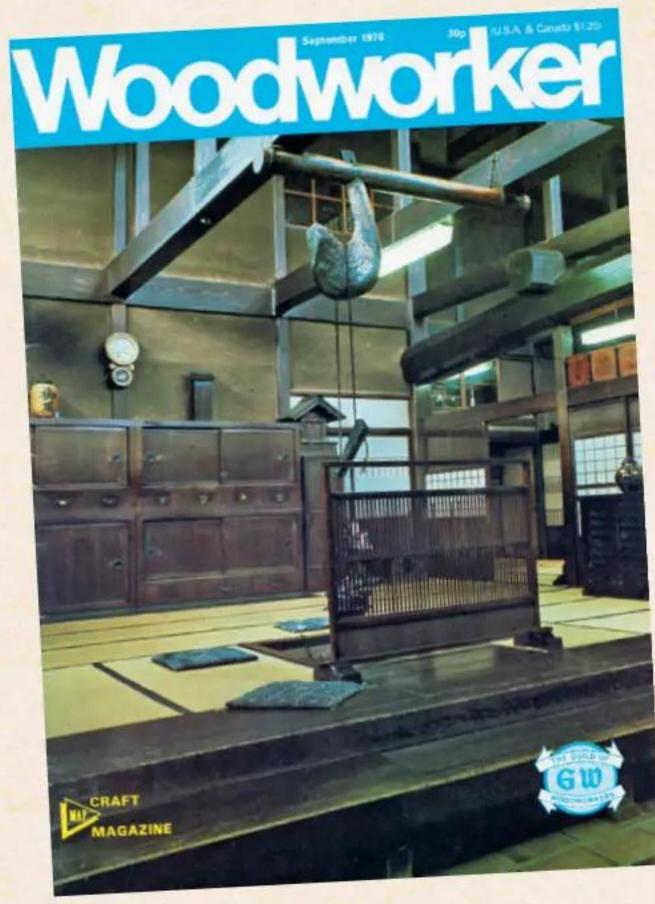
However, woodworkers of a more traditional bent could still find plenty to make within the magazine's pages. For a start, there was an intriguing dual-purpose standard lamp that provided a shelf for the telephone and storage space for a set of directories – remember them? - cleverly concealed behind an up-and-over sliding door. More traditional was a small vanity table, which 'the home craftsman could make for his adolescent daughter. It featured two drawers and a lid that folded up to reveal a mirror on its underside and a concealed storage space for cosmetics. This was to be lined with - you've guessed it - Formica! The other two projects included were rather less exciting. One was a small oak occasional table with a reversible top, which was upholstered on the underside for use as a fireside stool. The other billed as 'For the Man with the Lathe' – was a set of six turned egg cups on a circular stand.



9 × 7ft garden shed with concrete wall panels and roof trusses, to be topped off with corrugated asbestos sheeting

#### **Concrete castings**

Astonishingly, 73 years ago, The Woodworker wasn't just about woodworking. A couple of months earlier in fact, the magazine had started to take a look at making concrete castings as a substitute for softwood, which was still in short supply after the war. The first two articles in the series dealt with making the timber moulds in which the concrete was to be cast, with reinforcement provided by lengths of 1/4 in rods and sheets of mesh wire netting embedded in the wet concrete. In the September issue – shown above instructions were given for casting and building a 9 × 7ft garden shed with concrete wall panels and roof trusses, to be topped off with corrugated asbestos sheeting. The components must've been incredibly heavy to lift, yet pretty fragile with such insubstantial reinforcement within them. We wonder if any were actually built...



The front cover subject is a little confused and makes no appearance within the magazine!

#### SEPTEMBER 1976

Fast forward 25 years, however, and things have changed at The Woodworker. For a start, the title has changed to just Woodworker - a somewhat unfortunate shift that was introduced in 1968, when the magazine page size was increased to the A4 still used today. This title was to remain in use until 1995, when the missing 'The' was reinstated.

Full-colour covers were also introduced in 1968, although this facility was often wasted, as the example below shows. It features a reconstruction of a 19th century Japanese interior, and had no connection at all with the magazine's contents!

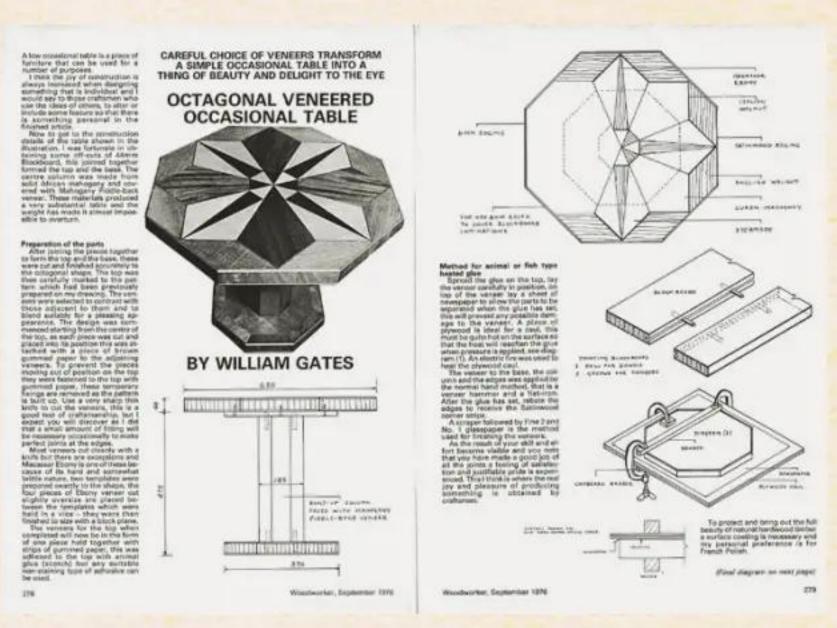
#### A strange assortment of features

Within the September 1976 issue – priced at 30p, although the editorial reveals that this would increase to 35p as of next month – was a strange assortment of features. There was very little to build; just a nest of three plain tables with tops made from veneered chipboard - which was widely sold as Contiboard, for those with long memories - and plans for an eye-watering octagonal veneered pedestal table - shown below designed by one William Gates. It probably wasn't quite as popular as the stuff the other Bill Gates gave the world a generation later!

The remaining pages were taken up with a succession of strange bedfellows. Alan Beardmore asked: 'Who invented the Stanley Combination plane?', and spent four pages describing it in fine detail. William Gates - him again - explained how to make an adjustable router, while former Editor Charles Hayward described an unusual table frame joint he'd spotted in an Italian hotel. Meanwhile, Homegrown Timbers had reached No.21: Oak, and part 7 of A J Kenyon's series about Working on Period Houses was looking at windows and interior walling.

#### A sign of the times

There was more technical stuff from Charles D Cliffe – fitting the rule joint stay –and Stanley Thomas – the importance of careful setting out – while Charles Hayward reported on the new Best English mitre plane – 'for the perfectionist who appreciates quality work in what is essentially a practical plane. A look at using the plunge router had reached part 5, and the magazine's technical consultant, Gordon Stokes, was reviewing the Dominion Elliot Minor woodworking machine. It all seemed incredibly heavy going, but maybe that was just a sign of the times?



William Gates' octagonal veneered pedestal table

# GETPLUGGED IN TO A NEW IDEA

Peter Scaife finds a way of working that's based on – wait for it! – electricity

CHISEL

ou, free and new. These three words, according to a friend who worked in an advertising agency, are the best ones to generate interest. And what I'm going to offer is for you, it's free, and – here's a little boast –new; at least in the sense that I've never seen it before.

I wanted to make a very small container for some tiny beads. The thought came to mind of drilling a hole and putting them in but that was followed by the problem of how to cover it. I now can't remember why, but the thought of a plug and socket came to mind. And this is what I did.

#### Making explained

The base is made from an odd piece of American black walnut nearly 64mm long; the top is from mahogany but almost any hardwoods will do just as well. The hole here is 20mm diameter.

Now, in plan it's not a regular geometrical figure; not square, not an equilateral triangle. I'll explain why in a moment. Next, cut out the top with a slight overhang all round. Cramp it in position and drill through one corner vertically into the base. Drive in one brass nail vertically, then drill the other three – or it could just be two – holes. Now pull off the top.

The only point that's a little bit tricky is this. Obviously the holes through the top have to hold the nails firmly; and all four holes in the base must allow a tiny amount of play, so that it's not an effort to remove the top.

#### Two options

There's two options available: experiment with two different drill bits – possibly one imperial and one metric – or, as I did, wiggle the bit around in the holes in the base to give a slightly looser fit. Either way, try it on a piece of scrap first. Don't forget to smooth over the nails' sharp ends with a small file.

Back to the shape in plan. Mine is irregular and this is why. If it were a square, it might be difficult to replace the lid if the holes weren't very precisely placed. Anyway, here it looks more interesting.

Trim the top to an exact match and sand until smooth. I made the top slightly domed; it looks good. And that's it.

Incidentally, my friend added that, when it comes to pharmaceuticals, and pain-killers in particular, a fourth word is 'fast' – never any need for market research on this point.

#### **Engineering precision**

Well, almost. Below you'll see another box, a couple of inches high and just big enough to hold a pair of cuff links and my engagement ring. Black with a tiny strip of cross-banding and most beautifully finished. My wife bought it for me at a Suffolk crafts fair and, unfortunately, I didn't meet the maker; possibly someone with an engineering background, I wonder? And I have no idea as to the timbers, tools or techniques employed.

The only clue is a label underneath with 'DR 163/4' written on it. If you, the maker, are reading this, I salute you.





West Midlands. Bristol, our subject this time round, was at least two generations ahead of it in becoming a sophisticated furniture making centre. The wealth from long-established overseas trade – sadly based on slavery – sustained a very mature furniture industry with everything from canework and bed joinery to inlaid mahogany and japanning. Apprentices were being taken on well before the first George arrived from Hanover in 1714





Bristol's Milk Street seemed to be overflowing with furniture makers

and, although nowhere near London standards, the domestic luxury sector was well-developed by the later 18th century. You'd have had no trouble finding a coach carver, and there was certainly no shortage of gilders working in the city.

Bristol also enjoyed an extensive export market, including America before and after independence. The trade literature of carver and gilder Aaron Jones was aimed at merchants and ship's captains in the 1770s and displays a charming commercial directness. His range of "swinging and small dressing-glasses" was reckoned to be particularly suitable for wholesale and export purchase, and his warehouse – note, not workshop – also contained "a Large Assortment of Oval and Square Glasses, in Burnish Gold frames, in the Newest Taste; Toilet glasses, in Japan or Burnish Gold; Gerondoles, with Double or Single Branches."

The importance of the wholesale trade is reflected in the number of cabinetmakers who also traded as brokers, including Stephen Bird of Redcliff Street in the 1790s and John Ford at various addresses in Temple Street between 1813 and 1838. Richard Adams of Thomas Street described himself as a furniture warehouse owner in the 1830s. And if the wholesale trade was widespread, so were the ramifications — not least for workshop practice. People were as likely to be employees of 'manufacturies' as they were to be sole traders or in partnerships, working directly with clients.

Around Birmingham, cabinetmaking was often combined with general woodworking, but in Bristol, specialisation was far more likely. Dedicated makers of clock cases, camp desks, sofas and couches, ornamental screens and card racks, fancy chairs and a variety of frames are all mentioned in the records, as well as the usual dabblers in upholstery. There are, of course, the oddities: Thomas James of Cathay made both chairs and ship's masts between 1809 and 1836, while the carver John Burge also dealt in spirits

in Milk Street from 1805–1822.

The degree of specialisation in finishing is particularly striking. There were several furniture painters in the early 19th century including William Hiatt, also of Milk Street, but it didn't stop at that: a John Hopkins was specifically a chair painter and Hannah Cosens of Temple Street was described solely as a clock case finisher between 1818 and 1830. The progress of James Smith, father and son, between 1795 and 1840, is a good example of how specialisation may've followed fashion. James senior was a cabinetmaker and varnisher at first, but by 1816, was specialising as the latter. James junior started as a varnisher and French polisher but later worked only with shellac, presumably to meet what must've been sharply rising demand.

Bristol also kept itself abreast of fashion through several subscribers to the various design books: the Burnet and Painter partnership, the Court brothers, William Langshaw of Milk Street – again – and Richard Simpson subscribed to *Sheraton's Drawing Book* of 1793, and John Russel to his *Cabinet Directory* of 1803.

#### Searching for clues

There are some famous names such as William Paty (1713–1789), a celebrated carver, we know a lot about, but scores of cabinetmakers are still only names, some with brief addresses. Hotwells seems to have been a popular district. For some we get the odd hint of their lives and output. James Joachim of the parish of St Augustine, who sold up his cabinet business in 1757, is known to have made a walnut bookcase with some element of gilding; John Evans of Broadmead made a mahogany bureau bookcase for 15 guineas in 1787; the trade label of John Willis (1797–1840) has been found on the back of a breakfront bookcase

and J Hathwell of Broad Quay was making "black frames in a new style" in 1800.

Information pertaining to the building of the Mansion House in the 1780s – destroyed in the 1831 riots – is more illuminating. Thomas Andrewes of Baldwin Street supplied fine furniture to the value of £594 1s 9d in 1785, including a set of 10 shield back chairs and several pier tables, all inlaid with the city crest.

A single remaining chair is now in the Georgian House Museum, and two of the pier tables can be found in the present Mansion House – as an aside it's interesting to note that many women would take over businesses after their husband's death; Andrewes' wife Mary is an example. Robert Salmon (1754–85) worked on other Corporation commissions, supplying seven large dining tables at £3 10s each, two mahogany pedestals with vases at £10 and 60 mahogany brass-nailed chairs at £1 2s each. We also know that the merchant John Pinney used local craftsmen to furnish his Great George Street house in the 1790s.

James Hingston and George Wilway of Broadmead were paid £42 10s and £52 2s respectively for unspecified work in 1791 and William Gorton, turner and chairmaker of Old King Street, supplied six Windsor chairs and painted two others at a cost of £1 10s two years later. Elsewhere, Thomas Tustin of St Thomas' (1774–84) supplied furniture to a clergyman in Gloucestershire and his bill mentions two sets of chairs. One was oval-backed in mahogany; the other consisted of six elbow chairs painted with red decoration on a white background – a gentle reminder that painted furniture was evidently far more popular than we often think.

For others, the picture is far more detailed. Robert James, 1784–1831, is interesting as he worked in native woods rather than fashionable mahogany and rosewood and used contrasts of natural colour and grain rather than paint for effect. He received a Royal Patent in 1822, just four years after he'd been declared bankrupt. Thereafter he described himself as "Manufacturer in British Woods to his Majesty." One of his adverts stated that "his present manufactured stock of POLYANTHUS AND OTHER BRITISH WOODS... will be found to excel any other yet offered, for beauty of Colours, and variety of the imagination, exhibiting on its highly polished surface, Woods, Landscapes, and in some instances Animals, Fish &..."

Extant pieces include a yew sofa table cross-banded in burr and a large pedestal table veneered in burr oak and elm.

#### Unsolved mysteries

Two things intrigued me. Why were there not many more cabinetmakers trading as timber merchants in Bristol than in the West Midlands, remote from the sea? Perhaps the answer lies in the trade label of John Kidson c.1760. Perhaps there was no need, with sailors operating a sideline as timber importers and selling direct.

The second thing was an apparently higher incidence of bankruptcy than round Birmingham. Why, in such an established area? Causes always JOHN KIDSON - CABINET MAKER

LIVING IN LAMB STREET, at the sign of the CLOCK-CASE & STAR, near THE WHITE HART, WITHOUT LAWFORD'S GATE, BRISTOL makes and sells all sorts of CABINET GOODS CHEAP

FOR THE SAKE OF CHEAP MONEY.

There are none shall exceed me for cheapness and Goodness of Goods.

Likewise, I will always keep them in order for any family, except any Damage happen thro'

Any Gentlemen, Merchants, Captains, Mates or Boat-swains, or any other Persons, that have any MAHOGANY or VIRGINIA WALNUT, May have it made into any sort of Goods To their advantage, or Exchanged for Goods.

>>>I will endeavour to give them such Satisfaction that they will not have any Reason to say, it is cheaper to buy out of the shops.

vary but perhaps Bristol's strength was also its weakness. Just about half the bankruptcies occurred during blockades of the Napoleonic Wars. Wars aren't good for trade in general and exports in particular. 1700–1815 was an age of wars, with other European and colonial conflicts preceding the Napoleonic. Peacetime trade recessions could be dislocating, too. So was furniture making a far more volatile occupation than we assume, particularly when you add the fickleness of fashion seekers?

#### A myth debunked?

Let's put this another way: was pre-industrial furniture making not as idyllic a way of life as the Arts and Crafts movement liked to think? Was that why many people combined it with something very different and more stable?

Thomas Harwell and Robert Peacock were both sworn measurers around 1800. There are several victuallers as well as John Burge, the spirit dealer. George Evans was a tobacco and snuff dealer between 1821 and 1835. Thomas Parfitt – one of the few listed cabinetmaker/mahogany dealers – was a salt dealer for a while in the 1820s, and



One of Thomas Andrewes' surviving pier tables can be found in the present Mansion House

James Allen combined carving with architecture from 1777 to 1793. Is this why Matthew Newbery chopped and changed? In 1820, he was solely a cabinetmaker; by 1824 he was described as a coach and cabinet carver; in 1830 a cabinetmaker and carver; and finally, a cabinetmaker and upholsterer in 1838. Did manufacturing pantile laths provide Thomas Davies of Redcliff Hill 1817–30 with a steadier income than cabinetmaking?

The case of George Clarkson during the Napoleonic Wars may give us a clue. He was listed as a carpenter, joiner and cabinetmaker from 1799 until 1809, when he was declared bankrupt. After that he became an auctioneer, appraiser and undertaker – all steady trades. 💸



The Napoleonic Wars weren't good for business



Grandpa was a carpenter, he built houses, stores and banks
Chain-smoked Camel cigarettes and hammered nails in planks
He would level on the level, shaved even every door
And voted for Eisenhower 'cos Lincoln won the war

John Prine,

Atlantic Records, 1973

o sang John Prine back in the early '70s, offering us a little portrait of what he thought being a carpenter was all about. The observation that his grandfather "hammered nails in planks" pays homage to the old axiom that carpenters use nails, joiners use screws, and cabinetmakers use joints. Obviously this is a sweeping generalisation, but a good starting point for the purposes of our investigation into the craft.

As stated in the last issue when introducing this series, I'll be looking at the development of English furniture through observations of the trades that produced the work, from early carpenters and joiners, to the highly skilled

cabinetmakers of the Georgian and Regency periods. This will also include observations of how developments in tools, processes, machinery and materials informed and contributed to the traditions and aesthetic interpretations of all that's English furniture.

The use of 'carpenter', which outside the trade tends to be an all-purpose catch-all term, had specific meanings here in the 20th century, and allowed us to differentiate between the various disciplines that make up the woodworking trade. This wasn't always the case, however. The word itself can be traced back to its biblical usage, and even further, to the ancient civilisations of Rome, Greece and Egypt. In 2009, I was lucky enough to visit Cairo and see the Tutankhamen exhibition featuring chairs, beds, tables, cabinets and cupboards that were constructed over 3,500 years ago. The heat and lack of humidity in the tomb's locality ensured that these artefacts didn't rot away, allowing us to see, first-hand, the highly developed levels of craft skills that those ancient craftsmen had at their disposal.

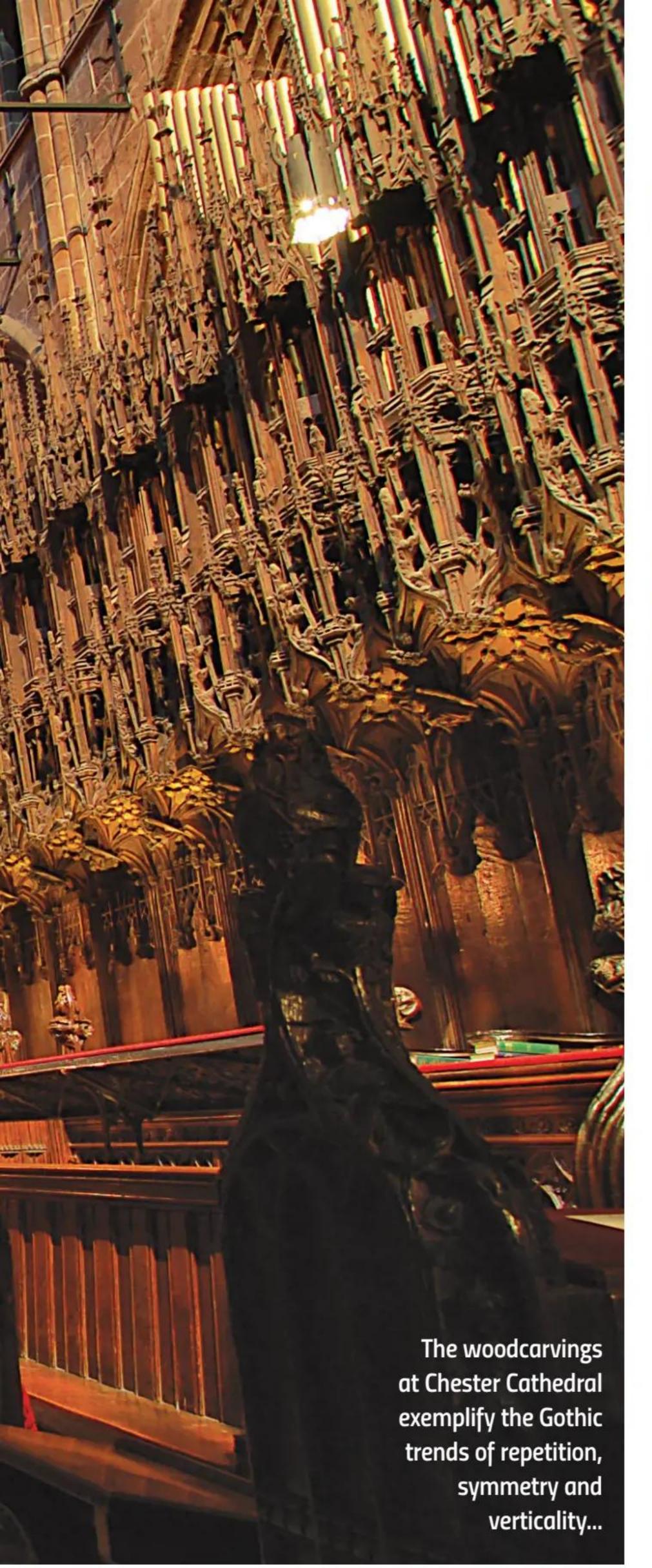
#### Veni, vidi, vici

The early Mediterranean cultures spread their empires far and wide, the Romans eventually

of course reaching the shores of this fair isle. We can see through remains, such as those at Bath, that architecture and building were highly developed and sophisticated during the Romans' tenure. It's probably fair to assume that the woodworkers' skills were on a par with those of the stonemasons. The unforgiving climate, of course, has ensured that no wooden structures or artefacts have actually survived intact from this period, although a few traces and remnants have been found and reclaimed from marshland.

The Roman Empire maintained its presence in Britain for over 400 years up until 410AD, but little written evidence of their time here now exists. The subsequent Anglo-Saxon period that followed the Romans' withdrawal is also poorly documented. There's almost nothing for the first 200 years, and following that, up until the Norman Conquest, we only have the limited writings and work of the church and its monasteries to go by.

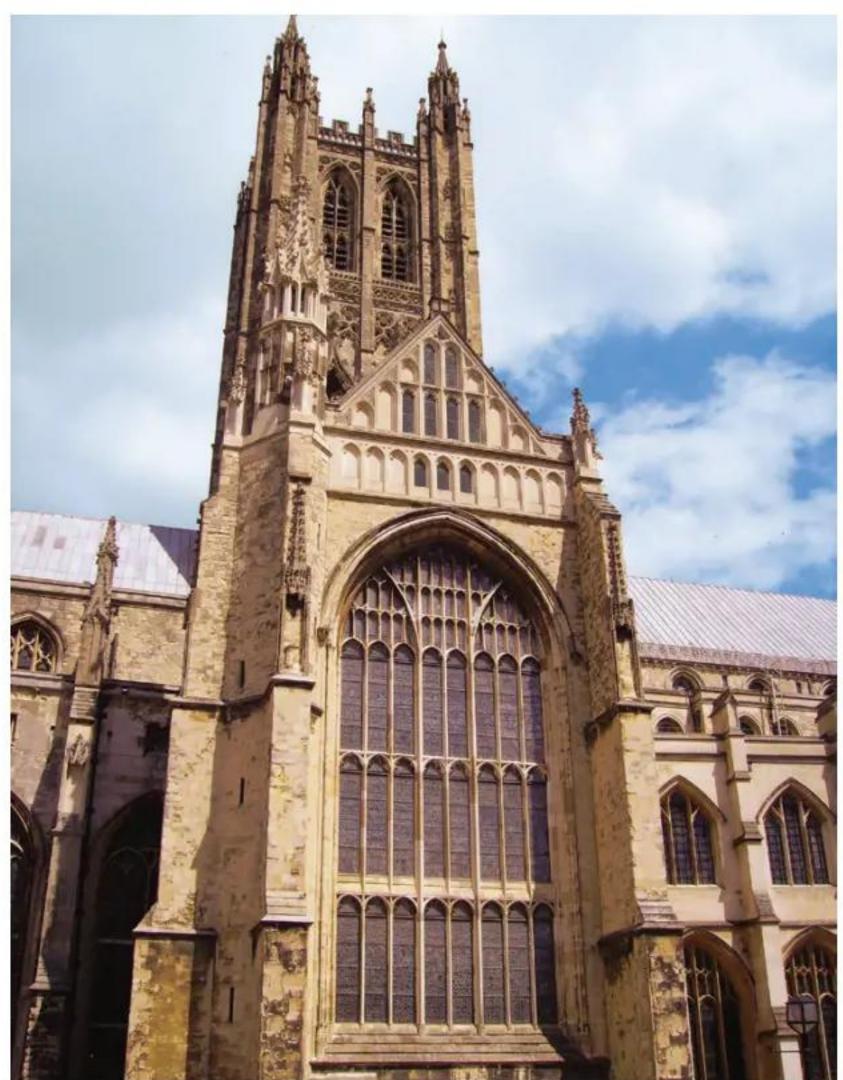
I don't want to dwell too much on the history lessons, but I feel it's important to establish that high levels of craft and skill in woodworking must have been evident throughout the Roman rule in Britain. The Dark Ages that followed saw many developments, and of course losses of these skills.



However we can only pick up those threads post-1066 when record keeping and inventories became more common and more has survived. This period from the latter Dark Ages, well into the Norman era, was a great monastery and castle building time and much of the stone work at least has survived intact – the Tower of London dating back to 1078, for example – or as archaeological ruins – Fountains Abbey, 1132. The carpenter would've had a significant role during this time, not least constructing the massive beam structures that existed to hold the roofs in place.

We shall see, however, that in those early years of the Norman Conquest, furniture making as a discipline wasn't a speciality set apart from any other area of woodcraft, and that such artefacts hadn't reached the stage where they were regarded as chattels signifying wealth or status. Fabrics, cloth and metalwork were regarded with much higher esteem. Often, wooden artefacts were constructed simply to display those items.

The term carpenter probably came into use just after the Conquest, emanating from the French 'carpentier', which itself derived from the Latin 'carpentrius', meaning maker of carriages.



... the latter of which is also epitomised by the imposing Canterbury Cathedral

The Middle-English preference had been for 'wright' as in arkwright, wheelwright and even boatwright. This term fell out of favour as the language developed after the Norman occupation, although interestingly, it was retained through surnames, especially in the north of England. At a later stage, we'll see further examples of how the language of woodworking has entered into general usage, and how many words and phrases that we take for granted have their origins in the craft.

#### Localised trade

At this point in history, there was obviously no industry as we regard it today. Crafts of all types would've been very localised, every village having its own carpenter, blacksmith and so on. Difficulties in communication would've resulted in any developments in technique also being very localised and slow to spread.

All timbers would've been locally sourced, oak being the mainstay, but also beech and whatever else was close at hand.

Trees were felled with an iron axe as and when required and converted for use by the carpenter himself. Wood wasn't sawn, but riven into segments along the grain with the use of iron wedges driven into the timber. These would be cleaned up and squared into boards with an adze. Seasoning and drying were little understood, so the qualities of green oak were embraced. Carpenters came to make use of these qualities in the development of the great supporting beamed structures of great halls and barns.

During this time, carpenters would mostly be occupied in

building dwelling places – the wooden framed huts in which the majority of the population lived, stone buildings being reserved for the church, castles and fortifications. Furniture in these dwellings would likely have been sparse and developed to suit the requirements of domestic life. Stools were the principal item the three-legged variety – as these have the capability of remaining stable on any uneven surface. In fact, such stools survived well into the last century as milking stools. Beds made use of straw, and tables may have existed, but only as a board on some form of trestle arrangement. Britain also has a great history of shipbuilding in oak, but this reaches a pinnacle later as carpentry skills developed into joinery.

Possessions of the peasant population were few and far between, so storage requirements were negligible. Both the church and ruling classes would have need for storage facilities of some sort and while no original examples exist, we do know that chests were hewn out of solid tree trunks. The whole was wrapped in iron bands to help it retain a semblance of shape as it warped and twisted through the drying process. This later developed into a structure consisting of timber boards fixed together with iron nails. Of course, the problems of shrinkage and warping weren't overcome but actually accentuated by the very technique used to hold the structure together; as the timber dried it simply split away from the nails that held the boards in position. It wasn't until the development of the 'Joyner's Mystery' that this problem was overcome, as we'll see in the next instalment.

#### Changing terms

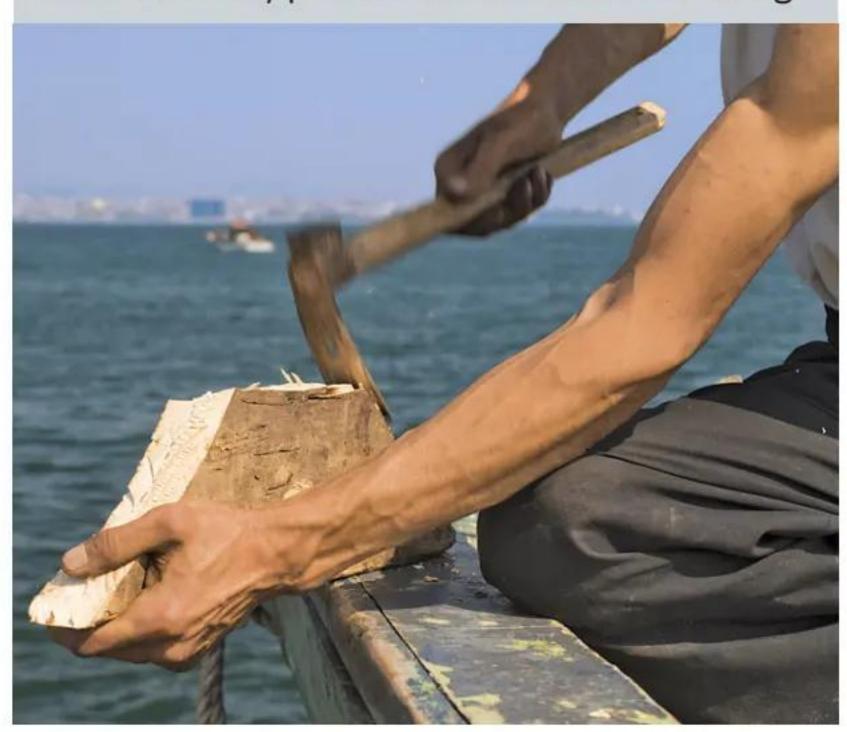
Vestiges of the Anglo-Saxon language remained throughout the Norman period and makers of chests were often referred to as arkwrights. The word 'ark' meant a place of safety, a term with biblical origins, as in the Ark of the Covenant,



#### THE ADZE

An adze is used for smoothing rough-cut wood. The blade is set at right angles to the tool's shaft like a hoe, and unlike an axe blade, which is set in line with the shaft. Generally the user stands astride the board, previously riven from a trunk, and swings the adze downwards towards their feet, shaving off pieces of material and moving backwards as they go, leaving a relatively smooth surface behind.

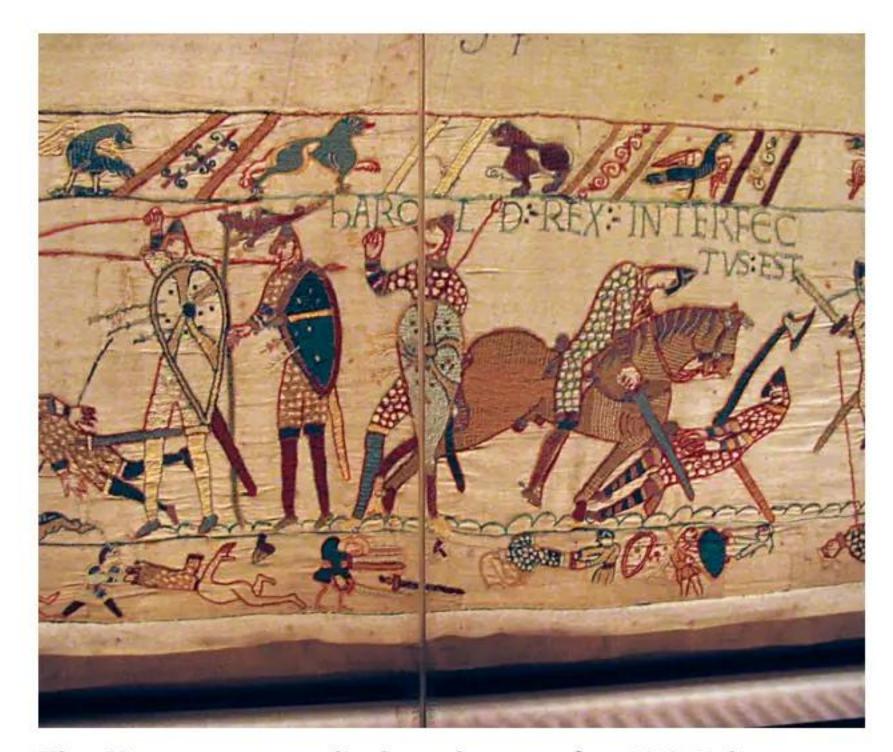
In the right hands, the quality of finish that can be achieved is excellent. The untidy look of the faux adzed timbers seen in many an olde worlde country pub is incorrect and misleading



which housed the writings of Jewish law handed down to Moses, and of course Noah's ark. 'Hutch' was retained, describing artefacts used for storage purposes – hence the hutchier – although these days we tend to think of a hutch as housing small animals. Rarely in common use these days the word 'coffer' referred to makers of similar objects. Today we tend to think of it as a monetary repository, although it originally referred to a receptacle for storing any valuable object.

The tradesmen who made these objects – arkwrights and hutchiers – lacked the carpenter's history and traditions and weren't regarded with the same status. They eventually fell from grace as the woodworker's craft developed and its scope widened to encompass the changing domestic dwelling arrangements of the church and aristocracy and functional requirements of developing furniture.

Up until the mid-13th century, the carpenter was generally the sole woodworker to be regarded as a 'craftsman' and he remained so



The Normans may be best known for 1066, but their dedication to record keeping is one of the things that makes them so valuable to us today



Negligible storage needs meant that people often used simple 'arks' to store their possessions

well into the 16th century. He was assisted, certainly in architectural structures, by the carver, who in terms of skill and expertise is historically, and quite rightly, often regarded as being a far superior craftsman to the carpenter.

The work in the rood screens and pulpits and choir stalls of religious institutions was highly detailed and complex and a testament to the carver's skill rather than the carpenter's. Stanton Harcourt in Oxfordshire, dating from the 13th century, is one such example of this.

#### Reach for the heavens

The fact that we have so few examples of work makes it problematic to identify a style or aesthetic. The predominant style in architecture throughout Europe had been Romanesque an amalgamation of Roman and Byzantine styles; however, accurate dating of this is open to debate, with starting points ranging from the 6th to the 10th centuries. In Britain, the tendency is to refer to this style as Norman, which then, as far as we're concerned, places it in the 11th century. The Romanesque style developed and evolved into what would become known as Gothic architecture, a term not used until the following Renaissance period and coined as a stylistic insult. Originating in France, Gothic became the favoured style for churches, abbeys and the great cathedrals throughout Europe until well into the 16th century, and later revived in the 19th century as Victorian Gothic.

A key element of this style was the emphasis on verticality. The structures, especially ecclesiastical buildings, appeared to grow out of the ground and stretch towards the sky, reaching to heaven. Enabling and emphasising this was the development of the pointed arch, which required no keystone to stabilise it. This allowed builders to construct high and wide windows, flooding the buildings with light. These characteristics were adapted by the woodworker, especially the carver, to provide a coherent whole to such buildings.

Carving tended towards repetition, symmetry and again the emphasis on the vertical.

While today we can marvel at the skill of those early woodworkers and bask in the glow of an almost poetic and ethereal use of our native English oak, there's evidence to suggest that, without exception, this realisation of the carver's art was painted and often gilded. This somewhat skews our perception of the visual effect these structures had, much in the way that we know buildings and stonework, including sculptures, from Ancient Greece and Rome were also painted and highly decorated.

#### Jack of all trades

So we've seen that the carpenter – a general-purpose woodworker – reigned supreme in Britain from our starting point (1066) up until the mid-16th century. His skills developed from producing simple wooden-framed dwellings, stools and chests to, with the help of the carver, highly complex and decorative ecclesiastical woodwork displayed in great cathedrals and abbeys. Along the way were the massive sturdy, beamed ceilings in halls and barns, which utilised the merits of green timber. Alongside the carpenter, but with lesser status, were the arkwrights and hutchiers, and eventually we'll see the joiner's emergence.

In the next issue, we'll look at how developments in joinery produced a massive leap in the woodworker's capabilities, and how this had a profound effect on both construction techniques and styles. Apart from a division of the craft during this time, guilds began to demand a quality of work, which ensured that so many examples of work survived until the present day.

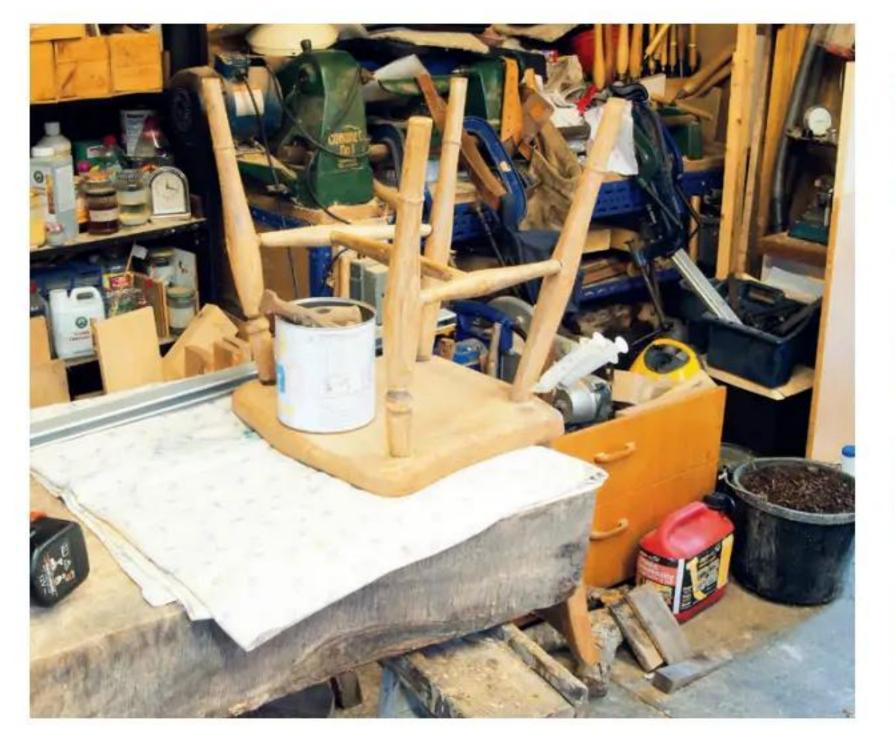
#### **NEXT MONTH**

Phil moves on to looking at the emergence of the joinery and craft division

# THE RACE ISON...



Animal glue is the ideal adhesive for Windsor chairs as it's easy to repair. These chairs do come loose and animal glue bonds well to old glue or can be entirely cleaned off easily. **Michael Huntley** shares his ninepoint pictorial guide to achieving success at speed



1 Set up the seat and weigh it down; assemble everything in a dry run; warm the joints; have a sash cramp to hand



2 Start by gluing up the stretcher; you only have 60 seconds to finish the assembly, so ensure to work quickly



3 Side rail to stretcher: if re-gluing an old chair, ensure the stretcher is correctly aligned, worn surface upwards



4 Set the stretcher assembly aside in the correct alignment and apply glue to the rail mortises...



5 ... then put glue on the legs...



6 ... and leg mortises, but remember the stretcher is drying, so work fast



7 Stretcher in and last leg in mortise ASAP!



8 You may need a mallet to help it in



9 Finally, check everything is fully home; curing Scotch is quite tough, so it's not unusual to need a cramp to help the joints go home — not too much pressure, though!

## CHISEL NO.

# FOUR-LEGGED FRIEND

Colin Simpson designed this footstool to show off a novel turning technique – creating a set of matching cabriole legs on the lathe. Last month he showed how to make the four legs, and here, in part 2, he completes the stool



1 I decided to cut biscuit slots in the top board edges to reinforce the butt joints

ast month I completed the four offcentre legs for this stool and now I'm going to show you my method of completing the project. I have to confess now that I'm a firm believer in power tools and machinery and where possible, use them in preference to hand tools. You can, of course, complete this project using only hand tools if you wish.

The top measures 400 × 290mm and is



3 Stand the legs in their final positions and mark the faces that need mortising



2 Glue and cramp up the three boards as shown and set them aside to dry

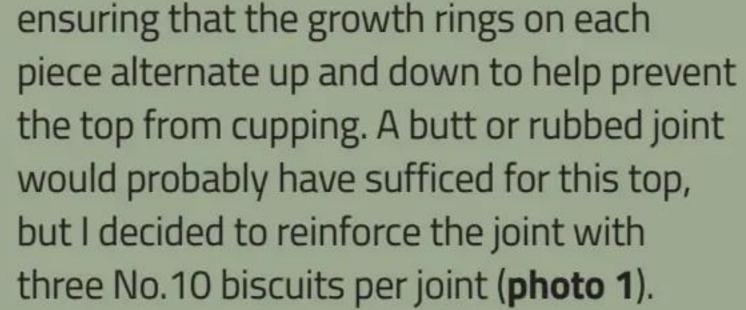
made up from three oak boards 20mm thick, glued together edge to edge. Apart from the legs, you'll also need two pieces of oak measuring  $290 \times 50 \times 20$ mm for the front and back rails, and two pieces measuring  $200 \times 50 \times 20$ mm for the side rails.

#### Making the top

Prepare the wood for the top using a planer/ thicknesser, then lay out the three boards,



4 Set out the top and bottom of each mortise and cut them all on a bench mortiser



Note that I'm using the jointer's fence rather than the baseplate as a register on top of the wood being biscuited. I find this method gives a far more accurate set-up,



**5** Cut the corresponding tenons on the router table, then add their haunches



especially if the work surface is at all uneven.

Glue and cramp up the top and put it aside to dry (photo 2). I fitted two cramps underneath the work and one on the top to help keep the boards perfectly flat.

#### Mortising the legs

The legs I made last month need to have mortises cut in them to receive the front, back and side rails. To avoid any risk of a mistake, stand the four legs in their final positions, then mark the faces of each leg that will be mortised (photo 3). This ensures that they're cut in the right places.

The mortises are all 40mm high, 10mm wide and 25mm deep. They start 10mm below the top of each leg and 10mm in from the outer faces. Since I'm going to use my bench mortiser to cut them, I need to mark out just the start and finish

6 Rebate some scrap oak and cut off six pieces to use as screw blocks

lines accurately; the fence on the mortiser will ensure the accuracy of the rest. Cut the two mortises on each leg (photo 4).

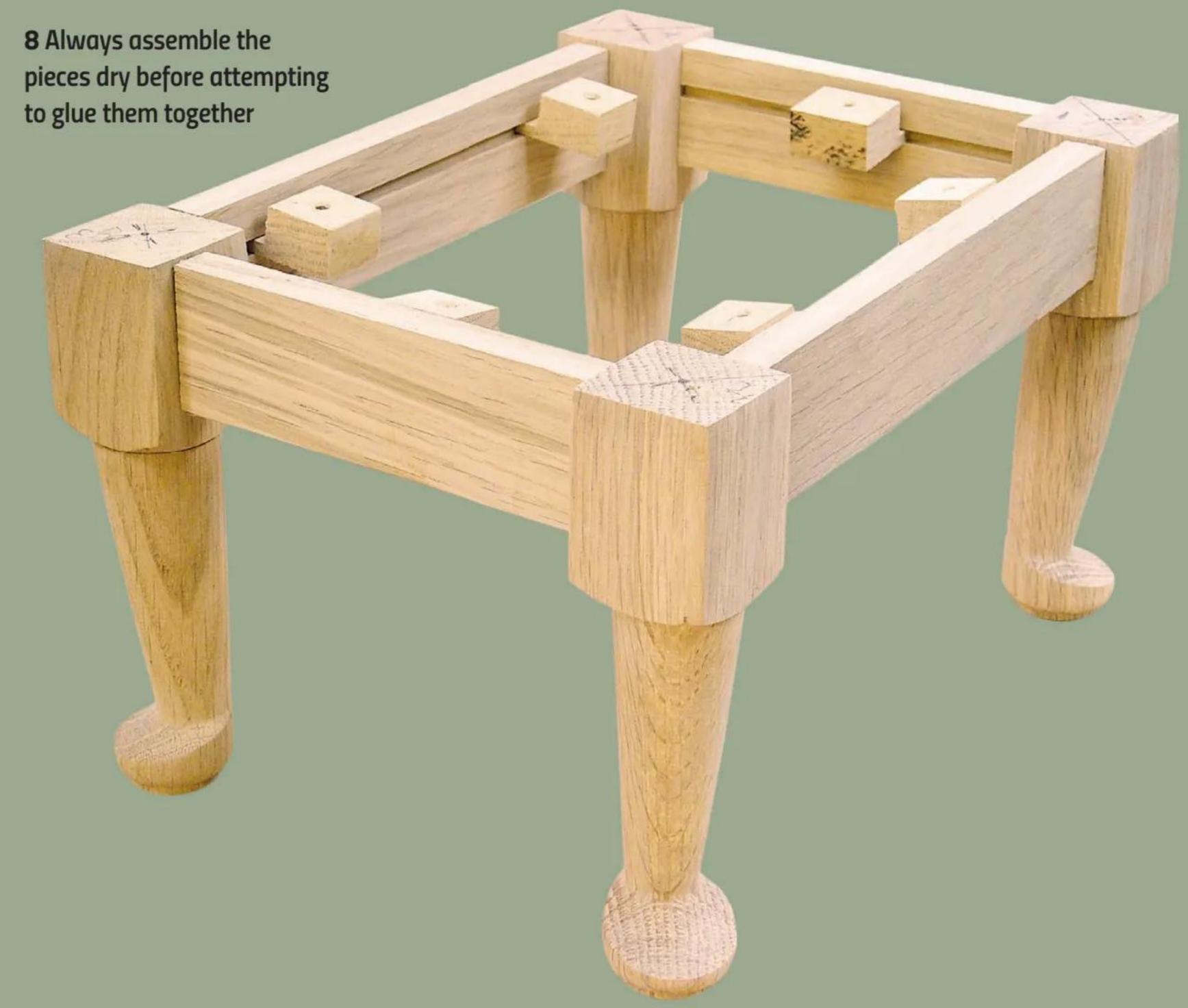
#### Tenoning the rails

Corresponding tenons need to be cut on all the rails, and I used my router table with a 20mm straight bit to do this. In this set-up, my mitre fence is exactly 90° to the table's fence and this is 25mm – the required length of the tenon – from the far side of the bit. Don't try to cut too much off with each pass. Cut all the tenons, then raise the router bit to 10mm to cut a haunch on each one (photo 5).

7 Rout a groove in all the rails to accept the tongues on the screw blocks

#### **Machining buttons**

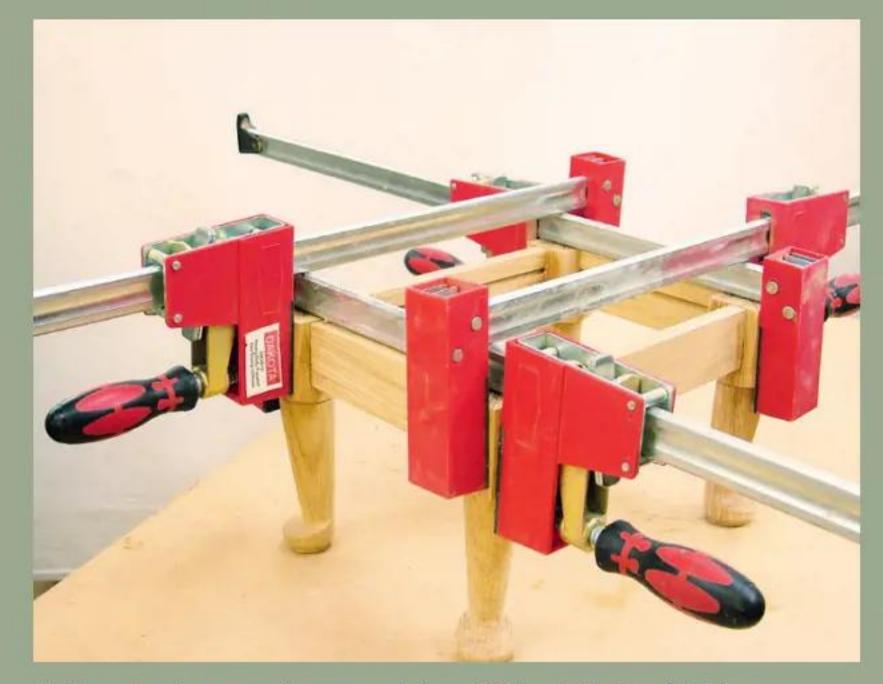
Before changing the router bit, machine a rebate on a piece of scrap oak to create the L-shaped cross-section of the screw blocks - buttons that will ultimately fix top to frame (photo 6). Next, cut six blocks from the strip, and drill and countersink a hole through each one to accept a screw. Fig. 1 shows the way in which these screw blocks are used. In order for them to work effectively, they need to be made accurately and have the expansion gaps around them as shown. These blocks hold the top securely to the stool's base, but also allow the top to move as the humidity changes.



#### Assembling the frame

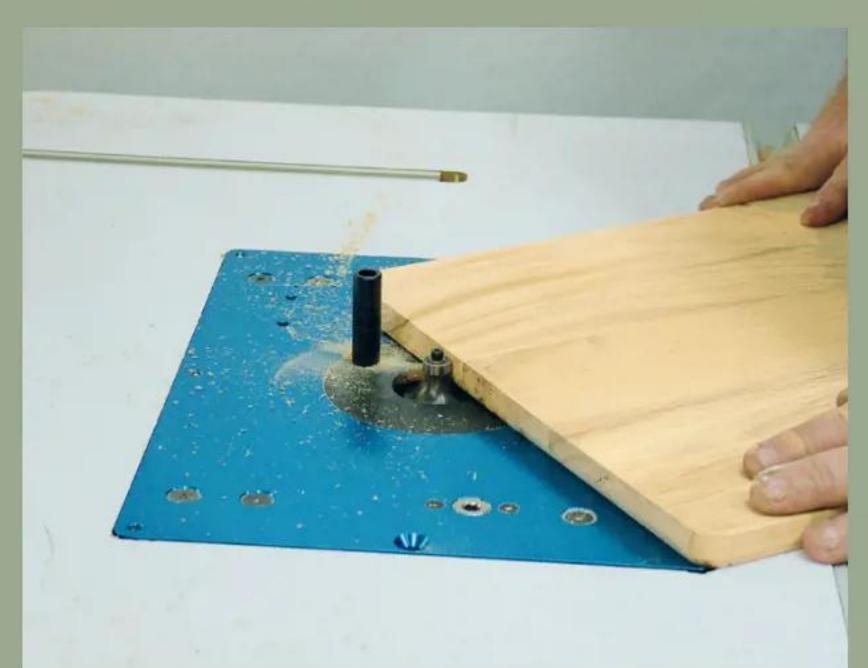
Next, remove the router bit and replace it with one that's slightly wider than the tongue on the screw block. Rout a groove on the inside face of each rail to accommodate this tongue. It should look like that shown in **photo 7**.

With the machining of the legs and rails



9 Next, glue and assemble all the joints, fit the cramps and test for square

completed, it's a good idea to fit everything together dry before starting the glue-up (**photo 8**). When you're happy, disassemble it and give each piece a final sanding. Apply glue to the joints, reassemble them and cramp up (**photo 9**). Check the frame for square by measuring both diagonals, and adjust the cramps if necessary.



**10** Round over the top's upper and lower edges on the router table

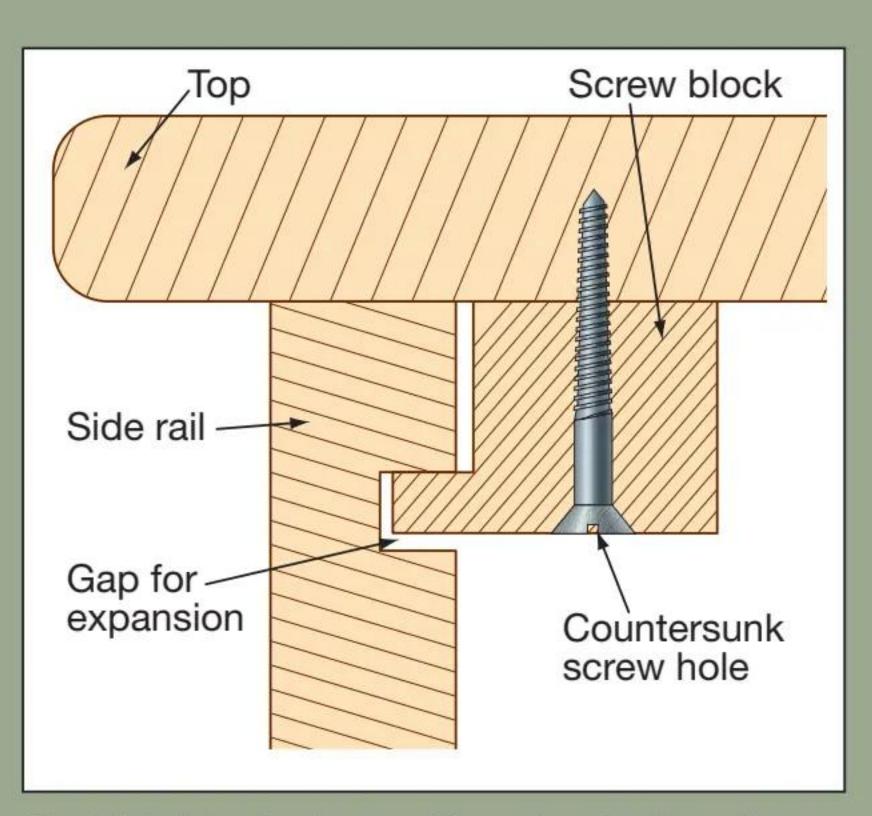


Fig.1 Cabriole stool assembly – showing how the screw blocks are used

#### Shaping the top

While the frame is drying, you can finish the top. I cut it to final size on the table saw, then radiused the corners on a disc sander. I also put a small radius on both edges of the top using a bearing-guided roundover bit mounted in the table router (**photo 10**).

Note the pin used to control the wood's entry into the cutter. Start with the wood touching the pin, then slowly pivot it into the cutter. Once the wood is touching the guide bearing, you can move it away from the pin.

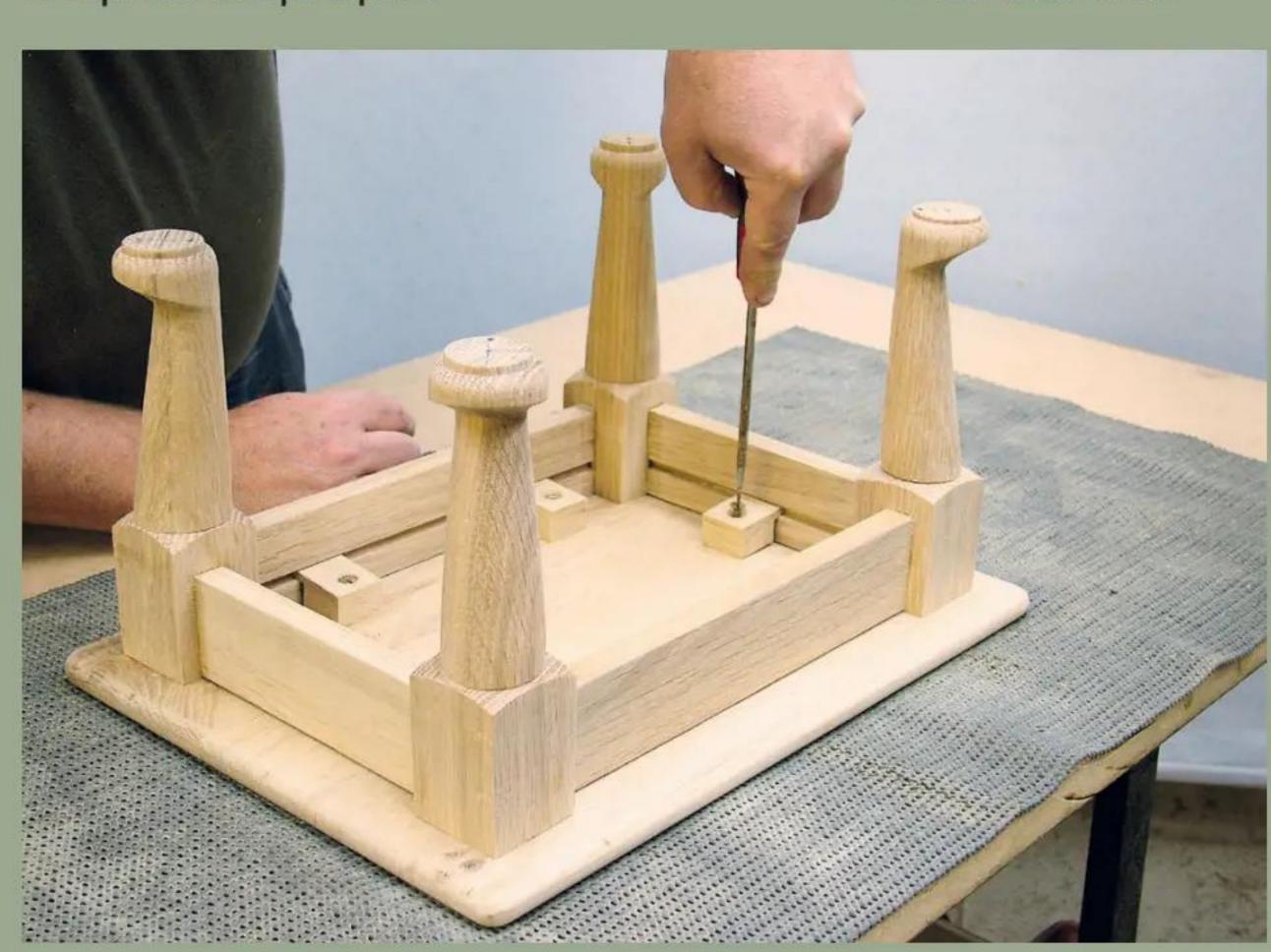
#### Completing the stool

Sand the top down to 240 grit. I started with a belt sander and finished with a random orbit sander. Then place the top upside down on the bench and centre the frame onto it. Position the screw blocks – two at the front and back and one at each side – and screw them in place (**photo 11**).

Always use brass screws with oak; steel ones will react with the tannin in the wood, corroding the screw and turning the oak around it black.

#### Time for a rest

I finished my little stool with a couple of coats of sanding sealer followed by an acrylic varnish, cut back between coats and applied with a brush (photo 12). By the way, I find the Painter's Pyramids shown here particularly useful for lifting the work off the bench when finishing projects like this. Now it's time to go and put my feet up.



11 Centre the frame on the top and attach it by screwing on the six screw blocks



12 Finish with several coats of sanding sealer, followed by an acrylic varnish





he Oxford English Dictionary
defines arboretum as 'a
botanical garden devoted to trees'
– a precise and concise description
even of the National one, at Westonbirt, in
Gloucestershire. Established by Robert Holford,
a wealthy Victorian landowner, and intended

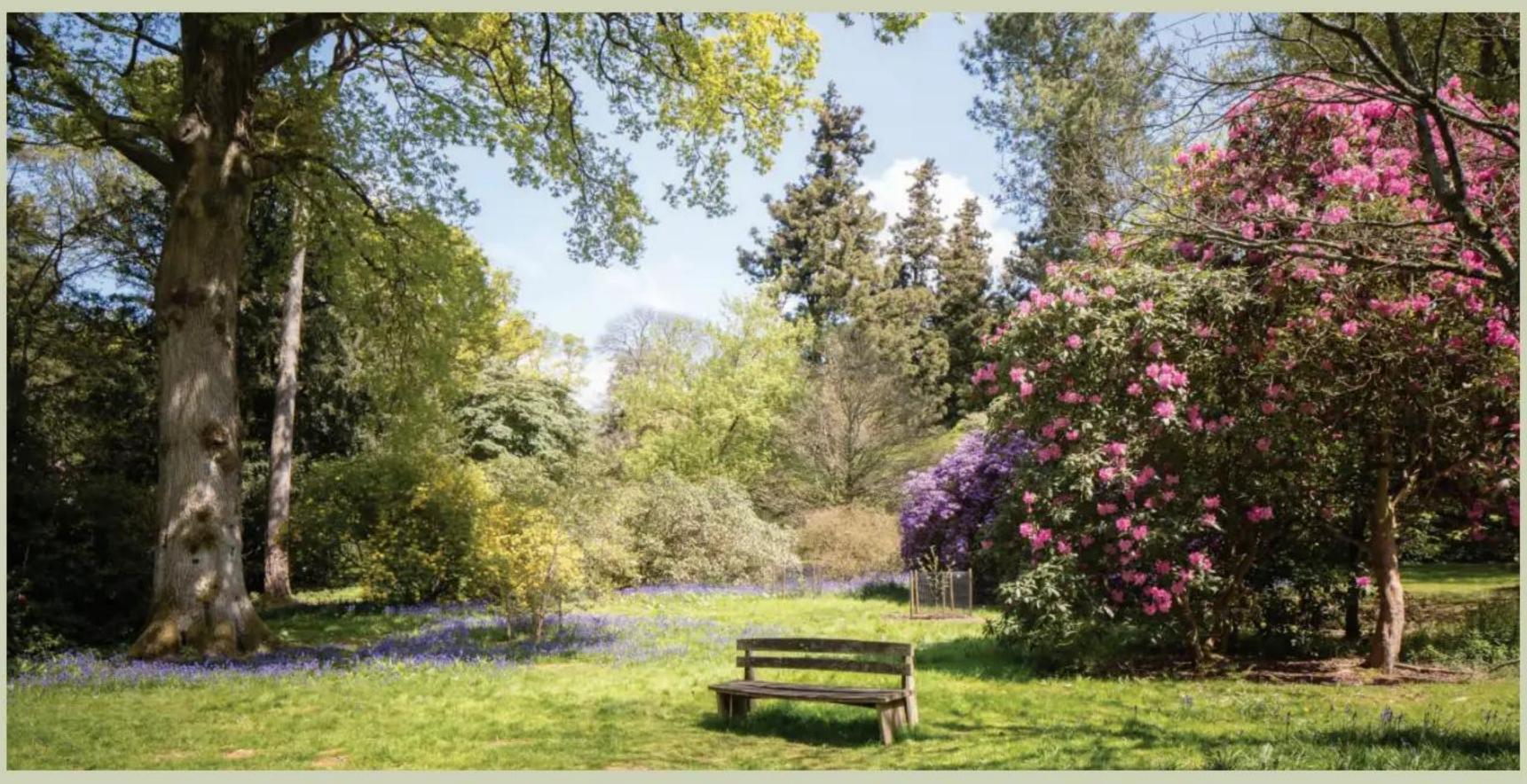
Westonbirt was created almost 200 years ago by Victorian horticulturalist Robert Stayner Holford, pictured here circa 1860

as an enduring testament to his resources and passion, today it's home to some 2,500 plant species from every corner of the Earth, not to mention five national tree collections.

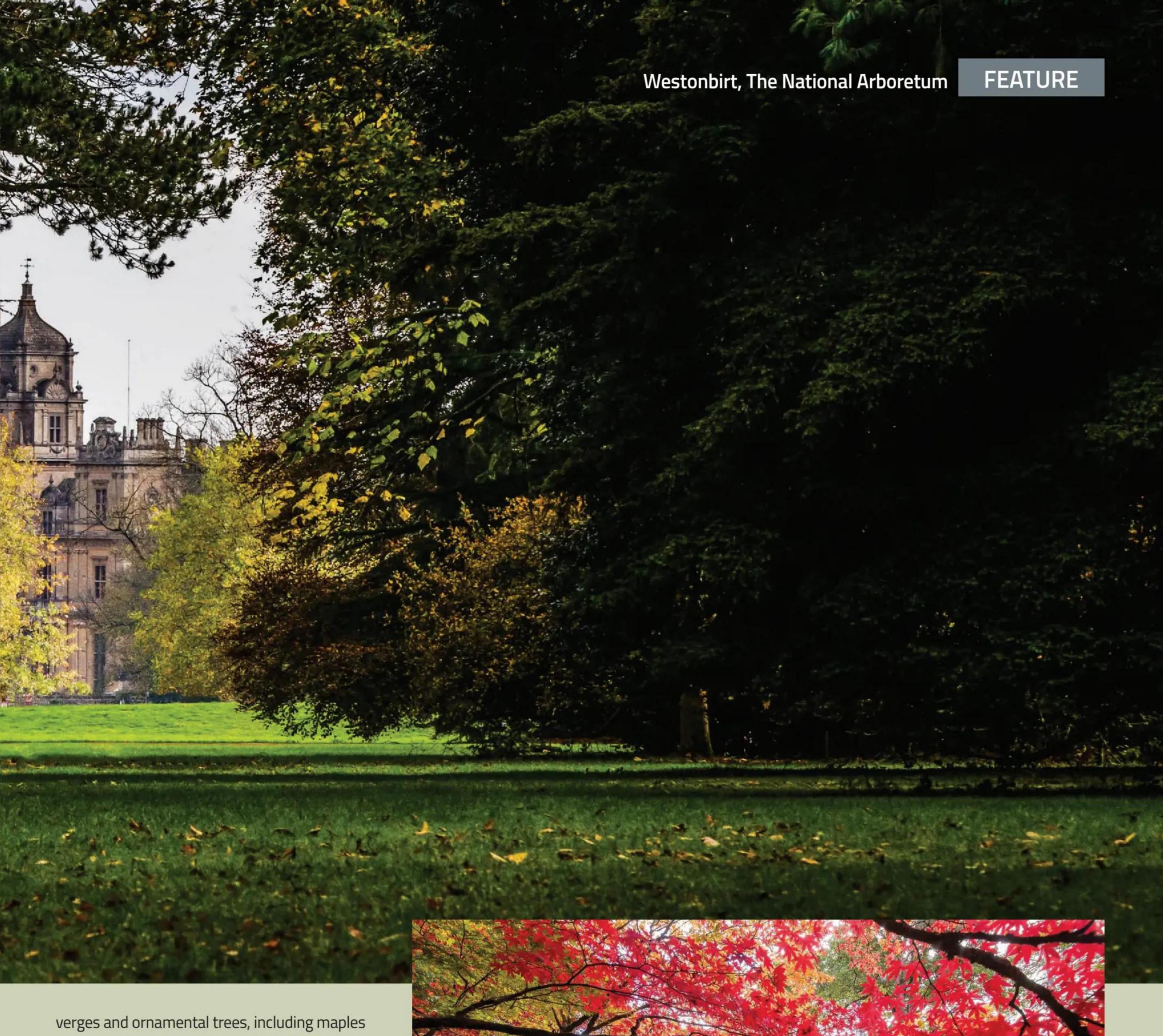
The Victorians were fascinated by exotic species, and many were brought to Britain during that era. Holford himself financed numerous collecting expeditions, and by the mid-1850s, had laid out an arboretum largely to his liking.

However, rather than arranging his plants by species or geographical area – the prevailing practices of the day – with enjoyment most in mind, he chose to display them aesthetically.

Partly owing to his strenuous efforts over many years, by the 1880s, Robert Holford had become very frail, and taking the Arboretum forward devolved on his son, Sir George. He introduced long drives bordered by wide



See nature come alive with spectacular spring blooms all around at The National Arboretum, Westonbirt



verges and ornamental trees, including maples and rhododendrons, still so admired by today's staff and visitors. George died in 1926, without an heir, and the estate passed to his nephew, the Fourth Earl of Morley, but was sold soon after, and divided up.

#### Five national tree collections

In 1956, Forestry England rose to the challenge of maintaining and making fit for visitors the entire 600 acres of Westonbirt, as well as fulfilling preservation and research objectives. It achieved these so successfully that, after only five years, in 1961, the Arboretum was opened to the public.

Its five national tree collections are groups of trees which Westonbirt has undertaken to 'document, develop and preserve for the future', one of which is the Japanese maple. Started in the 1980s, it includes around 300 cultivars, some of which are among the finest specimens in Britain. One variety of another species is the paperbark maple, which displays attractive bark patterns, and, surprisingly, looks its best in winter! A third collection is the lime, embracing 40 genera; the fourth the walnut, a collection of 25 types, of which the hybrid wingnut may be the grandest. The smallest national collection is the bladdernut,



Maples have formed an important part of the Arboretum since its creation, and today people flock from all over the world to see their spectacular colours

a genus numbering only 11 species.

Much of Westonbirt's most important work is carried out by arborists and dendrologists, and it's worth clarifying the responsibilities of each. Dendrologists are scientists who specialise in the study of trees and woody plants. They examine tree species, building up genetic

knowledge, evolutionary history, and the roles these trees play in larger ecosystems. This is achieved by focusing on the distribution of trees, their physiology, ecology, shape (morphology), and classification (taxonomy). Besides arboreta, dendrologists can be found in botanical gardens, universities and research institutes.



Westonbirt is home to over 200 species and varieties of rhododendron

On the other hand, arborists – often called tree surgeons – specialise in the care and maintenance of individual trees. Their training allows them to assess its health, diagnose any diseases or pests, undertake pruning, and make recommendations for its care. Most of their work is outdoor, but the setting can vary from city squares to suburban parks to residential areas, and often only accomplished by co-operating with landscaping firms. Stump grinding and tree removal also fall within an arborist's remit.

Another early notable in the tree world was John Claudius Loudon. Born in 1783, he was a Scottish gardener and architect, whose most important creation was the Derby Arboretum, which was finished in the early 1840s, shortly before his death. Loudon was, however, probably most influential as a writer, his pieces on horticulture being a powerful force in moulding

early Victorian tastes in public parks and gardens. Rather than picturesque, Loudon described his approach as 'gardenesque', and his major work, *Arboretum et Fruticetum Britannicum*, was published in 1838.

#### **Propagating & propagators**

Propagators fulfil important roles at Westonbirt, as 80% of the plants are grown from seeds. These are collected world-wide, and obtaining some recent varieties entailed a trip to Taiwan. The magnolia is among the most spectacular and popular trees, fossils of which date its origin to over 100 million years ago. This pre-dates the appearance of bees on Earth, and such species are pollinated by beetles. Britain is home to 4,000 beetle species, about a quarter of which are pollinators.

Propagating is a complex task, which



For over 100 years, Forestry England has been "growing, shaping and caring for over 1,500 of our nation's forests for the benefit and enjoyment of all, for this generation and the next"

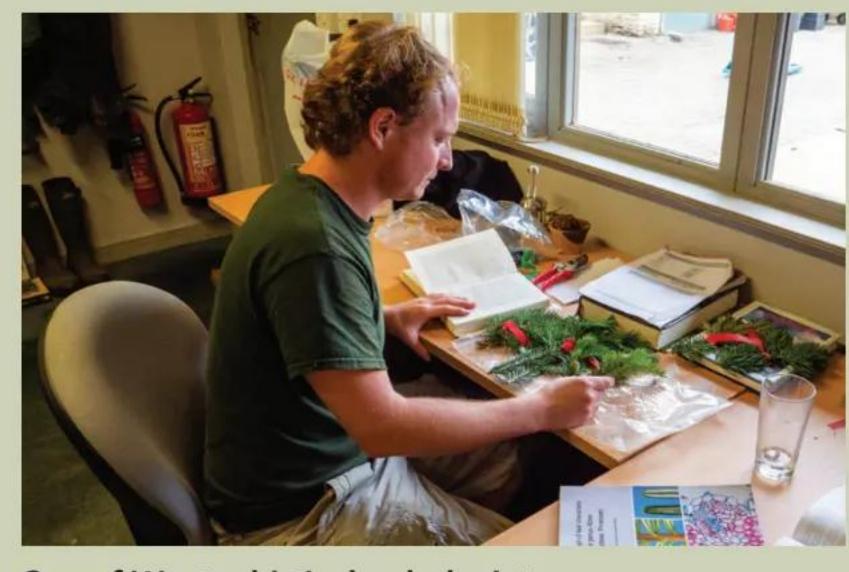


Paperbark maple tree

requires laboratory conditions, and careful assessment of soil conditions, light, shape, size, colour and texture. Aphids can present a problem, so to guard against these and other pests, new species are only added twice a year.

#### 'Champion' trees

Despite having long been a scientific centre of significance, Westonbirt was begun more in a quest for status and spirit of enjoyment, and it's the latter which attracts most of its 500,000 visitors annually. Westonbirt's value as a conserver of precious tree species can quickly be established, as it holds several of which fewer than 100 remain in the wild. The National Arboretum is also home to around 150 'champion' trees, each of which is the largest example in Britain, earning it a blue plaque, which is displayed on the trunk.



One of Westonbirt's dendrologists



An arborist – or tree surgeon – at work



2,000-year-old lime tree at Westonbirt



One of Westonbirt's fantastic magnolia trees

However, Westonbirt hasn't been without its problems, a major one being Dutch elm disease. This virulent infection requires radical action, and staff had to fell trees in their hundreds before being confident the garden was clear of it. A huge re-planting procedure was required, something that the Arboretum's small army of volunteers was able to assist with. Some large tree varieties were among those affected, bringing the tree team's expertise to the fore. This has been especially important where a tree has had to be dismantled – rather than just felled – removing branches and boughs in a specific order, so as not to risk harming neighbouring trees.

#### Other notable arboreta

Westonbirt deserves the distinction of National Arboretum, but there are at least 10 other notable ones around the country. One is Thorp Perrow – situated near the historic town of Bedale, in the Yorkshire

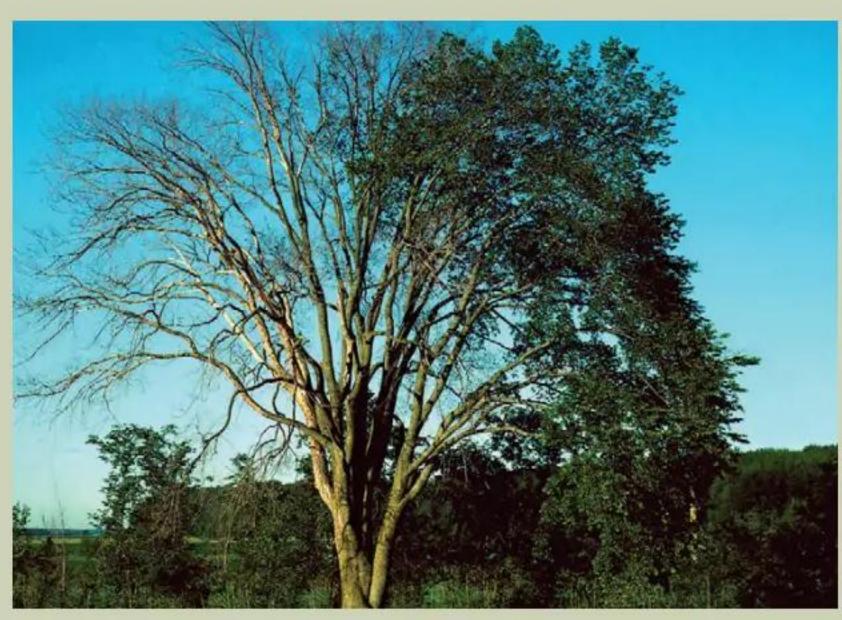


'Champion' trees qualify by being the tallest or having the largest trunk girth, measured at 1.5m off the ground. There are currently 140 champion trees at Westonbirt

Dales – which holds one of the largest collections of shrubs and trees in the north of England, including the national collections of ash, lime, laburnum, walnut and cotinus.

Thorp Perrow was the creation of Colonel
Sir Leonard Ropner, who died in 1977, but
whose descendants continue to be its custodians.
In common with most arboreta, it offers visitors
a number of attractions besides plant life. Among
these are birds of prey, and its very successful
breeding programme has led to the presence
of around 100 birds, including eagles, falcons
and songbirds, plus the little owl, and – exotic
– spectacled owl. There's also a few mammals,
of which wallabies, African pygmy goats and
meerkats have proved the most popular.

Among other notable arboreta in England are the National Pinetum at Bedgebury, Kent; the National Trust's only dedicated one at Winkworth, Surrey; Harcourt Arboretum, part of Oxford University since 1963 – but dating from the 1830s; and at Howick Hall, Northumberland.



Over the last 50 years, Dutch elm disease has led to the unfortunate demise of millions of UK elms



The Bird of Prey and Mammal Centre, which is housed in the Walled Garden at Thorp Perrow Arboretum, North Yorkshire

For further information on Westonbirt, The National Arboretum, and upcoming news and events, see www.forestryengland.uk/westonbirt-the-national-arboretum.



# PREJUDICE







# 

Dominic Collings wises up to the benefits of carcassing with MDF as he makes a bookcase

ver since I started woodworking, I've hated man-made boards. Sure, using MDF for jigs and workshop cabinets is fine, but on a piece of furniture? You may as well just buy something from IKEA. At least that's what I thought until very recently...

I'd made some office storage units entirely from solid oak. The drawer bottoms were machined to around 10mm thick, set into 8mm deep rebates in the drawer sides. However, the earlier-than-expected arrival of winter's cold weather, combined with huge air temperature and humidity variations, led to problems with the drawer bottoms shrinking by as much as 12mm – bringing some of them out of the drawer boxes' rebates at the rear and leaving a gap.

It subsequently dawned on me – a little late,
I know – that the wide use of man-made boards
in the mass furniture market was as much to do
with the increased guarantee of material stability
as it was a cost-cutting measure. So when my
friend Mike asked me to make a free-standing
bookshelf for his daughter from oak, I asked
myself if veneered MDF for the carcass would
be a blessing or a curse.

#### **Design solutions**

I was given basic dimensions of 500mm wide, an internal shelf depth of 300mm and a total height of 800mm. The bottom shelf needed to give 290mm worth of vertical space with the remaining space divided equally to create another two levels of storage.



1 MDF can be planed in the same way as a solid wood panel

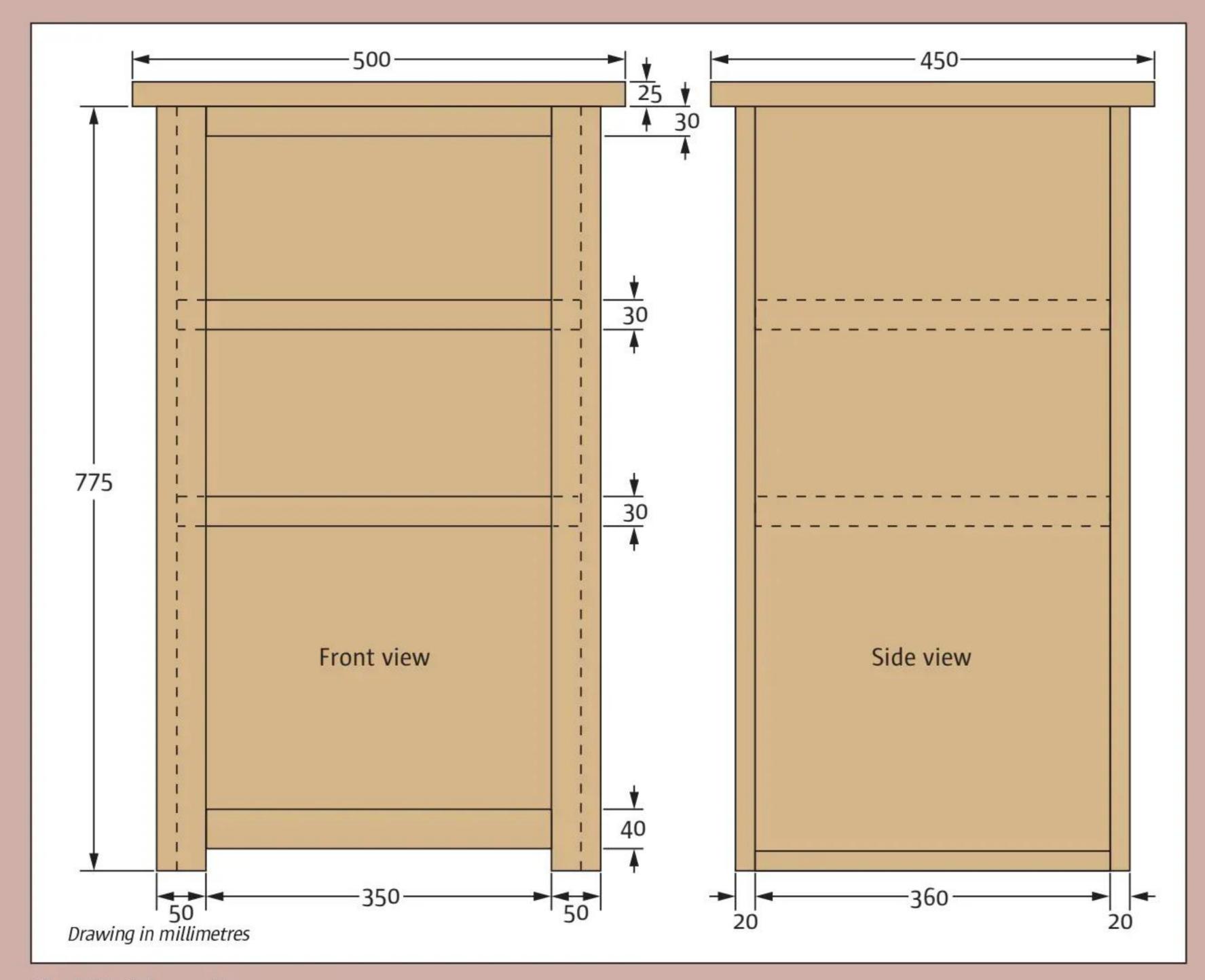


Fig.1 Shelving unit

Initially, I was going to make an oak frame with solid panels, but Mike wasn't sold on the panelled look. To be honest, that was a relief as it removed the hurdle of having a panelled interior around which I'd then have had to machine the shelves to shape.

Although the back was to be up against a wall and unseen, I didn't want to just rebate it – leaving a visibly bradded panel – because that'd look cheap. However, this would be tricky to do without introducing a panel of some form. Mike had said he didn't really care what the back looked like, so I came up with a solution that gave a panelled effect on the outside and a panel-free look on the inside.

#### **Doubling-up sides**

I had some 19mm veneered MDF left over from a previous project, but there was a problem. While one face of the stock was good quality, the reverse was pretty poor. For my upper storage project, subsequent units hid this poor-quality



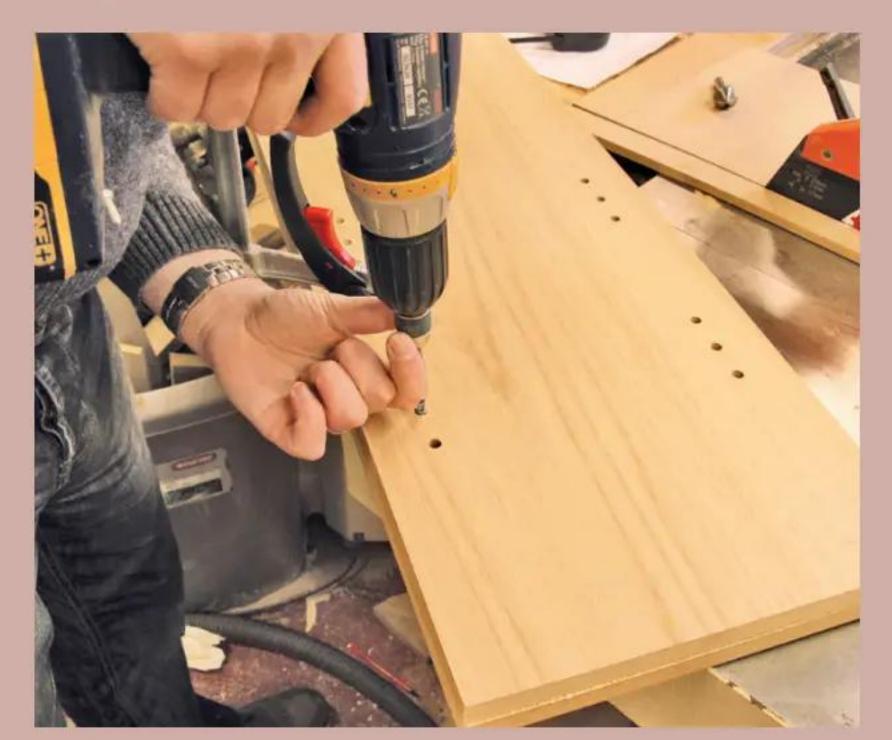
4 A guide bush is used with a plunge router for accurately machining the holes

face and the end unit had a solid panel overlay, but for this project, both faces – internally and externally – would be seen. Additionally, the stock had been delivered during a torrential downpour and some sections showed watermarks.

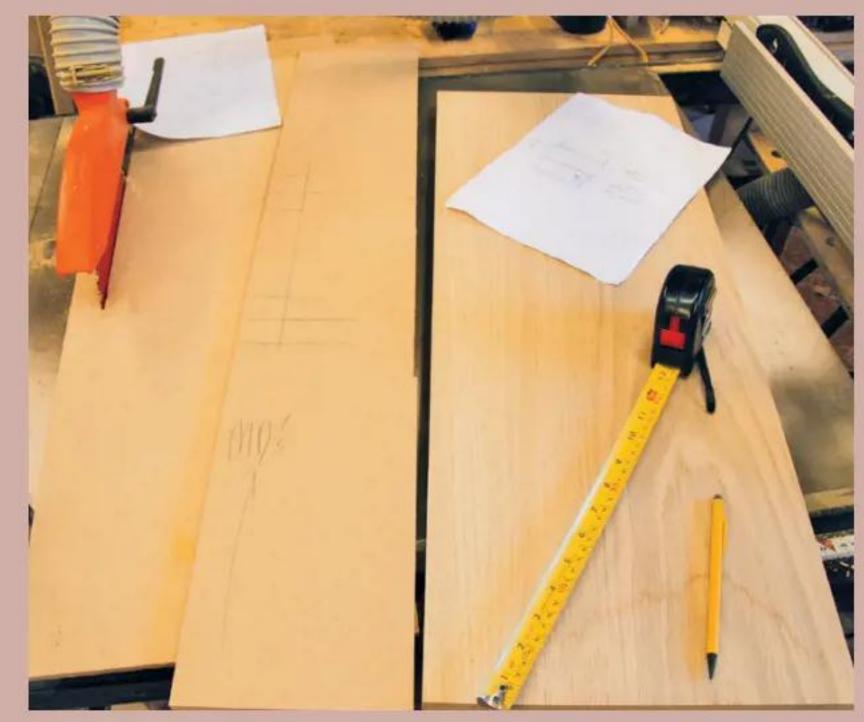
The first thing to do, therefore, was ensure that these could be sanded out. After exploring a few options, I decided to double up the sides, leaving the poor faces back to back and effectively giving me a very thick, A-graded panel on both sides. To begin, I trimmed one side within a millimetre or two of final size, just as I would with a solid wood panel and used the planer to remove the final material (photo 1).

Next, I made a rod from 9mm MDF, marking the pins' locations for adjustable shelves (**photo 2**). At the drill press, these holes were drilled out with a %in drill bit (**photo 3**). This effectively became a jig for a %in guide bush fitted to my router, allowing me to plunge-rout the holes to 10mm deep with a %in bit (**photo 4**).

To join the doubled sides together, I first cut the second side pieces slightly over size, and glued these to the first.



**5** Pin holes hide screws that hold the doubled-up sides together



2 A rod was produced using the client's supplied measurements



3 This was then drilled with the position of the shelf pin holes

I clamped around the perimeter, but to gain greater compression further towards the panels' centre, drilled for screws hidden in the depths of the pin holes (**photo 5**).

To give sufficient room to brad on the back panel and mount a hardwood frame to both front and rear, the top and bottom carcass sections needed to be thicker, so I added an extra 12mm layer of MDF at the top and created a simple leg arrangement at the bottom (**photo 6**).

With the side pieces completed, it'd be easier to apply finish to the unassembled pieces before gluing up. This was done indoors where the temperature was more finish friendly (**photo 7**).

#### Take a bow, Domino

The top was a glue-up of five 32mm thick boards that were then sanded down and flat to 25mm on my newly acquired drum sander. I have nothing but praise for this machine. What previously



6 The bottom assembly was glued together in advance of the remaining piece



7 Before assembly, the internal faces were wax-oiled to give an easier finish



8 I sanded the top flat on the speedy drum sander



**9** Confusingly, while one scale says 10mm, the other reads 20mm



10 The carcass has Dominos cut 10mm in from the edge



11 The frame has Dominos cut at an 11mm depth for a 1mm overhang



12 One Domino holds the sections in place while other slots are marked

The carcass was used to hold the frame

pieces in the correct places while I just

clamped the frames together. This way,

I knew that the frames would fit exactly

once I'd finished machining them (photo 15).

With the frames dry and removed from

would've taken me at least an hour now takes mere minutes (**photo 8**).

The face frames start as lengths of stock that's machined to 50mm wide and 20mm thick, then batch-cut to length. The Domino has a standard depth setting for 20mm stock, which confusingly shows as 10mm on the fence's back, indicating half the actual material thickness (**photo 9**). I started at the top of the carcass sides, machining one Domino slot on the tightest setting to 15mm deep, with a 5mm bit (**photo 10**).

The 5mm Dominos are perfect for this application as they're only 30mm long, meaning that the depth doesn't have to be reset when moving from face frame to carcass.

With the machining done, I reset the fence slightly deeper, from 10 to 11mm, and machined an identical tight-fit slot at the top of each vertical frame section (**photo 11**), so that the frames overhung the carcass by 1mm all the way round.

With these sections dry-fitted, I used an engineer's square to mark lines for subsequent Dominos at approximately 150mm spacing (photo 12), then, leaving the Domino on the tightest setting, I machined all slots on the oak, and the remaining slots on the carcass were machined using the intermediate width setting.

Once dry-fitted together, the horizontal sections were cut to exact length and Dominos used to attach them to the carcass. Only then did I mark up for Dominos to attach the four frame sections together. The rear frame required the additional step of machining a rebate for the back panel, which was carried out on the router table (**photo 13**).

#### Frame assembly

To prevent the frame from gluing itself to the carcass, I applied masking tape to the carcass where the frame's tenons would meet (**photo 14**).

the carcass, I cabinet-scraped the back area and completed final sanding, ensuring that I achieved a good glue line between the frames and MDF sides. The rear frame rebates were also cleaned up with a sharp chisel (photo 16).

15 The frames were clamped up using the carcass as a guide



13 Rear frame sections were rebated to accommodate the back panel



14 Masking tape protects the project carcass from excess glue

#### TIP

With MDF, I use the intermediate width setting because the material has a greater tendency to split when driving Dominos in on a tight setting, particularly if you've accidentally used too much glue.

The wider setting allows excess glue to escape, so therefore avoids this problem

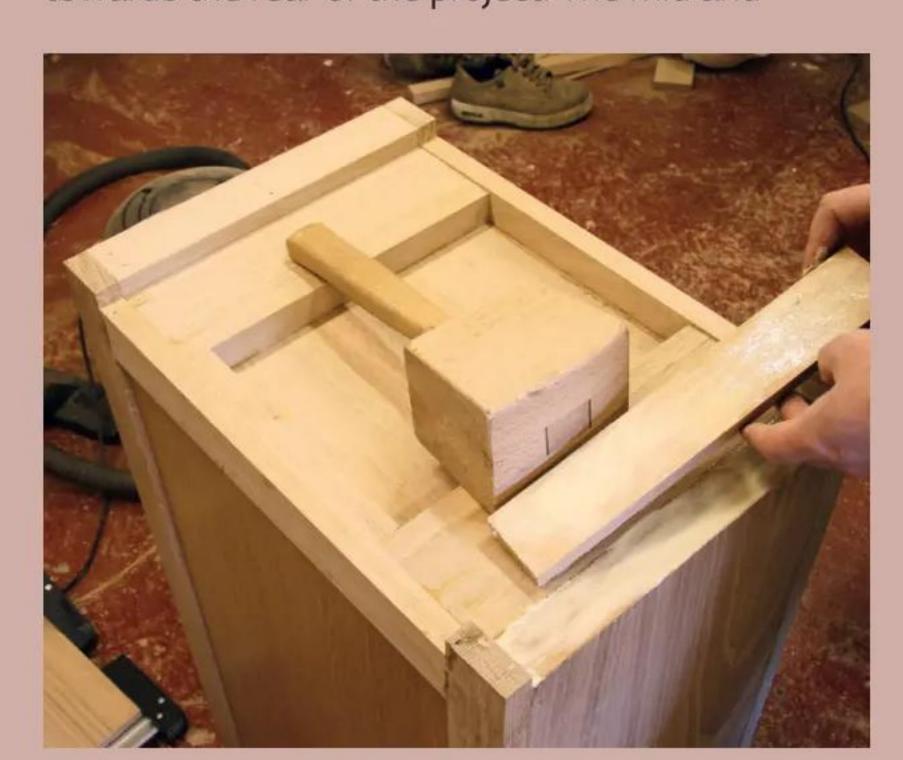
Again with the rear frame dry-fitted in place, a pencil was used to mark the rebate's limits onto the carcass (**photo 17**), providing easily measurable lines with which to trim the rear panel to size (**photo 18**).

This panel was simply fixed into place with brads (**photo 19**). The rear frame simply sits over this panel, giving a panelled look to the exterior while keeping the interior plain to match the sides.

With the two frames glued into place, I was left with a gap at the bottom sides between the front and rear frames. These were plugged with some spare 50 × 20mm stock, which hid the last of the visible MDF (**photo 20**).

A straight trimming router bit was then used to trim off the 1mm overhang from the face frames, to both the front and rear.

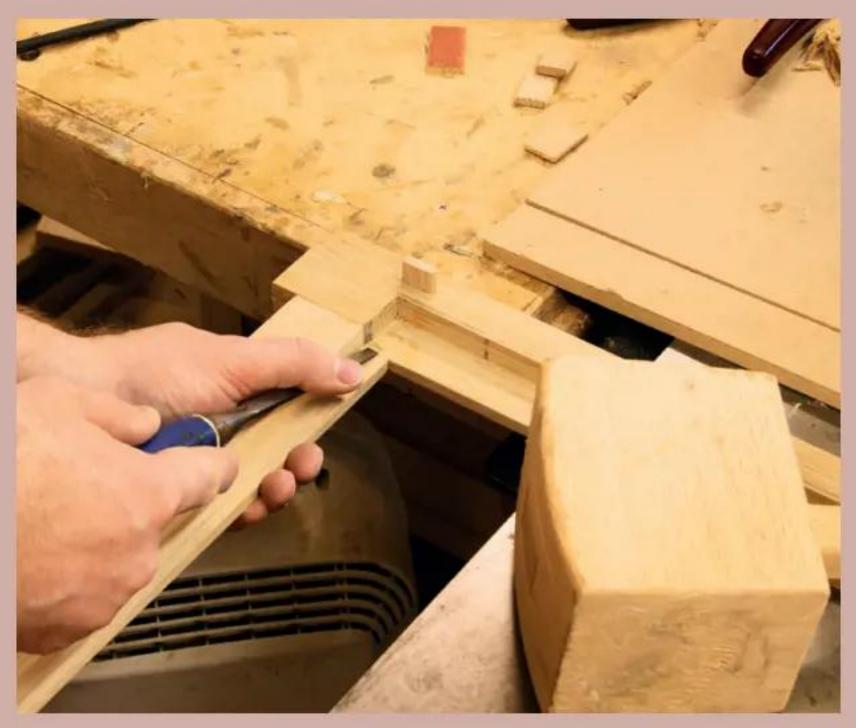
With the top trimmed to size, the edges were eased both top and bottom using the smallest radius bit I had available (**photo 21**). To attach the top and allow for movement, I drilled nine holes through the MDF top. The front row of screws acted as an anchor to ensure that any expansion of the top happened towards the rear of the project. The mid and



20 Leg sections connect front and rear frames, covering the MDF edge



22 The rear two rows of top holes were enlarged to allow for movement



16 I cleaned up the rear panel rebates with the aid of a sharp chisel



18 The rear panel was cut to size on the table saw. Note the temporary MDF top

rear row of holes were then expanded with a Forstner bit, giving these screws about 20mm of free space within which to 'flex', thus allowing for movement (photo 22).



21 A %in round-over bit was used to ease the top's corners



23 The shelf pin collars were glued in place with gloopy CA adhesive



17 With dry-fitting, a pencil line gives accurate dimensions for the rear panel



19 The rear panel was held in place with brads

#### **Finishing touches**

Finally, with the finish applied, I added some metal decorative collars with thick CA adhesive to the shelf pin holes. This matched the same nickel-coloured pins previously used (**photo 23**).

Given the current temperature outside and in the garage, I reverted to using Osmo for the over-sprayed finish.

#### MDF? The jury's out

You'd think that MDF would be a much quicker solution than solid wood, but as my table saw doesn't have a scoring blade, I found a good finish tricky to achieve. It's also very easy to damage the veneer and you have very little thickness to sand this out. Stable yes, but easy to work with for the amateur with small-scale machinery? Probably not.







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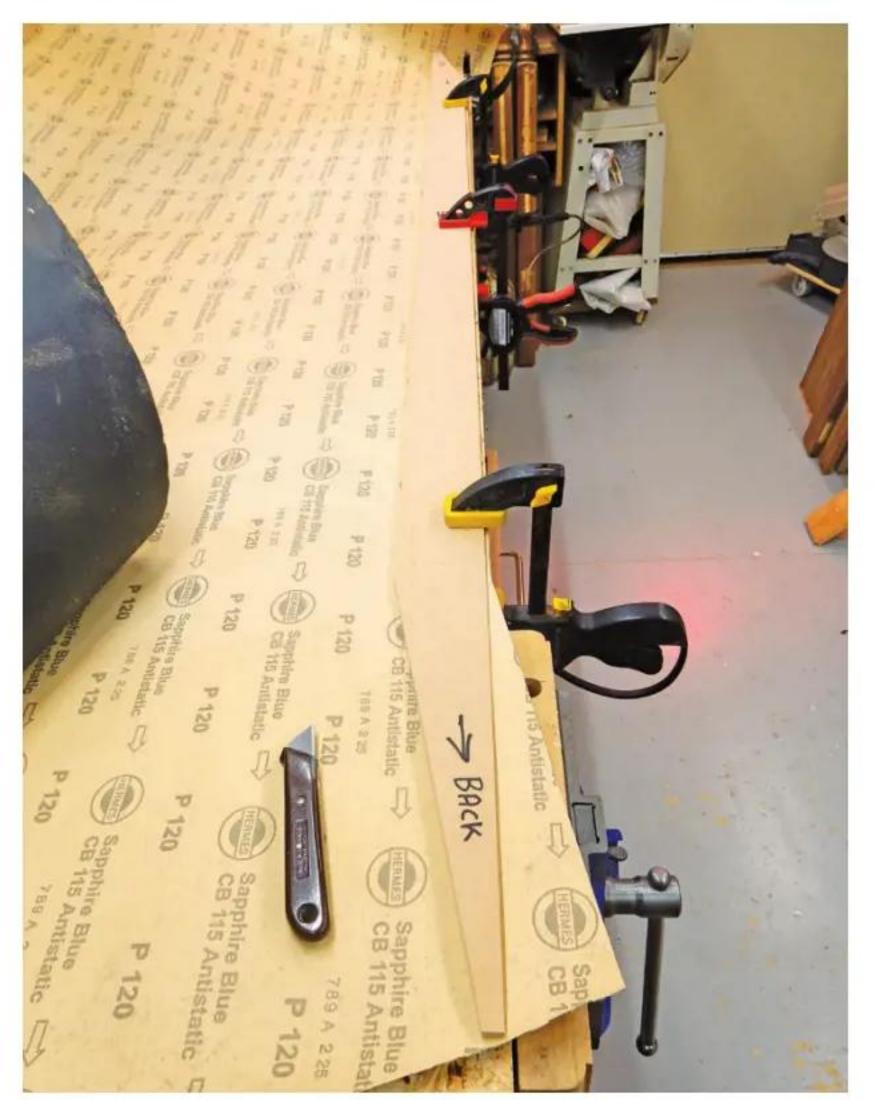






Having purchased a drum sander from Austrian machinery manufacturer Bernardo, **Geoff Ryan** is forced to learn some important safety lessons and implement various critical modifications

few years ago, I bought a drum sander – sometimes called a thickness sander – online from a company called Bernardo, based in Austria. The cost at the time was around £750 including delivery, and this was significantly cheaper than anything else available at the time.



3 This MDF template allows me to cut a belt to the correct shape and length out of a big industrial sanding belt



2 Simple solution: I connected the spiral's end to an earth terminal located on my ducting system

#### **Surface finishing** & removing planing marks

A drum sander consists of a rotating cylinder wrapped in a spiral of abrasive paper, plus a table with a conveyor belt. Unlike a planer/ thicknesser, which can remove up to several millimetres of material, a drum sander can only remove a small amount - such as 0.1 or 0.2mm at a time – and is used for surface finishing or removing planing marks. Material is removed equally across the board whereas using a random orbit sander or similar could result in variations in board thickness. If you have boards with complex grain where tear-out is an issue when planing, a drum sander will deal with this problem. When working with some heavily spalted boards, the drum sander

was the only way to achieve an acceptable surface finish. I also use it to level off hardened epoxy lettering when making signs and clock faces. Note that as with a planer/thicknesser, you can still get some snipe at the end of each board.

The drum size on my machine allows boards up to 405mm wide to be processed. Removing the clamping plate at the end allows boards up to twice this width to be machined, by taking two passes.

#### Implementing solutions

The machine was originally supplied on a metal stand, along with fixed metal infeed and outfeed tables. Being tight on space, I built a wooden cabinet on wheels, which also houses an air compressor and fitted hinged tables.

I found the machine straightforward to use and considered it one of the safest machine tools in my workshop, but was soon proved wrong. The machine produces large quantities of fine dust so good extraction is therefore essential and my setup is shown in **photo 1** on page 64. The flexible hose I use has a metal wire spiral running through it and, unknown to me, it built up a huge static charge during use. With the machine turned off, I leant across to adjust the handwheel and was rewarded with a huge crack of static electricity to the side of my head, which hurt and left me reeling for a while. Luckily, I was able to easily solve and remedy this problem by connecting the end of the spiral to an earth terminal located on my ducting system (photo 2). I already had a copper wire running through my plastic ducting, which dealt with static build up. A spark inside the ducting could ignite the air/dust mixture, thus causing an explosion.

#### Sanding belts

You can buy ready cut lengths of abrasive or purchase it on a roll of the correct width and cut your own. Both of these methods are quite expensive and I've been very fortunate to have a friend who bought a large quantity of big industrial sanding belts at an auction and gave me several in exchange for some acrylic templates I made for his box-making business. I created an MDF template, which allows me to cut a belt to the correct shape and length (photo 3).

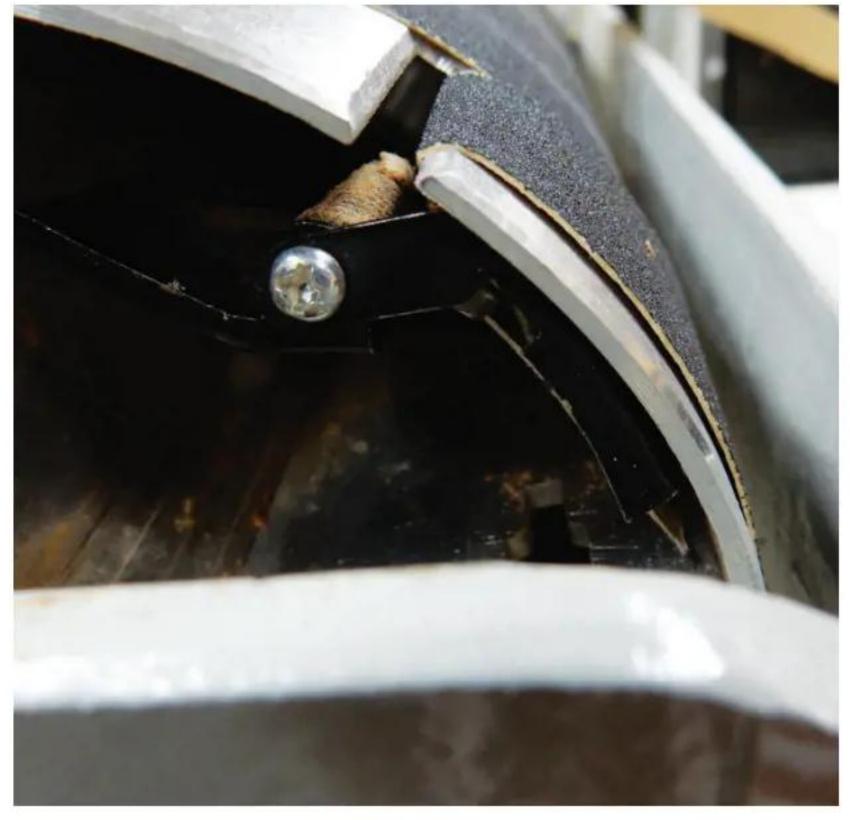
To begin, I insert the belt's tapered end into a sprung clip, which is located on the drum's left-hand side (**photo 4**). Next, the belt is wound onto the drum (**photo 5**), before inserting the end taper into another sprung clip, which also maintains some tension on the belt (**photo 6**).

#### Securing the belt

After use, in order to keep the belt clean, a rubber block is used with the lid open, the drum rotating and dust extraction running (**photo 7**). I always considered this to be a low-risk activity, but was sadly mistaken. It appears that the right-hand end wasn't properly secured and as a result, came loose. As the drum rotated, the belt shredded itself on the black metal strip located at the back of the housing, firing torn pieces directly into my face. The noise was terrifying – like a machine gun. I didn't want to lean across the machine again to switch it off,



7 Following use, in order to keep the belt clean, a rubber block is used with the lid open, the drum rotating and dust extraction running



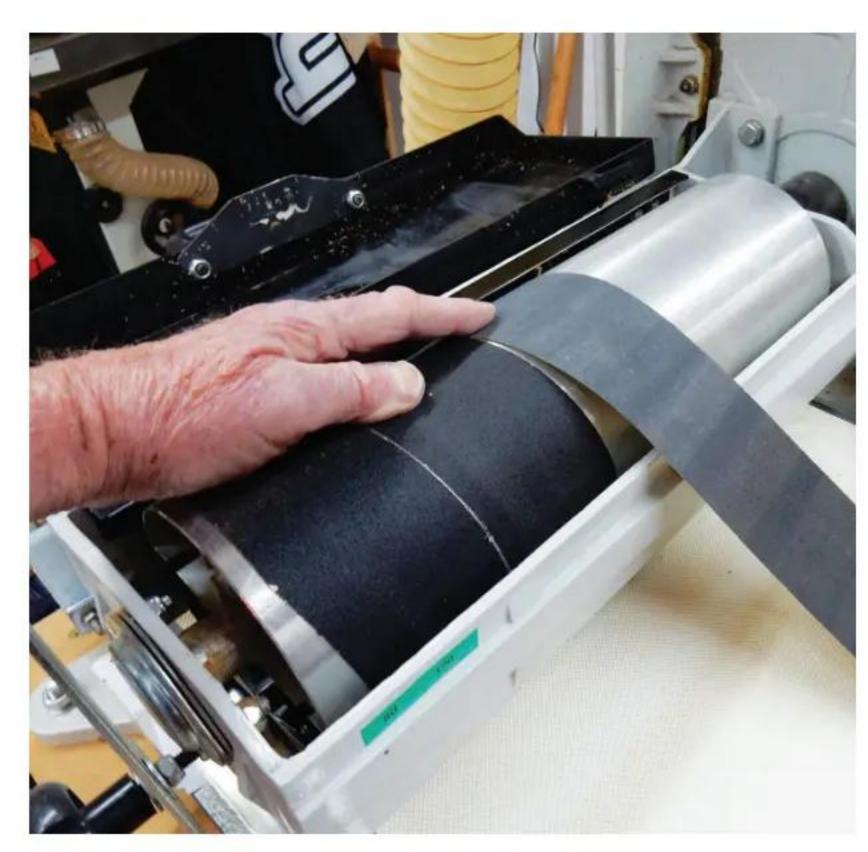
4 The belt's tapered end is inserted into a sprung clip located on the drum's left-hand side

so yanked the plug out from the wall socket. Fortunately, I was uninjured – just shaken. **Photo 8** shows some pieces of shredded belt with a complete belt pictured at the top for comparison. In future, I'll pay more attention to ensuring the belt is securely held, wear eye protection, and stand to one side when cleaning it.

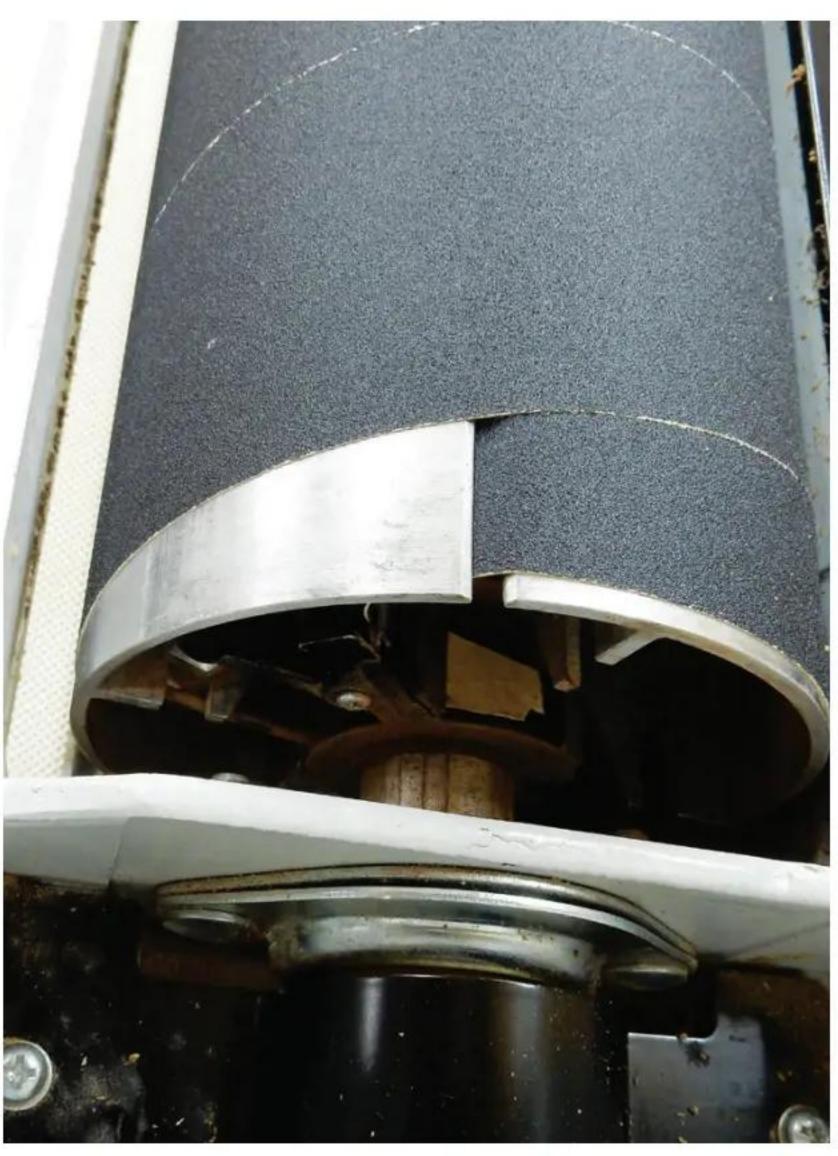
This particular machine model – the ZSM 405 – is still available from Bernardo for €1,132.80 – approximately £967 – but now has a large emergency stop button fitted. However, this price isn't inclusive of delivery and I'm unsure as to the current UK distributor. Axminster Tools sells an almost identical machine – the AP406DS – which is currently priced at £1399.98, and I believe delivery is offered free of charge.

#### **FURTHER INFORMATION**

Bernardo - www.bernardo.at
Axminster Tools - www.axminstertools.com



5 The belt is then wound onto the drum



6 Next, the end taper is inserted into another sprung clip, which also maintains some tension on the belt



8 Comparison showing pieces of shredded belt – bottom – and complete belt – top



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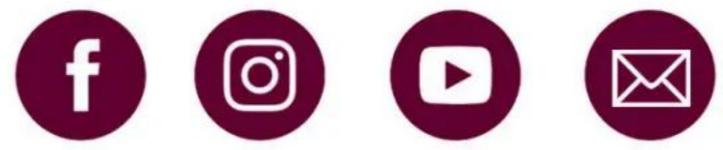
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## LETTER OF THE MONTH

#### THE WOODWORKING SKILL OF JIM HARDY

#### Hi Tegan,

I thought I'd send you this email, having just returned from visiting my 88-year-old Dad, Jim Hardy. When we walked in, as usual, the latest edition of *The Woodworker* sat on his settee – the August 2024 issue. I've contacted you in the past, sending photos of one of the many clocks he's completed over the years.

After seeing the cover of the latest issue, I thought I'd send you another photo, showing my proud Dad with the tool cabinet he made from a previous edition of the magazine.

My Dad has loved woodworking all his life, including making my large Lego box over 40 years ago, which is still in his loft. Last September, he was sadly diagnosed with Alzheimer's

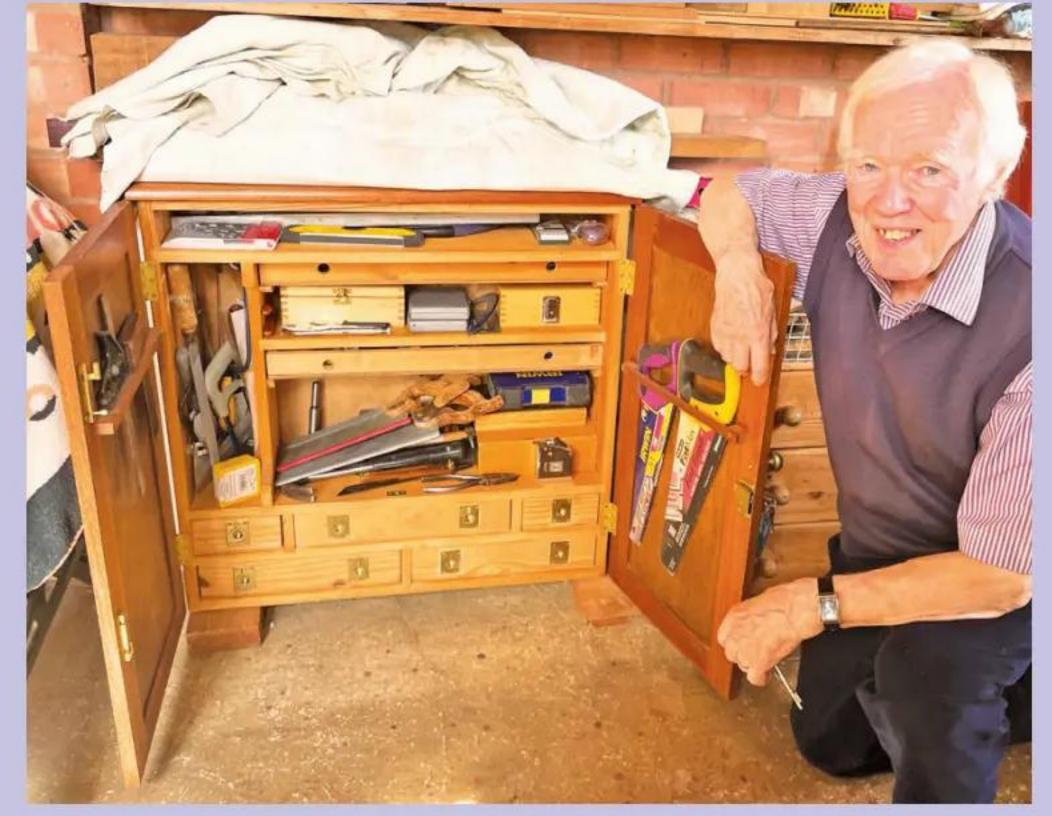
This loft. Last September, he **Woodworking, and more recently in the August 2024 issu**ely diagnosed with Alzheimer's advorking is one of the few things that still brings him joy. I know he'd to see his photos

and woodworking is one of the few things that still brings him joy. I know he'd to see his photos in the magazine.

Regards, Graeme Hardy

Hi Graeme, thanks so much for your email and for getting in touch regarding your Dad and his fantastic work. It's wonderful to see the projects he's completed and especially the tool cabinet. This is a very touching letter and highlights exactly why I love this job so much and feel incredibly humbled to be a part of the magazine's long legacy. I'm always stunned by the dedication of our readers and their commitment and support to the magazine, which is often unwavering over so many years. It's our absolute pleasure to be able to feature these photos of your Father's clock and more importantly, the tool cabinet he's so proudly pictured with here. I do hope that seeing his work featured here brings a smile to everyone's faces. Thanks so much again for reaching out and sharing this lovely story.

Best wishes, Tegan



Jim and his version of Jack Hill's tool cupboard, which was originally featured in the January 2013 issue of *Good Woodworking*, and more recently in the August 2024 issue



One of Jim's handmade clocks

Colin Unsworth's award-winning carved eagle

# HUNT FOR THE CARVED EAGLE

#### Hi Tegan,

Is it possible to get copies of old *Woodworker* magazines? My Father, Colin Unsworth, who's now 93, entered a carved eagle into the Woodworker Show back in 1991. In April 1992, you featured the 1991 Woodworker Show awards – pages 21 and 22 – and his eagle is pictured on page 22. My Father still has this edition, but I'm trying to trace a previous issue that he no longer has. I'd love to surprise him with a copy of it.

All I know is that it was before the 1991 show – there was an advertisement for the event, which mentioned Mr Unsworth's eagle. I don't recall if there was a photo of the piece, but my Dad was always proud that his name was mentioned. Apparently there was a carving of a Chinese man on the cover, but I think he may be confused with the April 1992 edition that we already have. I appreciate this is a long shot, but my Dad doesn't ask for many things. He has, however, mentioned this old, missing magazine a few times now. The eagle carving still looks just as impressive nearly 35 years on. Regards, **Rob Unsworth** 

Hi Rob, many thanks for getting in touch and hopefully, with the help of other readers out there, we'll be able to solve this conundrum and identify the issue in question. You've given some very useful information in terms of the front cover image and also being able to narrow down issue dates. So please, if anyone has copies from 1992, please can you help us to pinpoint the issue that featured Colin Unsworth's carved eagle so that we can assist Rob in tracking down a copy. Being able to source this

for your Dad would bring us immense pleasure. I'll

be in touch as soon as possible. Best wishes, Tegan

#### HANDY HAND-SCREWS

#### Dear Tegan,

I much enjoyed Ken Jones' article on how to make a hand-screw, which was featured in the August 2024 issue. Hand-screws seem to be more common in North America than here, but I've found them particularly useful for holding an odd-shaped piece steady because the hand-screw can itself be clamped into a worktop vice (**photo 1**).

My own hand-screws are cruder than Ken's, but also faster to make from offcuts of any convenient size (**photos 2** & **3**). Quick-setting epoxy holds the screws in roughly sanded handles just as firmly as a copper pipe. Epoxied nuts and washers hold each handle against its jaw but let it rotate freely. Both halves are identical, so construction is therefore quicker. And with my screws, after drilling clearance holes in both jaws, I simply bandsawed off a slice of each jaw, trapped a standard nut between the pieces, and glued them back together.

The jaws' business ends are merely self-adhesive foam pads of the kind sold to go under the legs of chairs and tables.

Regards, Tony 'Bodger' Scott







1 In bits

2 In use

3 Ready for action

Hi Tony, thank you for your response to this article and for offering advice on alternatives to Ken's design. Quicker and easier is nearly always better and I'm sure that many readers will find your suggestions very useful. If anyone has a go at making either of these designs, please do get in touch and share photos of your completed hand-screws, and perhaps even some photos of them in action. Best wishes, **Tegan** 

#### READERS' HINTS & TIPS

In conjunction with Veritas and Axminster Tools, we're giving one lucky reader per month the chance to get their hands on a fantastic Veritas apron plane with PM-V11 blade. Ideal for trim carpentry and featuring a ductile cast-iron body, its unique side wings allow for a comfortable, firm grip. To be in with a chance of winning this great piece of kit, just send your top workshop hints, tips or pointers – indeed anything that other readers may find useful in their woodworking journeys – to tegan.foley@dhpub.co.uk, along with a photo(s) illustrating your tip in action. To find out more about Veritas tools, see www axminstertools.com

HANDY HINT:

#### FOUR QUICK PENCIL STORAGE HACKS

If you're anything like me, you'll pick up a pencil and use it to mark a measurement, then later you'll go looking for the pencil and realise you've actually misplaced it. Try using one or any number of these four tips to ensure your pencil is always kept within easy reach when in the workshop.

TIP 1



1 Pick a drill bit which is larger, but not too much larger, than your pencil



2 Drill a hole somewhere in a workbench, cabinet, or anywhere that's easily accessible



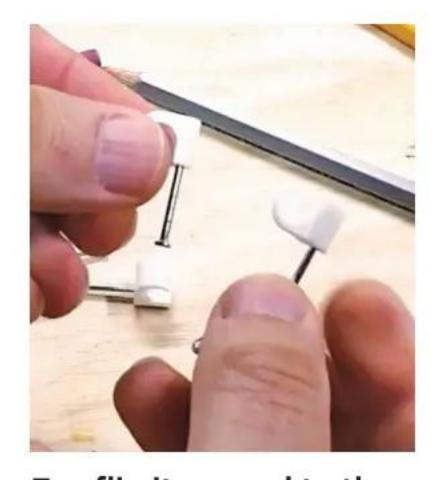
3 Make sure it's deep enough to store your pencil but not so deep that you can't get it out

Pick a drill bit that's larger, but not too much larger, than your pencil (**photo 1**). In this case, I have a No.2 pencil and am using a  $\frac{3}{6}$  in drill bit. Drill a hole somewhere in a workbench, cabinet, or anywhere that's easily accessible (**photo 2**). Make sure it's deep enough to store the pencil but not so deep that you can't get it out (**photo 3**).

TIP 2



4 Take a round cable clip, pull out the nail...



5 ... flip it around to the other side of the clip...



6 ... then attach it to your workbench

The second hack involves using a round cable clip with a nail, the cost of which is very minimal. Pull out the nail and flip it around to the other side of the clip (**photos 4** & **5**), then attach it to your workbench (**photo 6**). I actually use this one and have these in several places around my workshop...I just need to remember to put the pencil back!

trend technology

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 new 'Letter of the Month' prize – a Trend T8EK 240V 2,200W ½in dual-mode plunge router, worth £349.99! Engineered

for both hand-held and router table use, it comes with a host of accessories, all supplied in a moulded carry case to ensure safe storage. Simply email tegan.foley@dhpub.co.uk for a chance to get your hands on this fantastic prize

Good luck!

#### TIP 3



7 The third hack involves a screw eye and nail



8 Thread the screw eye into the eraser end of a pencil



9 Attach a small finishing nail to something in the workshop, so that you've got a place to hang the pencil

This third tip is similar to the cable clip one except that this time, it involves a screw eye and nail (**photo 7**). Thread the screw eye into the eraser end of a pencil (**photo 8**). Attach a small finishing nail to something in the workshop and you've got a place to hang your pencil (**photo 9**).

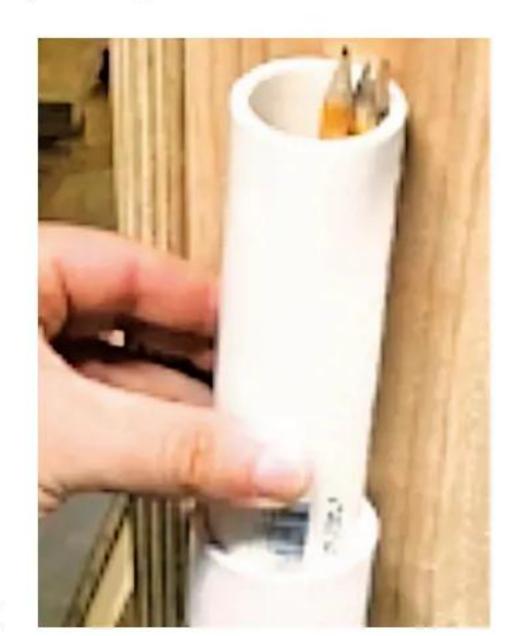
#### TIP 4

This last tip makes the most sense but can tend to get in the way, or be kept out of the way, thus making it less accessible.

Take a 32mm PVC pipe and trim it down to size. Put a cap on the end and secure it somewhere in the workshop. I've seen them glued, cut at an angle so they can be screwed to a surface, and also secured with a hook-and-loop strap (photo 10).

The biggest benefit to the PVC pipe is that it stores multiple pencils, pens or markers, depending on what you need. I always keep a silver welding pencil handy for use on darker woods such as padauk or walnut.

SlightlyCrookedWorkshop



10 Take a 32mm PVC pipe and trim it down to size. Put a cap on the end and secure it somewhere in the workshop



trend

Fine work on ancient bog fir calls for a careful strategy and some cunning plans by Jeff Gorman

> 1 The box is made from fir that'd been preserved in the acid and anaerobic conditions of a bog for 1,600 years



o turn a recent U-shaped lamination into a pill box, I used some bog fir that'd probably lain in the ground since the time of the Roman occupation until it was ploughed up. My sample was a wizenedlooking billet whose closely-spaced annual rings marked at 10-ring intervals by the veneer pins

(**photo 2**) – reveal about 130 years' growth. I began by fitting the billet onto my mini billet-sled (photo 3), using the mitre-gauge groove to guide the sled through my brave little Delta bandsaw, thus removing a slab to form a datum face. I then turned the billet 90° to make a cut that formed the second datum face, which would run safely against my circular sawbench's fence.

Although several years of storage had dried my gift, I suspected that conversion could release internal stresses and that subsequent drying would be likely to cause further distortion, so I sliced it into miniboards about 1.5 times as thick as the 6mm finished size. This revealed a lovely dyed-right-through pine-like grain stained by the action of acidic bog water on the wood's tannins.

Some strong rubber bands made from an old car tyre helped to bind together a mini-drying stack in which the boards

were separated by 12mm thick 'mini-stickers' ready to be 'conditioned' in the workshop. When I finally opened the bundles, I saw that the dark colour rather concealed the figure, so selected sections containing knots.

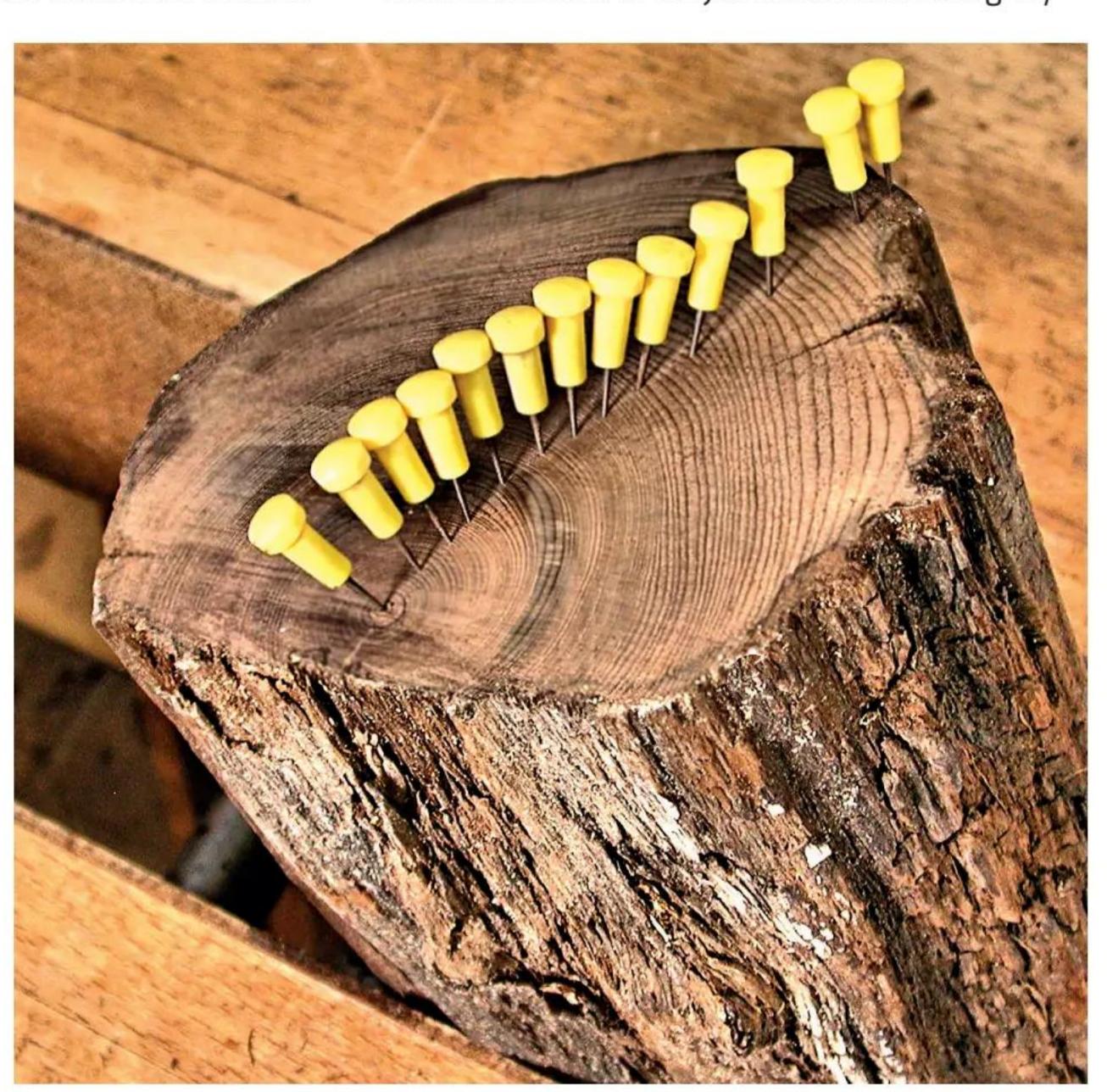
#### Planing face sides

It's customary to start with the job against the bench's planing stop and plane with short but gradually lengthening strokes over the job's mid section – but not reaching the very ends until the plane won't cut any more.

Since the stuff was to be planed quite thin, I anticipated a snag: that a straightedge held from end to end of the job would show a slightly

convex surface, caused by downward pressure on a slightly hollowed bench top. I knew that if this should happen, the faces would be curved enough to make a glued plain butt joint unreliable, so checked the flatness of the bench's most used area, immediately in front of the planing stop, with the aid of a millwright's long and broad-faced straightedge.

I tested the surface by trying to slide a feeler gauge under the straightedge and checking that it swivelled easily on a ridge or bump. I was somewhat surprised to discover that instead of being worn, it had a bit of a bump that easily planed out. A hollow would have involved planing down the surrounding area to get it right.



2 To keep track while counting, I marked each tenth growth ring with veneer pins



3 My billet sled utilises a pair of cramp heads

#### **JARGON BUSTER**

**Anaerobic** – The absence of air or free oxygen **In wind** – Having edges parallel to each other

Whichever way I planed, I knew that there'd be some 'reverse' grain around the knots, so chose an ancient Stanley Bedrock smoother, maintained with a very fine shaving aperture and 10° back bevel on the edge.

#### More snags

The next snag was the all too familiar tendency for light workpieces to stick to the plane's sole, then drop off to clatter onto the bench. I don't really know of any way of avoiding this irritating situation other than overshooting the plane at the end of each stroke.

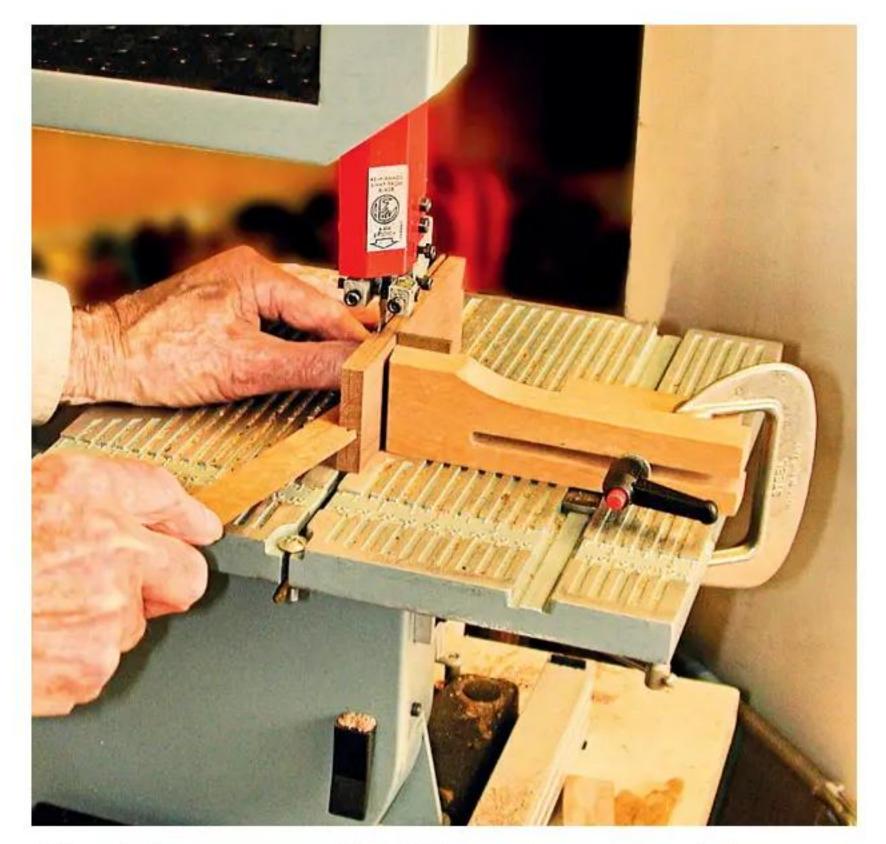
The final snag was that the sawn surfaces themselves might not be flat. If they happened to be convex they'd rattle as I planed, and if concave, the job would deflect under the plane's pressure even though the bench itself was flat.

Now usually it's preferable to choose the worst-looking face as the datum surface because this is usually installed on the interior of most constructions. So with the inside face to be resting upwards, I gripped each piece in the vice and skimmed a fairly flat surface before turning to the planing stop.

Finally, I settled down to seriously planing a flat face side, which I indicated with the traditional looped mark. If the job had been such a size that it'd not go into the vice, I would've had to pack it instead.

#### Thicknessing

The next stage was to rest my marking gauge against the face side and gauge a good deep line right round the four edges; this would give a guide for the final re-sawing, which took me to a couple of hair's breadths of the finished thickness. At this stage, I was working on



4 I safely re-sawed the sides using my workshopmade point fence

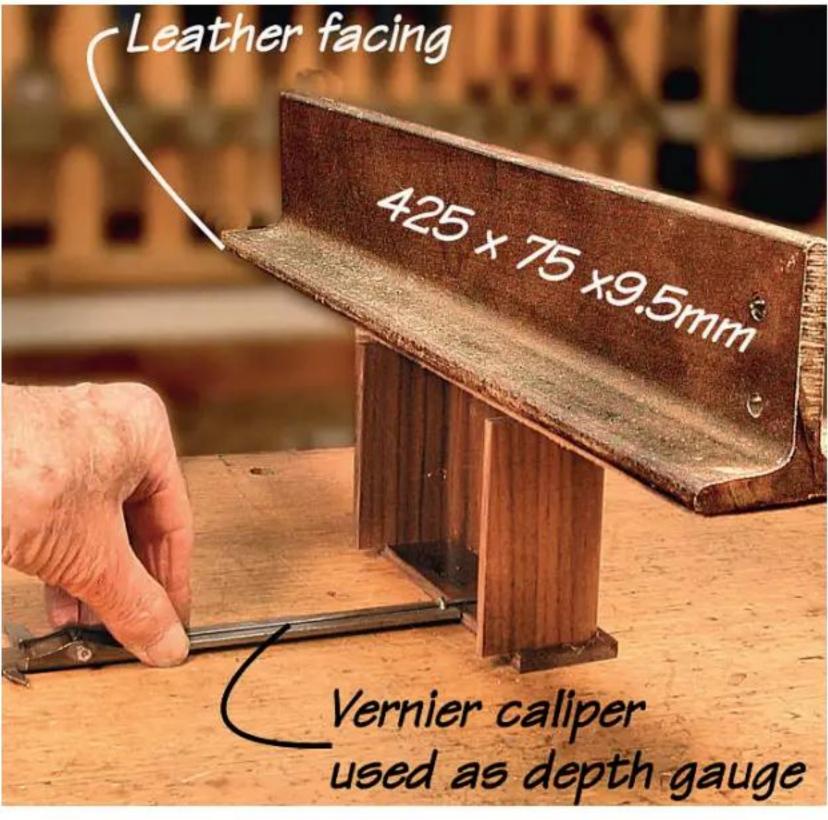
quite short panels; the 140 × 40 × 7mm sizes were much too small to risk putting through the circular saw bench.

I don't have much scope for adjusting the bandsaw fence to allow for drift, so to re-saw to near-finished thickness, I set the bandsaw's point fence to 6mm full (**photo 4**).

#### Shooting & profiling

Planing narrow edges can be tricky. On broader edges, we normally firmly press a cambered-edged plane on the wood, correcting any error by offsetting the plane's centre over the edge's high side, but few of us have strong enough wrists to drive a plane over very narrow edges without wobbling, so to true the edges and ends and prepare rubbed panel joints for the top, I called into service my lightweight shooting board.

A drill-mounted sanding bobbin soon shaped the lower edges and prevented the job from wobbling on hard surfaces. A second-cut engineer's file shaped the upper corners that combined with the lid shaping to produce a somewhat Chinese appearance.



5 This preliminary setup allowed me to pencil in the unpolished area

#### Assembly

Because the lamination edges were end-grain, I used Araldite rather than PVA or other absorbent glues. Beeswaxing the unjointed areas prevented adhesion of the squeeze-out and made it easy to prise it out with a sharp chisel (**photo 6**). The butt joint, of course, doesn't incorporate any means of accurately locating the parts. Instead of fiddling with cramps, I used a heavy weight (**photo 5**) to take advantage of the slow-setting glue and patiently positioned the sides out of wind.

Finally, I had to deal with the underside, which wasn't flat enough to be a reliable datum surface for gauging the end's profiles, so I left the shaping to the post-assembly stage and used a very fine-toothed model-maker's razor saw (**photo 7**) to get these narrow edges ready for file.

#### TIP

To tell if a board has finished drying, hang it on a spring against a scale; this can then be inspected to reveal when the spring has ceased to shorten



6 To do this without scratching the job necessitated a very sharp chisel



7 To cleanly cut thin stuff, I chose a very fine-toothed razor saw

# ROCKING CHISELY CONTRACTION OF ATTION OF ATTIO



Tasked with rejuvenating a 200-year-old rocking chair that was bought to him in a very sorry state, **Peter Vivian** goes back to basics and proceeds to give this historic item a new lease of life

received a request to take a look at a rocking chair to evaluate whether it was worth restoring or indeed if this was even possible, the client warning that "it was very old and in a poor state." The description proved to be pretty accurate as you can see from **photo 1**. The chair's owner said that it'd originally been part of the furnishings at Leeds Castle and believed it was possibly 200-years-old. However, as all the joints had been put together with dowels, I estimated it had actually been made during the second half of the 19th century, which was when this method first started to appear.

#### Box of bits

A closer inspection seemed to show that all the parts were there, although some of these were in poor condition. The chair had three issues, the first being the fact that many of the original glue joints had failed; with the second and third caused by previous attempts at repairs.



2 Biscuits are used to reinforce the joint and aid board alignment



1 The box of chair components laid out and clamped

The original glue was most likely animal hide based – a white glue, probably early PVA – had been liberally applied to all the failed joints but this too had failed, possibly as a reaction to the original glue. In addition to this, softwood braces had been added to reinforce the repairs and a plywood subbase screwed to the seat's underside. The few remaining joints that hadn't failed were dismantled with a few gentle taps of a wooden mallet; they didn't offer up much resistance! Some of the original dowels had snapped, so I carefully drilled out the broken halves and fitted new ones of a slightly larger diameter.

#### Back, seat

The seat back, also known as the 'splat', was made from three oak boards. I decided to use biscuits to reinforce the joint and help align the boards (**photo 2**). I refitted the top seat back with the original round head screws and glued it to the rear legs using the original dowels (**photo 3**). In spite of trying to remove traces of the animal hide glue, there must've still been a residue remaining as my initial attempt using

Cascamite glue also failed, so I switched to an expanding polyurethane, which seemed to do the trick. The seat base was also made from three boards, which had been previously dowelled together, so I simply re-glued it after carefully



3 Top seat back refitted with original round head screws, then glued to the rear legs





4 The seat base was re-glued after carefully cleaning off all traces of animal glue

cleaning off all traces of animal glue (photo 4).

#### Broken leg

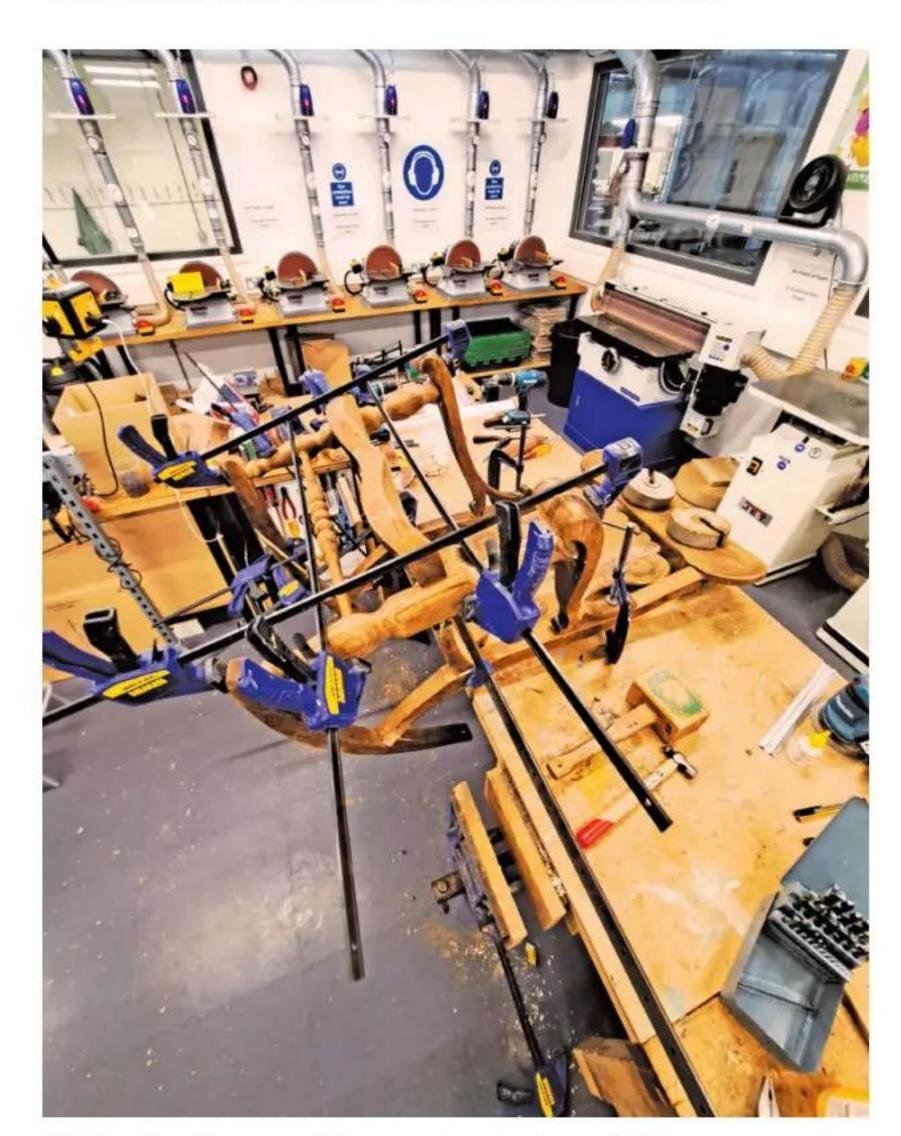
One of the rear legs had broken, at the point where it met the rocker, due to a short grain situation. The broken piece was included in the box of bits, but I reckoned it was too badly damaged to be reused. I planed the broken face flat, made a cardboard template from the good leg, and grafted a new piece of oak in place, carefully drilling the hole for the dowel to fix the leg to the rocker (**photo 5**). The front legs had been made from two pieces of oak joined longitudinally before being turned, both of which needed re-gluing (**photo 6**).

#### Up in arms

The chair's arms have a decorative upper bracket, one of which had a piece missing where it meets the arm. I neatened up the damaged edge and glued in a fresh piece after roughly carving it to shape. The new timber stood out like a sore thumb, so I stained it a shade darker; this improved the appearance but it wasn't invisible. However, I figured it was an honest repair and is now part of the chair's history (photo 7).

#### Rocky rockers

The rockers or 'bows' had been cut from a



8 The final assembly required a lot of clamps



5 A cardboard template was made from the chair's good leg

single board, which created a couple of short-grained weaknesses – needless to say, these had also broken. I repaired them with a combination of screws, which were counter-bored and the holes filled with crossgrained plugs, glue and yet more dowels. Steam-bending or laminating new rockers would've been the ideal solution, but the time wasn't available.

#### A not-so-sticky end

Normally for a job like this, I wouldn't attempt to assemble it all in one go as it can end in a sticky mess, plus you need a lot of clamps, but because each joint relied on the alignment of at least two others, I decided to give it a go proving the old adage 'you can never have too many clamps' (photo 8). The foaming Polyurethane glue needed a lot of cleaning up with a combination of chisel and Stanley knife.

#### Sitting pretty

The chair had a lovely patina from its 150 years of use, but was looking a little dull and lifeless (photo 9), so I gave it a light sanding with 240 grit followed by a couple of coats of Danish oil, finishing with two coats of beeswax buffed to a soft sheen (photo 10). Hopefully the chair will be able to rock on for another 150 years.



**9** The chair received a light sanding with 240 grit, then several coats of Danish oil were applied...



6 Both of the front legs needed re-gluing



7 The arm was repaired by gluing in a fresh piece after roughly carving it to shape



## 

Bernard Greatrix presents his figurines inspired by the Lewis Chessmen

were found hidden in a chamber within a sand dune on the island of Lewis, in the Outer Hebrides, and are believed to have been carved from walrus ivory by Norwegian craftsmen between 1,000 and 1,200AD. Almost 90 pieces were found in the early 1800s; there are over 80 in the British Museum,



Two warders – one carved in apple and the other in mahogany

while the others are in the National Museum of Scotland in Edinburgh. I first saw some of these pieces while visiting London over 30 years ago, and was immediately struck by the carvings' detail and the pieces' enigmatic faces. On arriving home, I carved one of the warders I'd photographed. I had the grand idea of making my own set, but it would've been extremely time-consuming and I didn't have photos of a full set.



... and as seen from the side



The king took a total of five days to carve

#### **Rekindled** interest

Recently, however, I discovered more photos of the pieces on the British Museum website – www. britishmuseum.org – and my interest was rekindled, although I still won't be making a full set. The warder took three days to carve and the king five, although I've enough timber to make more and have to admit that the knights, queens and bishops have a certain lure.

My pieces are 130 and 135mm high – the originals are only 80 and 90mm - and carved in apple from branches of a Bramley, cut off in 1999 and stored under my workbench. To complete some of the tracery, I made small gouges from masonry nails by first annealing the nail, hammering and filing to the shape required, then hardening and tempering. These are mounted in a small turned handle and honed to sharpness. They don't compare to the Henry Taylor or Ashley Iles tools, which are the mainstay of my gouges, but they're low cost – if you ignore the time taken to make them...

#### **Tooled finish**

The pieces generally have a tooled finish with only a light use of some 240 grit abrasive to remove any awkward lumps. They were finished with several coats of Danish oil, yet to be finalised, and will eventually be waxed. The mahogany warder is only 65mm high, finished with Button polish, and at one stage was coated in Copydex and rubber bands in an attempt to make a mould from which I could then make some copies in resin; one distorted copy later and the mould fell apart, the resin having gotten rather hot... I've since discovered silicone moulding rubber, but have yet to try this.

I'm still in awe of the ancient craftsmen who produced the originals without the aid of modern tools, the figures produced with exacting metallurgy. I suspect their eyesight was better than mine!

NOTE: If you'd like to have a go at reproducing the Lewis Chessmen - and intend to do so commercially - you should consult the British Museum as to copyright issues 💸

on throne...

#### AROUND THE HOUSE WITH PHILDAVY



When sourcing suitable timber for a project, occasionally you have to make do with whatever you can get. A tight budget can mean material quality may be lower than you'd hoped for, but with a bit of creativity, it's surprising what can be done to improve matters. As an example, ledged & braced doors commonly fitted to basic sheds tend to be rough and ready, clad with thin matchboard or shiplap timber to blend with the remaining structure.

I wanted a larger, sturdier and more secure workshop door, but was unable to find suitable boards to replicate the existing cladding. The biggest problem was timber thickness, though the solution was straightforward. Finding 21mm thick tongued & grooved floorboards at my local DIY shed, these were simply thicknessed down to 18mm to match the wall cladding. Reducing both outer vertical boards to width, the new door was essentially framed, ledged & braced. Fitted with security hinges, mortice lock and decent handle, the completed project is far sturdier than the original...

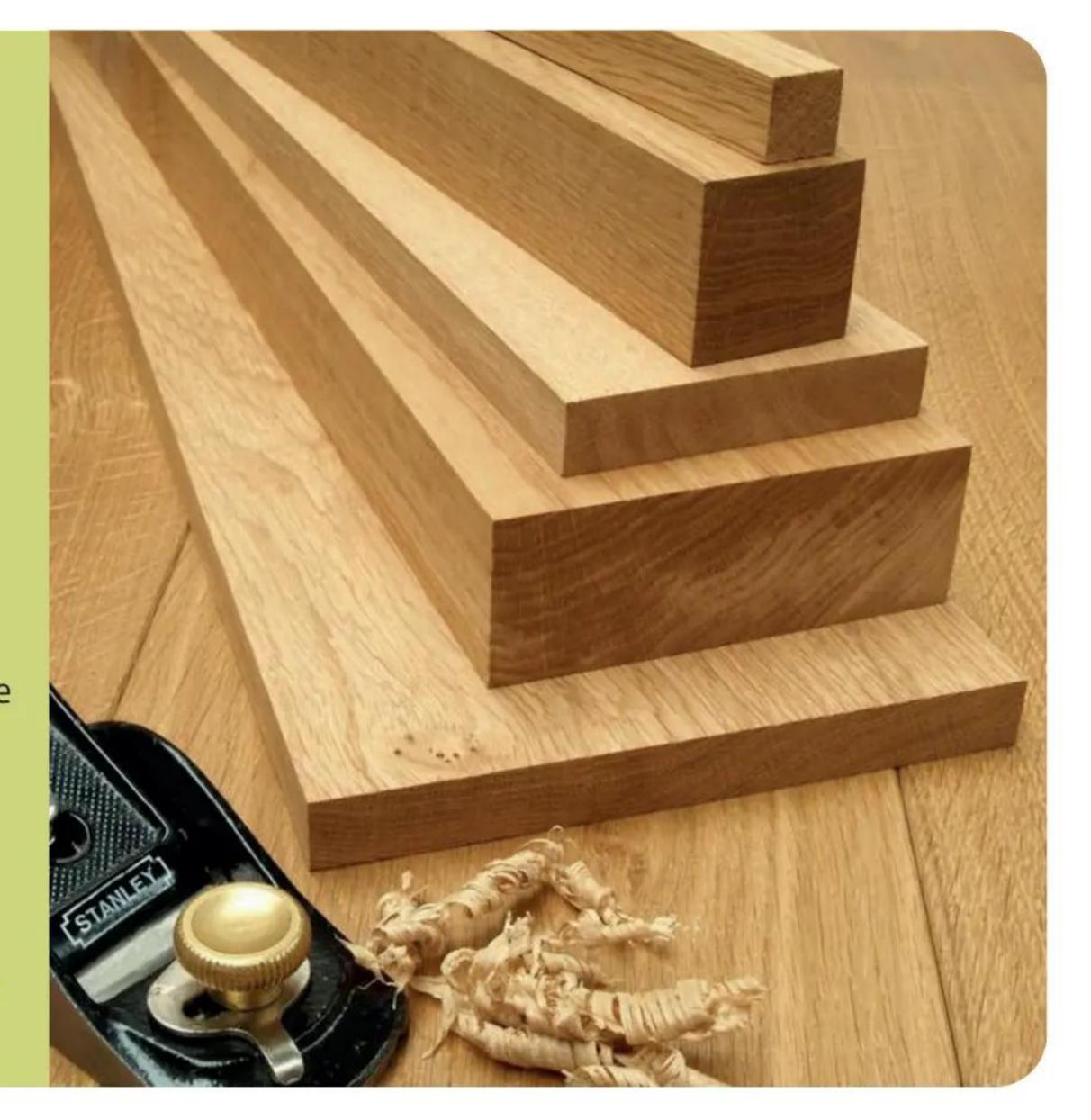
## **DEALING WITH SPLITS**

I have a couple of seasoned oak boards, which are nicely figured, but they do contain one or two prominent collife. I'm also is contain one or two prominent splits. I'm planning to use the timber for making a table top, but what's the best way to fill the cavities when it comes to finishing the project? A few small defects would be acceptable, but I'd rather not have gaping splits in the table.

C Teague, via email

European oak is notorious for splitting, though you don't always want these defects on display. Assuming you have offcuts from the same boards, you could cut matching fillets and glue them into the oak, trimming flush when dry. If you choose this method, saw the fillets first, then scribe around them with a craft knife. Masking tape stuck to the timber will make it easier to follow the lines, then carefully rout the cavities, cleaning up with a sharp chisel. Tap the fillet into place and leave to dry.

For smaller defects, try using oak sawdust mixed with PVA glue. This will shrink as it dries, so a couple of applications may be necessary. A two-part epoxy filler will be better for larger cavities. Ready-mixed filler dries quickly and is convenient, though again, colour match could be a problem.



### **FLATBIT OR** FORSTNER?

As I have various hardwood offcuts in the workshop, I'd like to use them to make tealight and candle holders. These are likely to be about 45mm thick, but I'm not sure what sort of drill bit is best for boring the holes, which need to be as neat as possible. C Clements, Norwich

For tealights, you'll need a bit about 40mm in diameter, though for safety it's best to use a glass or metal surround that's recessed into the timber. Buy these first and check the size before obtaining a bit. The cheapest option is to use a flatbit, though its point is likely to poke through the base of the wood, depending on hole depth. You could get round this by filling each hole underneath with a suitable two-part filler before sanding flush and finishing the timber.

Cheap flatbits tend to wobble slightly, resulting in slightly oversize holes. The tidiest hole will be produced by a Forstner bit, which creates a flat bottom. More expensive than flatbits, these shouldn't be used in a power drill held freehand. Ideally, the bit should be fitted in a bench drill, or electric drill mounted in a drillstand. Avoid using any type of auger



bit with threaded tip; this will wrench the workpiece upwards as you lower it into the wood.

Ensure to cramp timber to the drillstand base, moving it for each hole. Check hole diameter on scrap softwood first, and always feed the bit into the wood slowly to avoid burning. If it starts smoking, stop boring and allow the bit to cool. Scrape off any resin deposits and resume boring.



A bath panel may not be the most exciting project to build, but if you're wishing to give your bathroom a fresh look, this can make quite an impact. My old panel was past its sell-by date and needed replacing.

Once the panel was detached, I had to remove the original framework under the bath as water seeping through faulty shower sealant had damaged the bottom rail. It's simple enough to build a new frame from 50 × 50mm PAR softwood. Butt joints are fine here, though for a belt & braces job, you could house the vertical members into the top and bottom rails. Don't assume that each vertical piece is the same length because the bath edge may not be parallel with the floor, depending on its design.

#### Beaded boards

Rather than standard tongue & groove boards, I opted to use a decorative beaded profile, which looks slightly more elegant. This is much less common to buy than T&G, though making your own is easy enough. This means

that you can make the individual boards any width, though I settled on 100 × 25mm PAR. Regular T&G timber finishes at around 15mm thick, so you'll have heavier boards if making them from scratch. Take this into consideration if building a new framework, as you may not want the panelling to protrude too far out. I overcame this by using a wider capping piece, overhanging the boards by about 6mm.

When routing an edge with a bearingguided beading cutter, you may want to cramp another piece of wood behind the workpiece to give the router extra support. A small palm router means you can just about rout the edge of a 20mm-thick board without it tipping. With a bigger machine, it's easier to use a router table.

Unlike T&G boards, which are grooved, I just rebated the edges so they butted together neatly but still allow for timber movement. They're fixed to the horizontal battens with a single screw at both top and bottom, inserted from the back. Oversize holes in the battens also accommodate movement.

To provide easy access under the bath, I made three separate panels, each of them a push-fit into the framework. I'll probably add some connectors to make them more secure, so more about these clever fixings at a later date.

#### **MDF** option

You could use pre-formed bead and butt MDF panelling, which is 6 or 8mm thick. This is by far the easiest option, though it's not so sturdy and quite pricey at about £20 for a 1,220 × 811mm piece. You'd need two for a bath side, so although simpler, it's not cheap. Ideally you should use moisture-resistant MDF in a bathroom, so check the material when buying if you choose to go down this route.

Originally, I was going to add a length of Torus skirting along the bottom to match the rest of the bathroom. Finishing at 170mm, this looked too deep, so instead I completed the project with a piece of 120mm softwood, routed along the top edge with the same 6.3mm beading bit used for the panelling.



1 The existing bath panel looked tired and supporting framework suffered from water damage



2 Remove the kick board and cut away old timber; renew sealant around shower and bath if suspect



3 Cut the frame's bottom rail to length; drill and countersink, insert plugs in concrete and screw to the floor



4 Saw the top rail to size and measure vertical pieces; cut these and screw through the top rail



5 Position framework in place under the bath's edge; tap with a hammer, but be careful not to overdo it



6 Cramp ends of the uprights to prevent slipping, then drill and screw these securely to the bottom rail



7 Experiment with bearing-guided beading and rebate bits on offcuts in order to achieve the correct depth



8 Rout the beading profile along the board edges; cramp timber to support the router if necessary



9 Rout a rebate on two of the edges to accommodate the beading tongue; sand boards prior to fixing



10 Measure finished height of boards and saw to length; an offcut at the rear prevents breakout



11 Check overall width of boards by placing half the quantity together and measuring across



12 Decide on skirting height using an offcut held against the boards; this looks too deep







13 If walls are uneven, scribe first board with the Trend Easyscribe tool; ensure the board is plumb



14 Cut along the scribe line with a jigsaw; hold board against wall and trim the edge if required



15 Prime beading and rebates prior to fixing in place; doing so reduces the chance of bare gaps if timber should shrink



16 Cut capping to length and chamfer the edges; this sits underneath the bath edge and is nailed in place



17 Position first two boards against the framework and check with a level; cramp to the lower batten



18 Drill and countersink the battens for 5mm screws; slightly oversize holes allow for movement



19 Screw through from battens into the boards; position the next board and repeat the fixing process



20 Continue along the bath side, cramping each board before screwing to the batten



21 Made up of three separate panels, each one can be lifted out of the framework for ease of access



22 Cut skirting to length, scribing ends if necessary; rout a beaded profile along the top edge

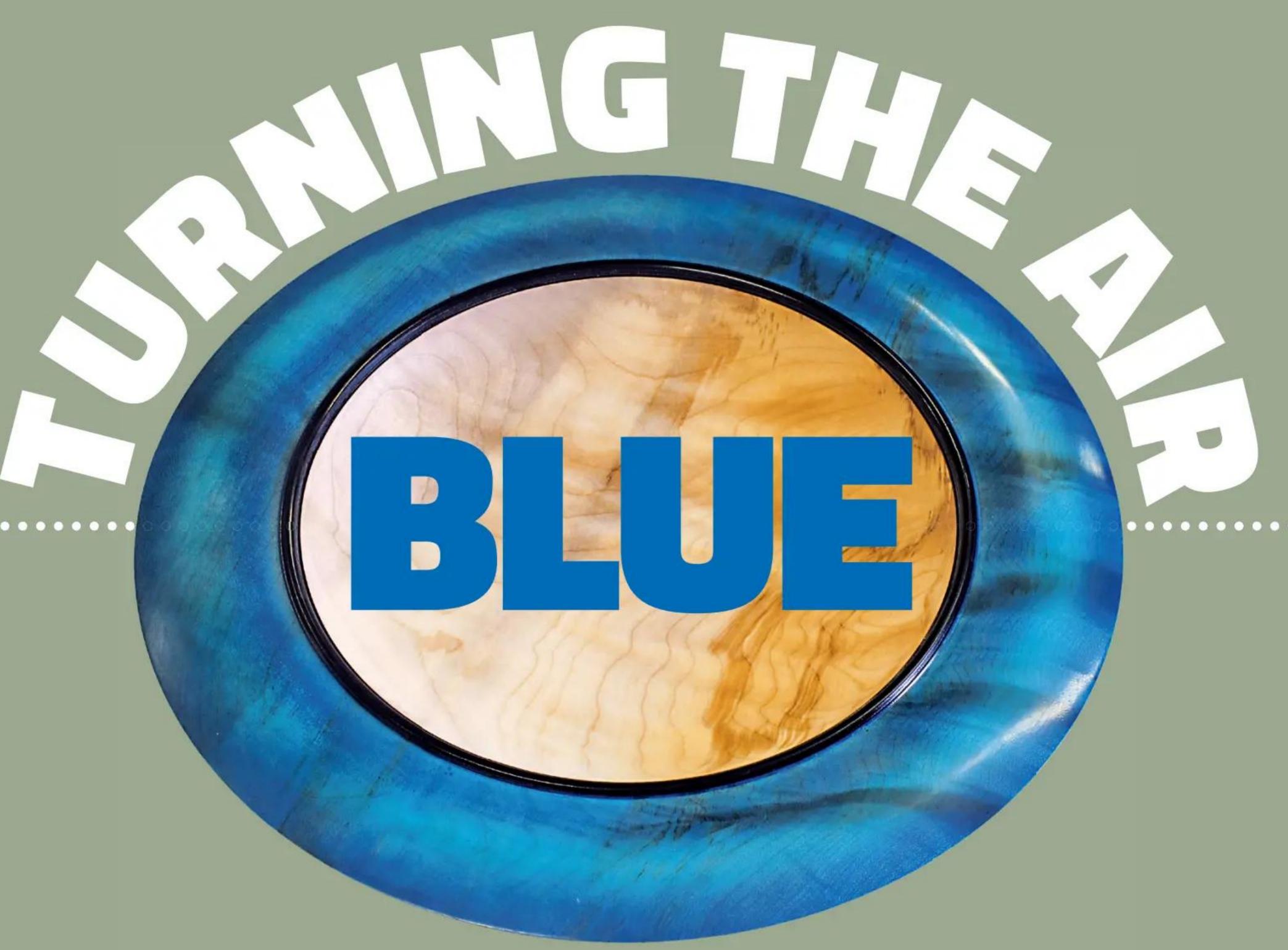


23 Mask off the bath edge, prime bare wood and brush on two coats of suitable satin paint



24 The finished panelling is a big improvement and gives the bathroom a more informal feel 💸

## CHISEL 1



## Les Thorne shows how to lift a plain sycamore bowl by applying airbrushing techniques

When I received a bursary award from the Worshipful Company of Turners back in 2007, one of the pieces of equipment I purchased was an airbrush kit with compressor. I've always liked the sunburst effect that appears on guitars and hoped to emulate colouring techniques like that.

The colouration of this piece comes from a fishing lure that's been painted to look like a mackerel. If you search online for wooden fishing lures, you'll come across many different colour combinations that can be applied to your turning – I'm not sure that calling this a fishy platter is a good selling point, though!

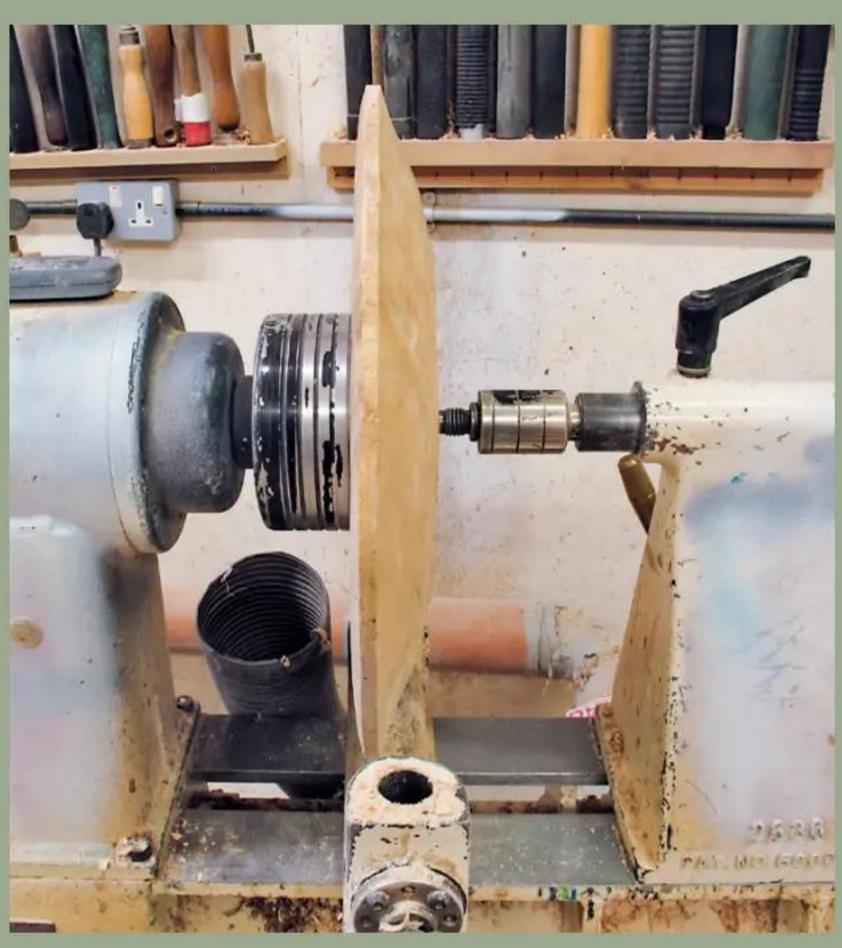
Remember that whenever using transparent stains, the wood's

shade will have an effect on the colour you end up with. You can use acrylic airbrush colours if you wish, but I prefer the spirit stains available from Chestnut Products; they're very bright, vibrant shades and being pigment-based, aren't prone to fading over time.

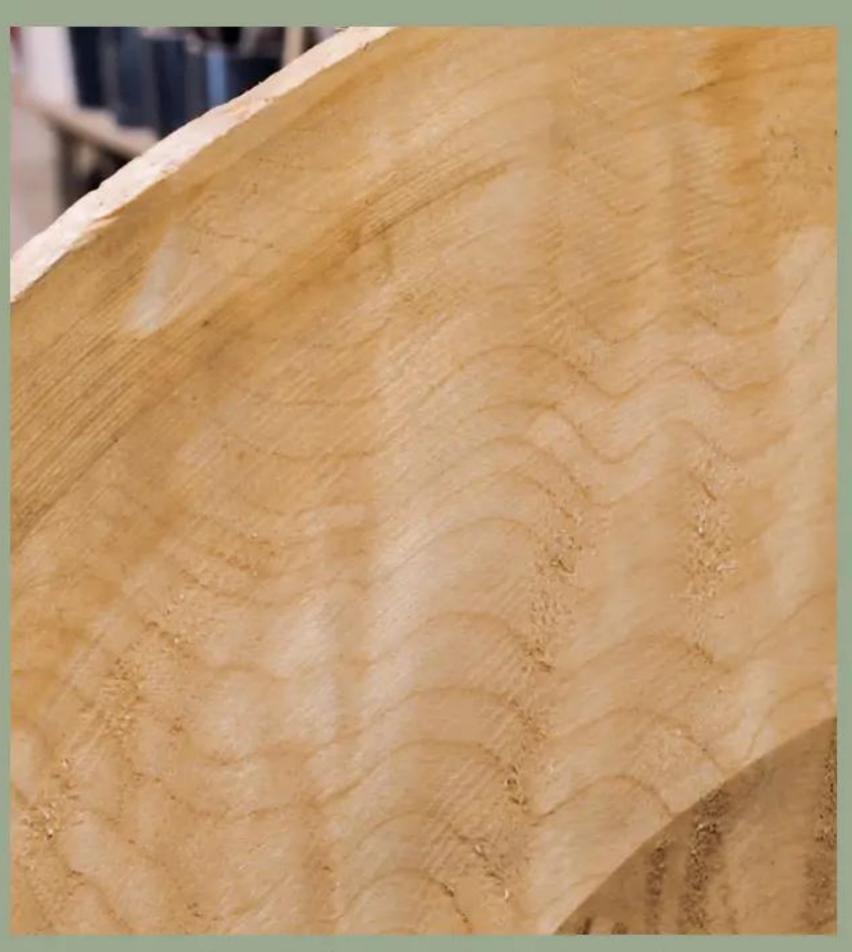
This is a very important consideration to take into account when you're selling high-end turned art. Whereas the airbrush is cleaned with water when using acrylics, the brush must be cleaned with methylated spirits when stains are employed. This means it's very important to protect yourself from the vapours that'll be in the air when you subsequently airbrush stains.



1 Luckily I found this piece of sycamore that I'd part turned a couple of years ago; it's about 410mm diameter × 40mm thick and the moisture content is now approximately 12%



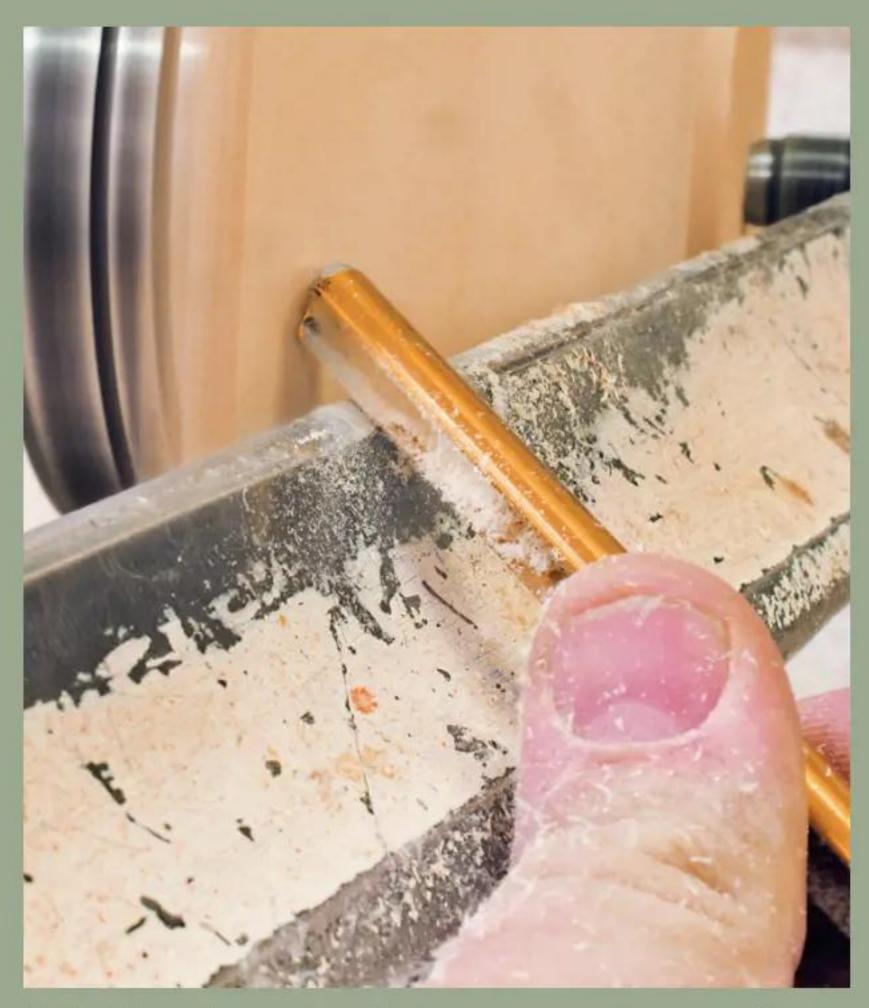
2 The easiest way to remount a roughed-out bowl is to friction drive it between centres; here I'm using the drum chuck from my vacuum-chucking system, but without the pump



3 Just what I needed: to obtain the best effect from the staining, you need to have some ripple or figuring in the grain; if there wasn't any curly grain in this blank, I'd select another



4 The 10mm bowl gouge is once again the surface-cleaning tool; because the blank will be uneven, you need to work off the high points first until all the original surface is turned



5 Finishing figured grain is never easy because the grain direction is so varied; a good tactic is to shear cut using a 6mm bowl gouge with a traditional grind, that's presented almost upside down



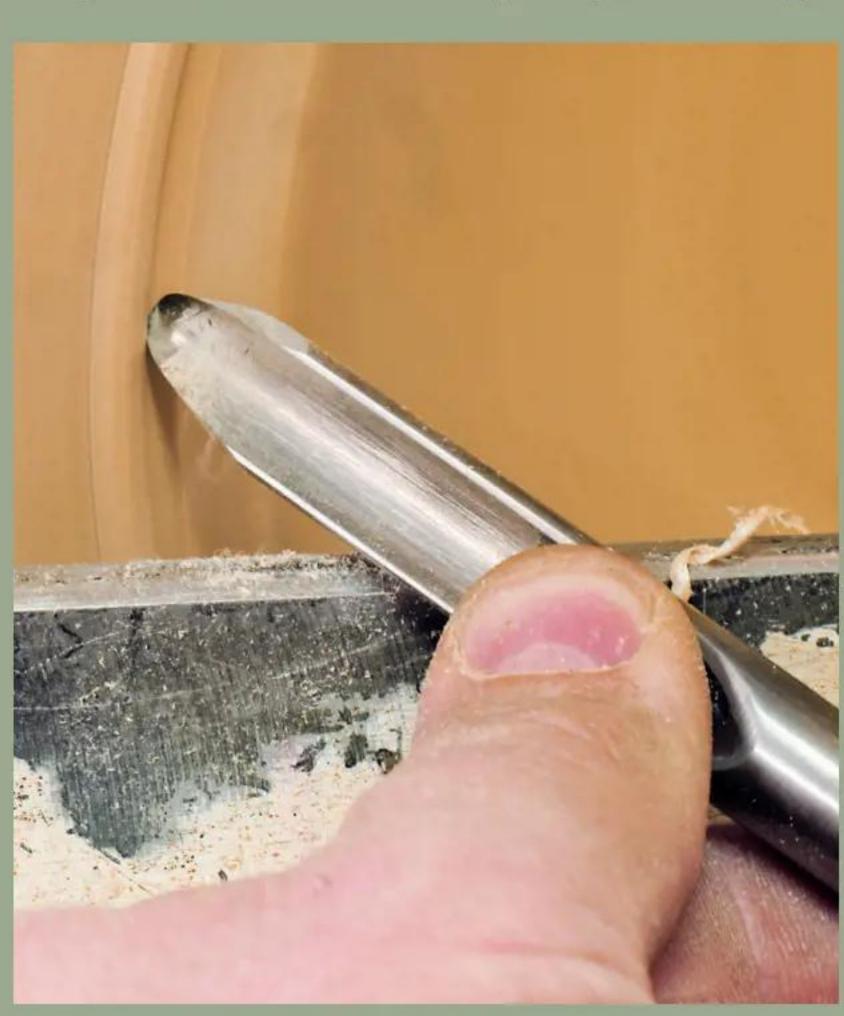
6 Once the surface is finished as well as possible with the tool, power sand the surface, starting with 120 and working through to 400 grit, using compressed air to clean the surface after each stage



7 To protect the blank's face from any potential overspray, I apply lemon oil with the aid of a cloth; at this stage in the turning process, you can really see how the ripple figuring is showing on the sycamore's surface



8 When I remount my platter on the Stronghold chuck with No.3 jaws, the discrepancies on the edge where the timber has warped in the drying process, are revealed



9 After truing up the blank's edge using the same techniques as employed on the base, I'm going to turn a bead where the coloured edge will stop and the central hollowed part begins



10 When I used to make these, I'd colour this bead detail after finishing the rim; however, I soon realised that it's more effective to do this now, so out comes the ebonising lacquer



11 The ebonising lacquer that's over-sprayed onto the rim is cleaned up using a 13mm spindle gouge; this tool's smaller nature allows you to cut closer to the bead without removing any paint from it



12 Here you can see how clean the timber looks up against the left-hand side of the black bead. This face needs to be tooled perfectly, ready for sanding



13 Because I've tooled the surface well, I can start sanding with 240 grit; anything coarser may leave scratches, which will be accentuated when the stain is applied



14 My airbrush setup came as a complete kit from Graphics Direct. Having a dedicated compressor means that there's no need to fit regulators into the workshop supply



15 The kit's business end is the actual airbrush; this dual-action type is more expensive than some of the single-action models, but in my opinion, does a better job



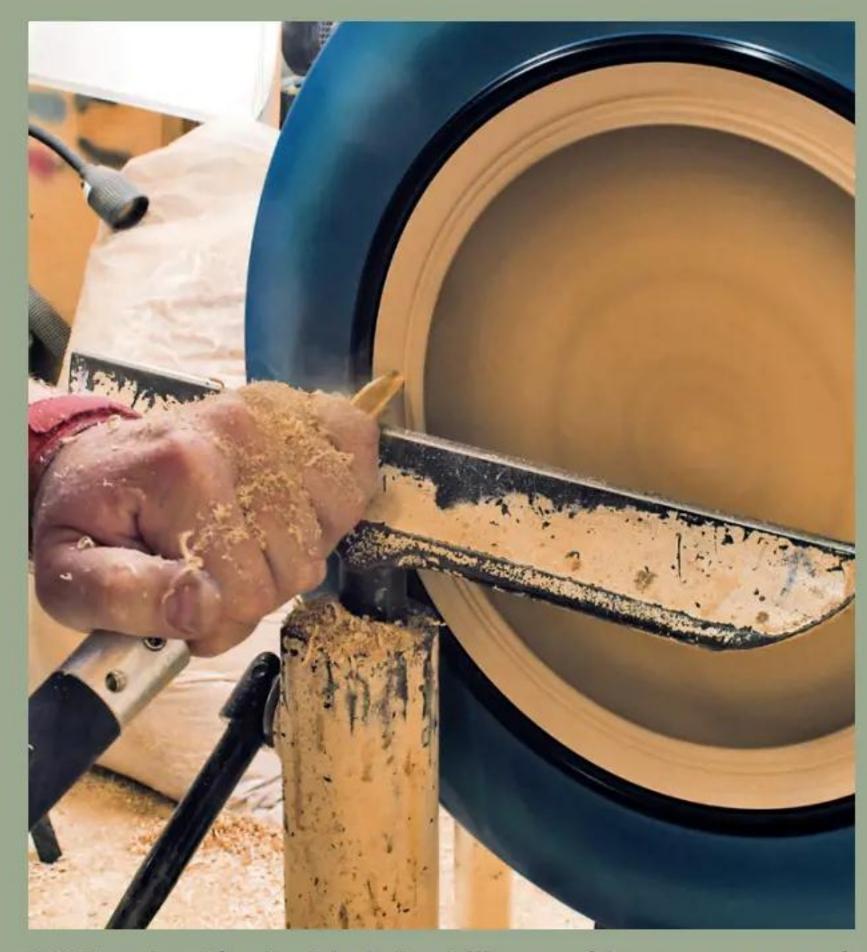
16 After filling up the little pot with blue stain,
I start spraying the surface. Here, the lathe is set
to a slow speed and the paint is started off the
rim, then traversed across the surface



17 When the blue is dry, you have the option to shade in the edges with another colour. Here, I'm using royal blue to define the inner and outer edges; the satin won't show up on the black bead



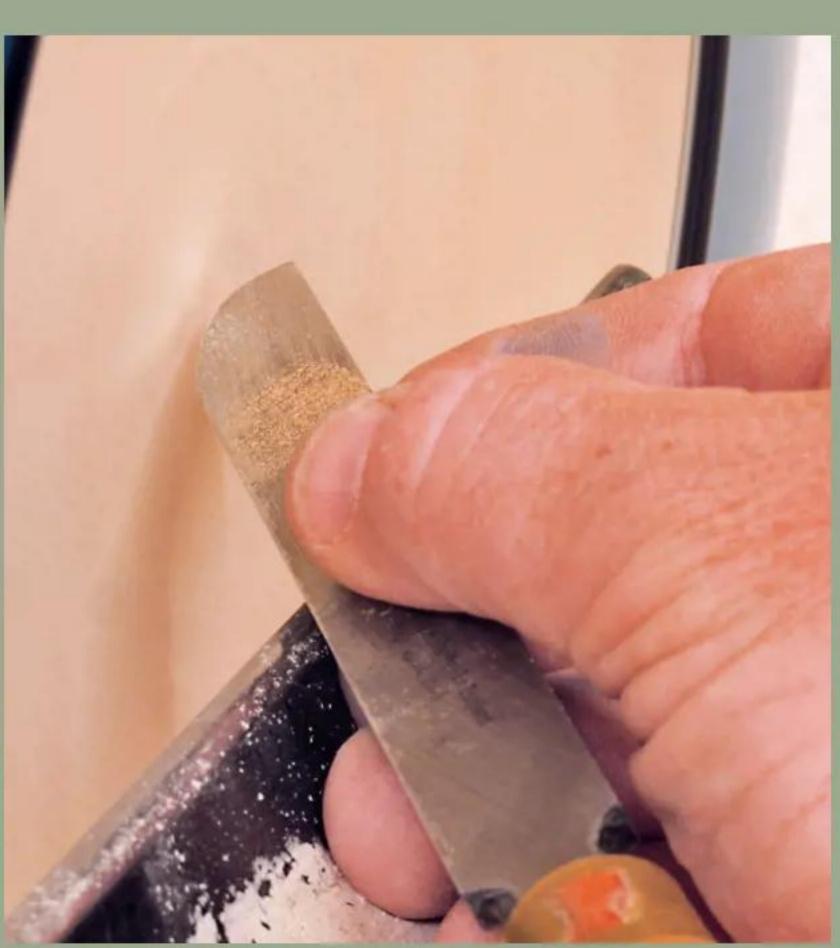
18 The edge close-up shows how the translucent stain penetrates the rippled timber at different rates to produce a range of shades



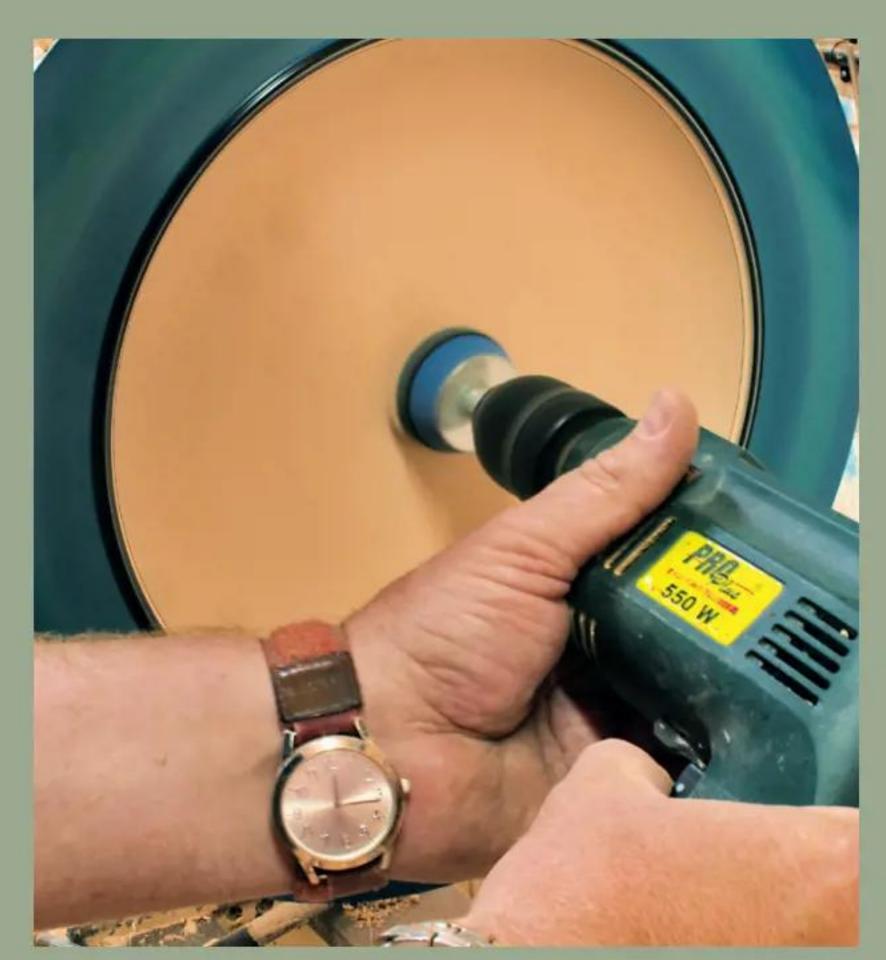
19 Turning the inside is just like working on a normal bowl; start from the outer edge and finish each stage as you go, using the 10mm bowl gouge in pushcutting mode



20 Provided I can get the toolrest close enough to the work, the smaller 6mm bowl gouge is my tool of choice for the final finishing cut, especially near the centre



21 If you're struggling to get the curve correct in the platter's bottom, you can use a scraper with a French curve on it; here I'm applying the tool on its edge as the wood fibres are sheared off



22 When sanding the platter interior, you have to be very careful not to run over the black rim. Ensure that the drill sanding pad passes over the bowl's centre so as not to end up with the dreaded lumpy bowl



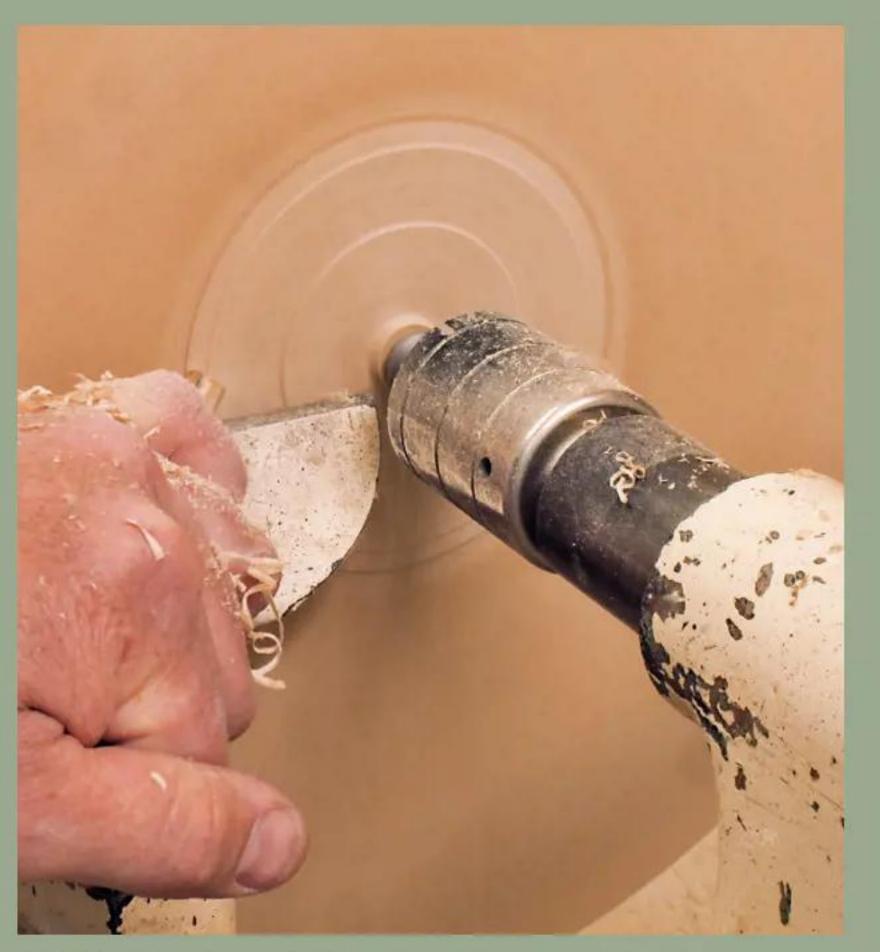
23 By using a matt oil like this lemon one, the bowl's interior won't overshadow the gloss of the rim. In my opinion, paler woods often look better with a matt or satin finish



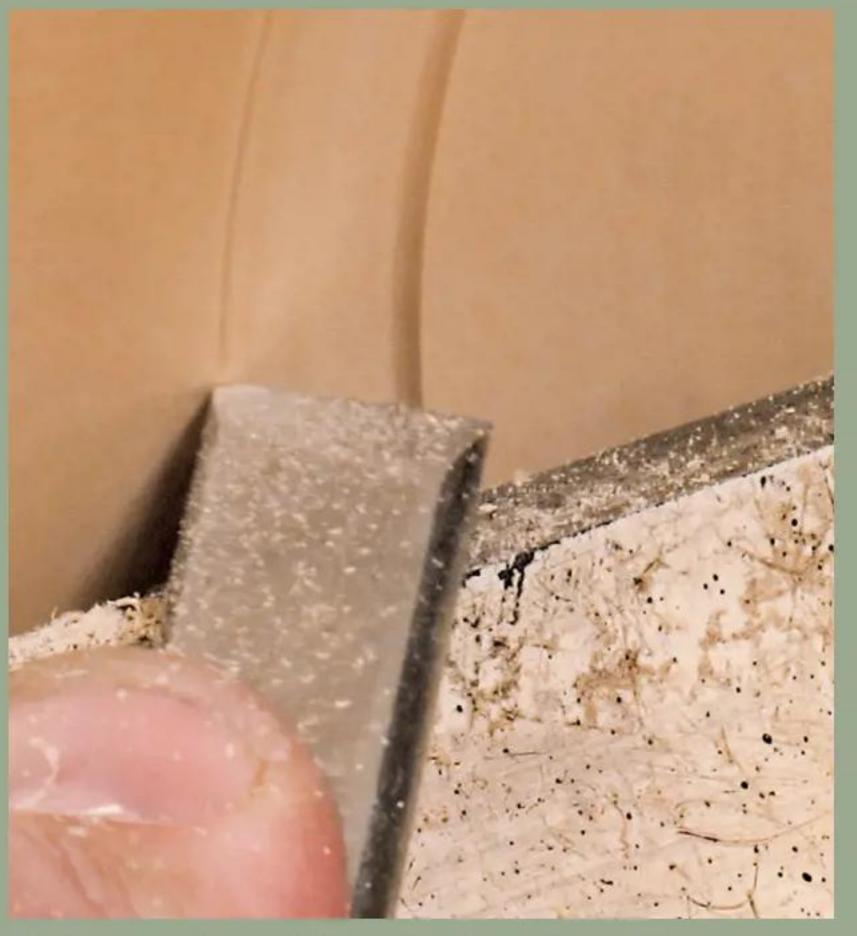
24 My vacuum chucking system allows me to remount the platter. This way, I can turn the spigot in order to remove the chucking marks



25 The bowl is sucked onto the 125mm drum chuck; now, barring power cuts and a huge dig-in with the tool, the work will stay on throughout the process



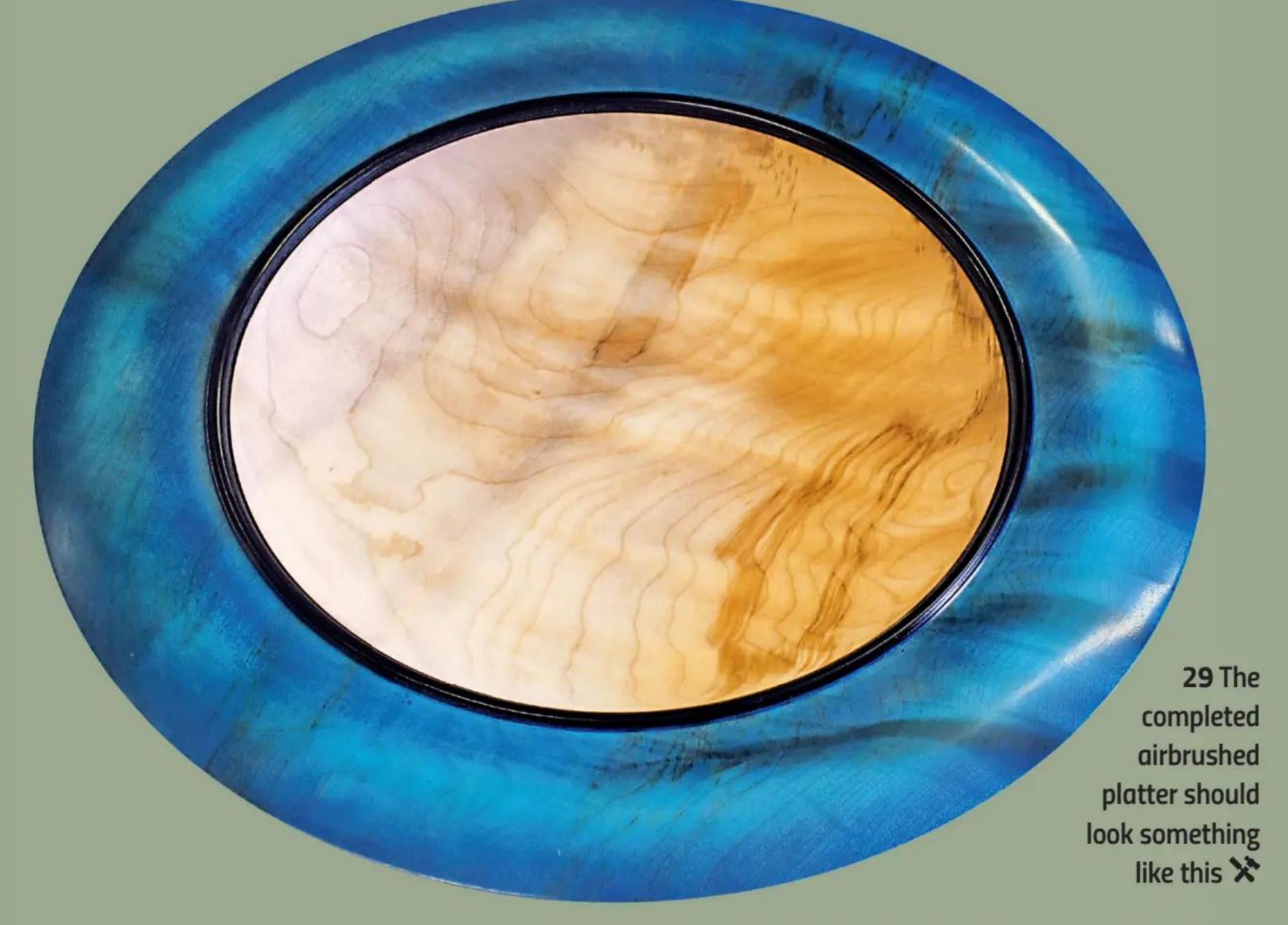
26 At this stage, light cuts with a small tool are the order of the day. I've put the tailstock centre back in place for added security and proceed to take light but positive cuts



27 You need to put the obligatory decorative grooves in the platter's base, if only to prove that you've reverse turned it, thus keeping other woodturners happy!



28 With the tailstock removed, finish off with light cuts into the centre, ensuring the base is slightly concave, then sand through the grades as normal





## CHISEL NO.

Tony 'Bodger' Scott transforms an old lump of wood into a serviceable, 12in-wide wastepaper bin for his home office

very shed I know has a box of bits left over from old projects. This wastepaper bin was made from a block of oak that measured around 355mm long and 38mm (1.5in) thick; the block had been gathering cobwebs for so long that I can't quite remember what it was left over from.

The construction is simplicity itself, and can be adapted to any convenient-sized lump of anything that you happen to have lying around.

#### Slicing up the stock

Rip the block into 6mm-thick slices, ideally on a bandsaw rather than a tablesaw to cut down on waste, and sand at least one face smooth. I left



2 The base is hardboard let into a 3mm rebate. Use the glued-up cylinder itself as a template in case it's not exactly round



Divide 360° by twice the number of slices you have. That'll tell you the bevel angle to cut along each edge of your slices; four slices – a standard box – need a 45° bevel (360 divided by 8); 18 slices need 10° (360/36) and so on. Cut the bevels on a bandsaw, tablesaw or router.

Without thinking very hard, I initially cut 12 slices off my block and put a 15° bevel on each edge (360/24).

I had, of course, forgotten about  $\pi$  – the Greek letter pronounced 'pie': the relationship between the circumference of a circle and its diameter. The value of  $\pi$  is a little over 3\*. So when I taped my 12 bevelled 1.5in-wide slices together, they fitted together beautifully. But I had a circumference of 18in – 12 × 1.5 – and therefore a diameter of less than 6in, which was far too small to be useful.

**Problem:** How to enlarge the bin without starting all over again? **Solution:** Cut 12 more slices and this time don't put on any bevels at all. By alternating the bevelled and unbevelled pieces, the angles still fitted together and added up to a circle – and the difference in thickness between

#### Taping & gluing the slices

The last steps involve cutting a slim rebate on the bottom end of each slice, then taping and gluing all the slices together. It helps to tape a couple of temporary hardboard discs into the ends to hold the cylinder steady during glue-up and while you're smoothing the external joints later on. Finally, glue a disc of hardboard or thin plywood into the rebates (**photo 2**).

I finished the bin off with clear varnish on the outside, stained varnish inside, to make cleaning easier, but you can of course use any finish you like. The result: One old lump of wood transformed into a serviceable, 12in-wide – even (whisper it softly) elegant – wastepaper bin, destined for my home office.

\* If rounding off to 3 is too crude for your taste, there's an easy way to remember  $\pi$  more accurately. Memorise the sentence: 'Can I have a drink – alcoholic, of course!' The number of letters in each word gives you  $\pi$  to seven decimal places: 3.1415926.

#### OFFERED



Router lathe - in good condition, includes router; £190 cash buyer collects 07966 145 260 (Kent)

Bandsaw – 16in depth of cut; 20in throat depth; compound 30sq.in table; two-speed 3HP motor; £400 – buyer collects 0114 233 4758 (Sheffield)



#### Startrite Super 310 Universal Woodworker

- includes slot mortising attachment, original jigs, guides, handbook & loads of tooling – in superb condition; £4,500

07890 104 021 (Essex)

**Henry Taylor & Marples pairing chisels:** 2 × Henry Taylor chisels – 1½n; 1 × Marples pairing chisel – ¾in – good quality tools, made in England. Can post at cost or buyer collects; £80 ONO 07703 290 831

**Draper WTL12 woodturning lathe** – on matching stand, with set of six Sorby chisels – in very good condition; £200 ONO – cash on collection 07494 849 598 (Woodbridge)



**Boxwood** – well seasoned, for over 40 years various diameters ranging from 20-50mm, of varying lengths; call for details 07449 914 078 (Milton Keynes)

**Cherry wood** – as advertised in the May 2024 issue – was £800, but price negotiable, or small lots, all for local hospice and for charity 01295 721 201 (Oxon)

#### Robert Sorby ProEdge sharpening system

 never out of the box – buyer collects; £250 07722 842 547 (Somerset)

#### Coronet Major saw & lathe with extended

**bed** – 56in centres on a wooden storage base plus other accessories buyer to collect; £425

**07970 312 532** (Worcestershire)



Elu planer in metal case plus Elu planer thicknesser attachment - both unused; £175 – buyer collects 07864 792 554 (Manchester)

#### Gifkins dovetail jig with two sizes of cutters –

6 & 10mm. One cutter has a small nick in its wing, but cuts perfectly. Also included is the manual and an instructional DVD. Simple and accurate jig that produces very neat joints; £100 - collection only **01462 676 796** (Letchworth Garden City)

Woodworking planes – Stanley and Record; some boxed, some good collector's items; 26 off; £300 – call for details 01422 202 465 (Halifax)

29 sash clamps – from 2ft 6in-6ft - mainly Record; 46 G & F clamps; 75 clamps in total; £350 - call for details 01422 202 465 (Halifax)

**Kity combi machine** – in good condition with instructions – can ship cheaply; open to offers 07968 570 076 (York)

#### Coronet Imp bandsaw

- in working order; ideal for accurate, small work. Cuts up to 12in widths; £75 - cash only 07977 100 313 (Slough)

The Woodworker/Good Woodworking magazines 2004–2023; most in binders and in excellent condition; free for collection 07720 537 912 (Derbyshire)

**Leigh Dovetail Jig** – in excellent, like-new condition – supplied with cutters, hand book, screwdriver and guide bush adaptors; £450 (OVNO)

**07860 506 040** (Telford)

#### **Hegner Multicut 1** Super Universal scrollsaw/fret saw

 perfect entry model for the discerning hobby craftsperson - new, unused - still in

box; £300 - cash on collection 01584 810 881 (Worcs)



#### Trend Mini Ellipse Jig

 ideal for routing elliptical picture frames, mirrors, clocks & small coffee tables – in excellent condition, with manual; £50 ONO 01322 664 388 (Kent)

#### WANTED

Top-loading barrel log burner or similar 01473 658 546 (Ipswich)

Kity combination machine (or similar) - must feature saw, planer, mortiser, spindle moulder, etc. Carriage paid +087 2275266 (Ireland)

Australian-made Symtec woodturning lathe; in sound condition; must be complete with toolrest – excellent price paid 01454 260 395 (Berkeley)

Three-jaw chuck for mortiser attachment Kit K5. Attaches to planer cutterblock with left-hand thread – both 12mm **01302 817 889** (Doncaster)

#### Stanley No.1 plane & Stanley No.2 plane

- one of each wanted by novice collector 01572 723 976 (Rutland)

Woodworking tools: planes by Norris, Spiers, Mathieson, Preston, Slater, etc. brass braces, interesting rules & spirit levels; top prices paid, auction prices beaten 01647 432 841 (Devon)

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# THISTORY OF THE SCREEN

Michael Huntley presents his timeline documenting the screw's long history

hreads were invented, as far as we know, by Archimedes or one of his contemporaries. Initially the concept was probably to apply pressure, as in a wine press, but then the idea of using the thread's lever to hold a nut that secured two components came about; however that was in a parallel-sided bolt or stud. The big advance came when the screw with a point was invented. In the present day, there are several systems in use but there's a suggestion that Robertson's screws are still the best.

SCREWS TIMELINE			
365BC	Archytas of Tarentum credited by some historians as inventing the screw		
287-212BC	Drill inventor Archimedes definitely invented the Celestial Globe, Endless Screw and water screw		
Antiquity	Screws made by hand-filing the helix. Template was made from a triangular sheet of soft metal		
Antiquity	Several writers clearly describe screw threads, probably parallel threads, nuts and bolts. <b>NB</b> The Romans didn't use pointed screws, only parallel-threaded bolts		
Roman Empire	Linen press using a screw seen in a Pompeian fresco		
1st century BC	Marcus Vitruvius Pollio refers to press worked by turning screws		
10AD-70AD	Hero of Alexandria made several presses, taps and dies. Hero's screw tap is now described and shown in Scott Landis' <i>The Workbench Book</i> , pp122-123		
1st Century AD	Josephus describes male and female screws joining structural components		
After the Romans there follows a big gap until			
1404	Oxford English Dictionary says first use of the word screw [spelt screws sic]		
1400s	Guttenberg printing press with screw		
1475	Matchlock mechanisms secured to the gunstock by slotted screws		
1480	Medieval Housebook shows manacles fastened with slotted screws and also a picture of a screw-cutting lathe		
1500s	In the 16th century, screws were relatively expensive compared with nails		
1500s	Leonardo da Vinci designed a screw-cutting machine that was perhaps never built		
1550	According to the horological author FW Britten, screws in clocks were unknown before this		
1588	A Ramelli in Paris shows screws		
1693	Moxo Exercises, published from his shop in London, describes methods to make nuts and bolts to attach strap hinges to doors, but these are driven with a spanner not slotted for a screwdriver		
1765	Encyclopedie says that the region of Forez in France specialised in screws – ½in to 5in – but still so expensive that these were sold individually. Heads either slotted or square, and showing a picture of a screwdriver		
1760	In the UK, screws were made in the Midlands. All had inaccurate threads cut by eye or with a simple jig. Wyatt brothers patented the method of cutting screws using lead screw so individual screws could now be made in seconds, not minutes		
1772	Roubou mentions a tournevis operated in a brace. He also refers to 'ready made screws' for the cabinetmaker		
1777	Jesse Ramsden invented a screw-cutting lathe with 4 thou precision!		
1790	Midlands screw factory producing 16,000 a day		
1797	Henry Maudsley makes screw-cutting lathe with 36in regulating screw. Longest so far		
1800	Screwdrivers recorded in toolboxes from this date		
1840	George Nettlefield factory set up, eventually becoming GKN		
1841	Maudsley pupil Joseph Whitworth began the standardisation of screw threads that we have today		
1849	Sloan's patent for pointed screws		
1907	Robertson's patent		
1936	Phillips' patent used in a Cadillac. Phillips' screws are estimated to be 30% faster than slotted versions 💸		



### Coming up in the next issue...





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See inside the issue for further details...

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Woodworker 1

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THE MODELMAKER'S YEARBOOK



## OTAKE



This month's selection features a piece by 2017 Chippendale School of Furniture graduate Andrew Cockerill, a mesmerisingly hand-carved ornament by Edek Dłutoręki; and a tool chest design by Mike Weber, which is constructed entirely by hand





www.thewoodworkermag.com

- An engaging, measured design by young British designer, Rob McCarron - @mccarron\_design - 'Library' is cleverly configured in sections to give neat storage for books and journals -4mm wide × 600mm high × 400 deep. The version shown here is in English ash, but also available in walnut
- Hickory tool chest featuring hand-cut dovetails, with butternut drawer and bottoms to reduce the overall weight, by Mike Weber – @mjw\_woodworks
- Guitar Cabinet by former Chippendale International School of Furniture student, Andrew Cockerill – @andrew\_cockerill\_ Scottish oak and sycamore. Featuring an innovative opening mechanism, the piece serves as both a functional storage space and beautiful display cabinet





A selection of footed bowls in plain woods and simple forms, by maker of functional art and tableware, Jack Havelock Bailey

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