WOODWORK | TURNING | TOOL TESTS | FEATURES

September 2021

The Woodworker

& Goodwoodworking

THE ORIGINAL & BEST SINCE 1901

THE DEVIL'S IN THE DETAIL

How **Tom Galt's** engineering know-how led to a successful career in fine furniture-making

WIN

WIN 1 OF 2 **CLARKE TOOL CHESTS & CABINETS**

PLUS...

- MODERN TAKE ON A TRADITIONAL CHESS SET & BOARD
- **FEATURE:** THE MAYFLOWER 400 BONFIRE & PYROMUSICAL
- **TURNED MARACAS:** AN EXERCISE IN COPY TURNING & AIRBRUSHING

www.getwoodworking.com

mytimemedia WOODWORKING GROUP

09

9 772632 337014

£4.99

FAMILY MEMBER OF

Manutan

Specialist products for specialist jobs

KLÜG
Intelligent Solutions

The Top Rated ***KLÜG*** collection, exclusive to **IronmongeryDirect** is rated 4.4/5 by customers.

Cabinet Furniture

Hinges

Sliding Door Hardware

Pocket Door Systems

High-quality and built to last, ***KLÜG*** products come with a 10-year guarantee as standard. Browse the entire collection at **IronmongeryDirect.co.uk/brands/klug**

Call or go online
0808 168 28 28
IronmongeryDirect.co.uk

Ironmongery Direct
Trusted to deliver

Welcome

Since taking on editorship of the magazine back in 2015 (before the two titles merged), I've always shared my Cornish holiday tales – in fact, it's become something of a tradition. For those who've been reading *The Woodworker* since this time, and even before, you're no doubt familiar with my ramblings!

Cornish roots

Having grown up in Cornwall and my family still living there, I feel very lucky to have this connection, and pre-COVID, I always looked forward to my annual summer pilgrimage. Last year, however, things were very different, and even though I managed two fleeting trips between lockdowns, I wasn't able to stay with my mum as I usually do, or even socialise indoors. As a result, everyone was a little nervous, things were understandably tense, and I spent a week 'sofa surfing', which was anything but relaxing.

I booked my Cornish holiday as soon as restrictions eased, and the main thing I was looking forward to – besides meeting my new nephew – was being able to stay at my mum's house once again. I definitely felt a renewed appreciation for the peace and tranquillity, which was somewhat affected by the sheer number of tourists, but I made a concerted effort to enjoy the garden and stunning sea views, not to mention the breathtaking sunsets. There's something incredibly calming about being near the coast – and water in general – and if this happens to be the gently-trickling Trevillet River running through St Nectan's Woods, then so much the better. It really is a magical place.

A plethora of cherry trees

I also visited the acre of land that my mum has recently purchased, near a small village called Dizzard, situated between Crackington Haven and Millook Beach. Wishing to create an area of woodland, despite some saplings being eaten by escapee sheep, I'm pleased to say it's doing well. As it was her birthday, I decided to buy my mum a cherry tree – two years old with a four year rootstock – so given time, it stands a good chance of bearing blooms, and hopefully fruit. As John Bullar says in his article on choosing wood (**p.34**), cherry is popular with furniture makers as well as woodturners, displaying a varied grain pattern and pale pinkish-brown heartwood. Opting for the 'Van' variety (*Prunus avium Bigarreau Van*), which was fairly established at 7ft tall, I have to admit that I was rather overwhelmed by the veritable plethora of varieties available – 'Morello', 'Stella', 'Sunburst', 'Summer Sun', 'Kordia' and 'Lapins', to name but a few. I'll report back on how it's settling in over the coming months.

Wild flowers

During my trip, I also had the opportunity to explore new sections of the North Cornwall coastal footpath. I'm not sure how I'd missed them previously, but this time I couldn't help but marvel at the sheer number of wild flowers I came across. Apparently there are hundreds of varieties, even on the short stretch between Boscastle and Tintagel, but the ones that stood out for me were Bitter and Common Vetch as well as Heath Dog Violet. Making sure I stopped and examined each of the tiny flowers in detail, I was blown away by their intricacy, a few of which looked exactly like orchids, only on a miniature scale. Obviously varieties depend on the season, but looking out for new ones became a real highlight. My only tip is to keep your eyes on the path and not to wander too close to the cliff edge!

Anyway, getting back to magazine matters, I do hope you enjoy our September issue, which, as usual, contains a real mix of woodworking content. Whether you choose to make projects, learn from technical articles, be inspired by our features, or perhaps all three, the most important thing is to ensure you're having fun along the way!

Tegan

Email tegan.foley@mytimemedia.com

Tegan Foley
Group Editor

Rhona Bolger
Group Advertising Manager

Phil Davy
Technical & Consultant Editor

34 CHOOSING WOOD FOR FURNITURE MAKING

In the next part of this series, John Bullar discusses the subject of selecting appropriate timber for your furniture making projects

The Woodworker & Good Woodworking
SEPTEMBER 2021

PROJECTS & TURNING

TECHNICAL

REGULARS

FEATURES

ON TEST

FOLLOW US! www.facebook.com/GetWoodworking @woodworker_mag

www.getwoodworking.com
Published by MyTimeMedia Ltd.
Suite 25, Eden House Enterprise Way,
Edenbridge, Kent TN8 6HF
UK and Overseas Tel: +44 (0) 203 855 6105

SUBSCRIPTIONS
UK – New, Renewals & Enquiries
Tel: 0344 243 9023
Email: mytimemedia@subscription.co.uk
USA & Canada - New, Renewals & Enquiries
Tel: (001) 866 647 9191
Rest of World – New, Renewals & Enquiries
Tel: +44 (0) 1604 828 748
Email: help@tww.secureorder.co.uk

BACK ISSUES & BINDERS
Contact: 01795 662 976
Website: www.mags-uk.com

EDITORIAL
Group Editor: Tegan Foley
Technical & Consultant Editor: Phil Davy

CONTRIBUTORS
Geoff Ryan, Simon Frost, Peter Skilton, John Bullar, Robin Gates, Martin Pim-Keirle, Andrew Hall, Peter Bishop, John Greeves, Matthew White, Phil Davy, Edward Pulleyn, Terry Diss, Les Thorne, Andy Standing

PRODUCTION
Designer: Nik Harber
Retouching Manager: Brian Vickers

ADVERTISING
Group Advertising Manager: Rhona Bolger
Email: rhona.bolger@mytimemedia.com
Tel: 0204 522 8221

SUBSCRIPTIONS
Subscriptions Manager: Beth Ashby

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

mytimemedia
print & digital media publishers

D&M TOOLS

THE TOOL SUPERSTORE

HAND, POWER TOOLS & MACHINERY SPECIALIST

DM-TOOLS.CO.UK

Quality Tools, Trusted Service & Expert Advice

D&M Tools has been family owned and managed since 1978. During that time we have earned a reputation with our customers as a trusted partner. Whether you are a trade professional or a DIY enthusiast, our mission is a simple one - **to supply top quality tools at the best value for money, backed up by a service you can trust.**

LOW TRADE PRICES!

Whether you're buying online, by phone, email, post or visiting us in-store, D&M provides you with the widest range of quality hand, power tools and woodworking machinery all at the keenest prices.

OVER 10,000 LINES IN STOCK!

We hold massive stocks, meaning that most items are available for despatch the day you order it. Our website shows up to date stock availability, so you can order with confidence.

SHOP ON-LINE 24HRS A DAY

Visit our easy-to-use website to see what we mean about range and value. Browse and buy with confidence 24hrs a day from the biggest brands in the business, all at prices you'll find hard to beat, you will also find all our **latest offers and deals.**

Subscribe to our regular emails to keep up with our latest deals and offers or join our **D&M Loyalty Scheme** and earn valuable loyalty points every time you shop on-line.

More details on our website

DM-TOOLS.CO.UK

Scan this QR code

73-81 HEATH ROAD • TWICKENHAM • TW1 4AW

020 8892 3813 • SALES@DM-TOOLS.CO.UK

FREE DELIVERY

Delivery to UK mainland addresses is **FREE for most orders over £99,** and for orders under £99 is only £5.95.
See the carriage rates on our website for full details.

020 8892 3813
MON-SAT 8.30am-5.30pm
(CLOSED BANK HOLIDAYS)

D&M TOOLS

VISIT OUR EXTENSIVE TWICKENHAM SUPERSTORE

OUR CUSTOMERS LOVE US!

We are regularly receiving 5 star reviews on the independent review site Trustpilot, as well as testimonials direct from our customers, here are just a few:

★★★★★
"You can choose to buy products anywhere. What you can't buy is service. On the odd occasion tools fail. D&M Tools Staff have a great knowledge of the products they sell. offer unbiased advice and above all else exemplary service, especially when there is an issue. A well run business which will keep me coming back for all my tool needs."

★★★★★
"Super helpful team, phoned in late in the afternoon and said he'd get my order dispatched the same afternoon and like a flash my product turned up super fast! Will be using again very soon!"

★★★★★
"Brilliant service friendly staff lots of knowledge of the tool trade. Like the loyalty points. My number 1 tool supplier."

★★★★★
"**D&M tools have gone the extra mile** with there outstanding support, Nothing is to small for there team, sorted out my order, Really quick, will happily buy more gear from them."

★★★★★
"**Service support was excellent** with a prompt and helpful response to my query. Item was as described and keenly priced."

★★★★★
"**Quality products, great price and quick delivery** well done again."

★★★★★
"**Excellent deal best price around.** Dispatch and delivery quicker than expected and exactly as promised. Will absolutely use again."

Trustpilot

SOME OF OUR LEADING BRANDS

BAHCO
BESSEY
BOSCH
DEWALT
FEIN
FESTOOL
IRWIN
Kreg
mafell creating excellence
makita
metabo PROFESSIONAL POWER TOOL SOLUTIONS
RECORD POWER ESTABLISHED 1909
Snickers WORKWEAR
STANLEY
trend tool technology

@DM_Tools DandMTools dm_tools DMTools1

CHIPPENDALE SCHOOL announces its 2021 international furniture design talent showcase

Leading furniture design school, The Chippendale International School of Furniture, has announced it will be hosting its 36th annual Graduate Exhibition & Sale in September 2021.

The event will take place at the School from Wednesday 8 September to Saturday 11 September 2021 and will showcase an array of fine furniture made by Professional Course students over the last nine months.

The course attracts aspiring woodworkers from around the world and provides students with all the necessary skills to set up and run their own furniture making businesses, covering everything from design techniques to marketing strategies.

The school places a real focus on sustainable practice in cabinetmaking and furniture making. Locally sourced natural materials are employed across the campus, from the timber used to create bespoke furniture items to natural oil finishes, and waste materials such as sawdust are used to heat the workshops during the cold winter months.

On this year's course are 23 students from the UK, Mexico, The Netherlands, USA, Spain, Israel and Russia. One such student is Chris Taylor, founder of Northcote Furniture, who strongly believes in his motto 'sustainability through versalilty', meaning that the furniture he designs will be multifunctional, so that one piece can be used in a variety of settings.

Another of the students, James Weir from Coventry, gave up his career as a Saville Row tailor to pursue a passion for working with wood. Look out for his curvaceous veneered lampshades and sleek set of oak side tables at the Graduate Exhibition.

Tom Fraser, School Principal, comments on the upcoming 2021 Exhibition: "We're delighted to announce the dates of our upcoming 2021 Graduate Exhibition and Sale and are looking forward to celebrating the achievements of students on the Professional Course. This will mark a pivotal moment for graduates as they embark on the next stage of their woodworking journeys and future furniture making careers.

"The exhibition will be open to the public over four days in September and showcased online so that people from around the world can also tune in and enjoy some of the outstanding work our talented students have produced."

Pre-booking for the exhibition and sale is essential and free tickets can be reserved via this link: **https://bit.ly/3wrH2FI**.

Anna Patxot with her completed end table designs

Student Helena Robson finishes off her table design, watched over by whippet Sookie

As with last year, the Chippendale School will also be hosting a virtual showcase so that more visitors can enjoy the exhibition, wherever they're located in the world. Live and pre-recorded videos will be shown on the School's Facebook and Instagram channels as well as being published on the School's website: **www.chippendaleschool.com**.

Power & accuracy meet cordless freedom – HIKOKI launches M1808DA 18V cordless edge trimmer

Rounding off its impressive router range, HiKOKI Power Tools has launched the M1808DA 18V cordless edge trimmer. The latest cordless router innovation from HiKOKI follows hot on the heels of the M3612DA 36V router, powered by its ground-breaking 36V Multi Volt batteries.

Equipped with HiKOKI's highly efficient brushless motor, the M1808DA 18V cordless edge trimmer's winning combination of HiKOKI's 18V battery technology and highly efficient brushless motor delivers a cutting speed that's faster than similar corded trimmers. Furthermore, it guarantees a high level of efficiency – a fully charged BSL1850C battery trims approximately 120 metres of MDF when fitted with a 6mm straight collet.

The M1808DA 18V cordless edge trimmer is equipped with a variety of brilliantly thought-out features that will make the trimming job comfortable and perfectly matched with the needs of the user and material. For instance, speed is easily changed using a variable speed control dial, and bit changing is facilitated by a spindle lock.

The M1808DA also delivers the highest cutting speed and performance in its class and thanks to its perfect ergonomics and switches located near the grip, it's fully operable with only one hand. It accepts collet chucks of both 6mm and 8mm, ready for all common applications, and restart protection offers increased safety.

"The M1808DA rounds off our router range perfectly, with our cordless routers matching power and accuracy with the freedom cordless technology affords," says Nick Chan, Marketing Manager at HiKOKI UK. "We understand what end users need from their tools. These two new cordless routers are a great example of our innovation and the technological refinement of the tools' key features and benefits, which make for awesome power and performance."

For further details on these and other tools and machinery from HiKOKI Power Tools, see **www.hikoki-powertools.co.uk**.

The Woodworker Timber Suppliers Directory – September 2021

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

A Harrison (Northants)
Tel: 01536 725 192
Web: www.aharrisonwoodturning.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: 01621 877 400
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 0SD
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
Web: No website

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

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

W L West & Sons Ltd (Surrey)
Tel: 01798 861 611
Web: www.wlwest.co.uk

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

BEDGEBURY NATIONAL PINETUM awarded ArbNet Level 4 Arboretum Accreditation

Forestry England's Bedgebury National Pinetum in Goudhurst, Kent, has been awarded a Level 4 Accreditation by The ArbNet Arboretum Accreditation Program. This program is the only global initiative to officially recognise arboreta at various levels of development, capacity and professionalism, and Level 4 is the highest accolade that a botanic garden can achieve.

The accreditation programme sets the industry standards, and only 33 out of the 452 accredited arboreta across the globe had reached Level 4 status.

Joining institutions such as The Morton Arboretum and Longwood in the United States, RBG, Sydney in Australia, and Kirstenbosch National Botanic Gardens in South Africa, achieving this level of accreditation puts Bedgebury National Pinetum on the international stage among the top performing arboreta in the world.

Alex Brearley, Forest Management Director for East Forest District of Forestry England, says: "It's a real privilege to manage such an important tree collection at Bedgebury on behalf of the nation. The recognition that Level 4 accreditation brings helps to further highlight the important global conservation work undertaken at the National Pinetum. Achieving this award is testament to the hard work and dedication of our team."

Bedgebury National Pinetum is unique and important on a global scale for species conservation, scientific advancement and the understanding of conifers. The mix of conifers and broadleaved specimens contained in 350 acres of rolling Wealden countryside is awe-inspiring in its size and grandeur. Among these trees, you'll find the planet's largest living organism – the giant redwood or Wellingtonia (*Sequoiadendron giganteum*), and the tallest – the coast redwood (*Sequoia sempervirens*). Bedgebury holds six National Plant Collections – *Chamaecyparis lawsoniana cultivars* (cvs.); *Cryptomeria japonica cvs.*; × *Cuprocyparis leylandii cvs.*; *Juniperus species* (spp.); *Taxus* spp. & cvs and *Thuja* cvs. Keeping these collections ensures they are available for gardeners, nurserymen, researchers, and anyone interested in trees to benefit from as a resource alongside the expertise of the Bedgebury team in managing their care.

The scale and quality of Bedgebury Pinetum's conifer collection make it an ideal 'safe site' for the International Conifer Conservation Programme (ICCP) run by the Royal Botanic Gardens Edinburgh.

A safe site for this programme is a botanic garden that grows plants collected in the wild, as seeds or cuttings, and where regular monitoring and biological data are recorded. The ICCP aims to promote the conservation of conifers through in-situ conservation work, ex-situ conservation work, research and education. Bedgebury Pinetum plays a vital role in conserving the genetic diversity of conifers, particularly those from temperate rainforests.

Being recognised as one of the world's top performing arboreta is a great achievement for Bedgebury Pinetum and highlights the important global conservation work carried out by the tree team. The National Pinetum offers a world-class tree collection where scientists can study, as well as a place where visitors can enjoy the beauty and diversity of conifers. To find out more, see **www.forestryengland.uk**.

MAKITA launches DML810 self-righting site light

Makita has launched a new self-balancing area site light – the latest addition to its range of LED site lighting solutions. The DML810 18V self-righting site light LXT delivers up to 5,500 lumens (lm) and 360° illumination with the option for corded or cordless operation.

Owing to its self-balancing design, the DML810 remains upright even when knocked or bumped, making it ideal for busy sites. The 202 super luminous daylight white LEDs provide high quality illumination without the heat of halogens or incandescent lights. It features three operation modes – High (5,500lm), Medium (3,000lm) or Low (1,500lm) – and three illumination direction modes: full 360° or 180° to the left or right.

For versatility, the DML810 offers corded or cordless operation and utilises two Makita 18V LXT Lithium-ion batteries, using one at a time. This means the light delivers up to 15 hours of continuous illumination on 'Low' with two 5.0Ah 18V batteries, and over three hours on 'High'. When using AC power, the batteries function as a power back up to keep the area lit if the power fails.

The dimensions of this durable light unit are 787mm high × 420mm wide and it's both dust- and water-resistant, with an IP54 rating when using battery power. It's also possible to connect up to eight units together using the AC inlets and outlets to deliver light across the whole job site area. Convenient carrying handles and a balanced side position allow for easy movement, transportation and storage.

With over 270 compatible products, Makita's Lithium-ion LXT battery technology is one of the largest battery/cordless platforms in the world. This allows users to use just one battery type and seamlessly swap between different pieces of equipment as required.

Lyndsey Bailey, Assistant Product Manager at Makita UK, said: "The DML810 18V self-righting site light has been engineered to provide a robust, durable and versatile lighting solution that is suitable for the toughest site conditions. The high quality illumination makes work easier and safer, especially as the LEDs eliminate the hazards associated with the heat of halogen and incandescent lights."

To find out more about this and other products from Makita, visit **www.makitauk.com**.

MACHINE MART – Customers Dream Workshops

Machine Mart is still on the lookout for workshops packed with Clarke tools, big or large, messy or immaculate. The first video in the Machine Mart series is now live, with dedicated Clarke enthusiast Ant showing off his impressive workshop and collection of tools and equipment – watch it here: **www.machinemart.co.uk/dream-workshops/**

Do you have a garage or workshop you'd like to show off? Or perhaps you have an interesting story you'd like to share with others? If so, don't hesitate in getting in touch with Machine Mart – you never know, you and your workshop could feature as the next video in the series.

If you'd like to find out more, get in touch with Machine Mart via social media using **#MachineMart** or email **socialmedia@machinemart.co.uk** with the subject line **'Dream Workshops'**.

Einhell

AVAILABLE AT TOOLSTATION

WOODWORKING OFFERS

~~£149.98~~

£119.98*

SAVE £30

210MM 1600W DOUBLE BEVEL SLIDING MITRE SAW

TE-SM 2131 DUAL

- Power input 1600W
- Saw blade tilts 45 degrees both ways
- Cutting laser guide
- Integral LED light
- Extendable work table
- Includes high grade carbide tipped precision saw blade and dust bag

CODE: 20523

EXPERT

~~£149.98~~

£119.98*

SAVE £30

254MM 2200W TABLE SAW 230V

TC-TS 254 U

- Power input 2200W
- Saw blade 254 x 30mm 24 Teeth
- Cross stop/angle stop (+/- 45°)
- Working table 580 x 555mm
- Dust extraction connection

CODE: 70927

CLASSIC

Einhell

Experts in Power Tools since 1964

einhell.co.uk

*Offer available from June to 6 Sept 2021

3 YEAR WARRANTY EINHELL PRODUCTS

EINHELL GERMANY AG GERMAN DESIGNED QUALITY

CRAFT FESTIVAL brings back Bovey Tracey event for 2021

Craft Festival Bovey Tracey will return from 10–12 September for its 18th year at Mill Marsh Park, Bovey Tracey, Devon. Set in idyllic parkland surroundings on the edge of Dartmoor, the multi-award winning festival is recognised as one of the finest craft events in the UK. Over 200 exhibitors are confirmed to exhibit with many demonstrating their craft.

"After the rollercoaster that was 2020, we're delighted to say that Craft Festival Bovey Tracey is back," says Sarah James, Festival Director. "Over 200 of the UK's finest designer-makers are confirmed to exhibit. As ever we'll showcase the best in British craft, celebrate making and small business from across the country. We can't wait to welcome visitors back to meet the makers, shop, take part in workshops, and enjoy the wider festival atmosphere we know visitors love," she added.

This year, tickets will be limited each day and are available to purchase in advance: **www.ticketsource.co.uk/the-contemporary-craft-festival**.

Craft Festival is a not-for-profit organisation based in Devon, which creates and produces a vibrant programme of the best designer-maker live events hosted in Bovey Tracey, Cheltenham and Bath. In 2020, it launched Digital Craft Festival, which now draws an international audience of over 30,000 online, plus 'Find a Maker', a curated online makers' directory and business advice service.

Craft Festival highlights

As well as meeting and buying from over 200 makers, Craft Festival is a hand-picked collection of skilled craftspeople demonstrating throughout the weekend. StartUP is also a dedicated showcase nurturing new talent from emerging makers in the first two years of business.

Other festival favourites returning include The Forge, with an extravaganza of blacksmithing, and potters, willow sculptors and printmakers will also demonstrate their unique skills.

The very special Out of the Woods showcase, curated by internationally respected basket maker Hilary Burns, will host makers working in willow, hazel, oak and ash, demonstrating spoon carving, basket making and ash pounding.

Popular craft workshops return

According to a recent BBC Arts Great British Creativity Test survey of almost 50,000 people, three quarters of respondents said creativity could help block out stress and anxiety, with almost a quarter naming making or craft practice as their favourite activity.

Craft Festival Bovey Tracey is the ideal opportunity to try a new craft and give yourself time to make, reflect and relax. Participating in making has always been an important part of Craft Festival and hundreds of visitors get involved each year making jewellery, throwing pots, binding books, weaving baskets and creating lithographic prints. Choose from over 20 two-hour workshops being hosted at this year's event. Workshop places are in short supply and should be booked in advance. Full details are available via **www.craftfestival.co.uk/Workshops-BoveyTracey**.

Your safety is a priority

Safety measures planned for the event include socially distanced queuing, crowd management and a one-way system in each marquee to spread visitors out comfortably, enhanced cleaning and waste disposal, cashless transactions where possible, monitoring to ensure safe distancing, masks indoors as well as track and trace check-ins. All measures are subject to change following Government and local guidelines and advice from the Association of Independent Festivals.

Craft Festival Bovey Tracey will be open on Friday, Saturday and Sunday from 9am-5.30pm. Tickets for each day are priced at £10 for adults; concessions – £9; and accompanied children under 18 years enjoy free entry. A weekend three-day ticket costs £19, or £17 for concessions. This year's event includes a limited number of advance tickets, so early booking is advised. For full details, see **www.craftfestival.co.uk**.

Help create a new film with FORESTRY ENGLAND

Forestry England are inviting colleagues from across the forestry industry to help create *Treeline* – a new film by international artist Ruth Maclennan about forests and the climate emergency. To create the film, artist Ruth Maclennan is asking people around the world to record video and sound in their own local forests or woodland where they live or work. You don't need to be a professional cinematographer to contribute and there are just a couple of simple rules to follow so the videos can be edited together.

Co-commissioned by Forestry England and Film and Video Umbrella, *Treeline* will feature forests from across the world, from Australian native bush to subarctic boreal forests, temperate and tropical rainforests, ancient woodland and recently planted trees, urban woodland and rewilding projects. The film aims to depict the unique features, habitats and activities of different forests whilst highlighting the impact of the climate emergency on the world's forests and their importance for mitigating global warming and supporting life.

Forestry England is commissioning and presenting this new artwork to coincide with COP 26, the UN's climate change summit being held in November 2021 in Glasgow. This is when policy and decision makers from across the world will be discussing issues of environmental and ecological significance. This collectively sourced film – depicting our local and national forests alongside international forests – mirrors the collective efforts that are required when facing the phenomenon of climate change.

Mariam Zulfiqar, Forestry England Arts Manager. says: "During the COP 26 summit, the arts will have a vital role to play in bringing together what is at stake and imagining alternative futures. *Treeline* is a fantastic opportunity for us all to come together and make the impact of the climate on the world's forests visible."

The submitted clips will be edited together into a continuous forest landscape encircling the planet, to allow audiences to experience the rhythms of forests – lines, shades, and patterns – and witness the lives of inhabitants, human and otherwise, who dwell near the 'treelines' of the film.

Footage is to be submitted by 10 September 2021 and for full details on what and how to film, as well as how to record sound, visit **www.forestryengland/treeline**.

CLARKE modular storage packages

Clarke's heavy-duty, professional modular storage packages are ideal for those looking to upgrade their garage, workshop, warehouse or shed. Not only do these storage solutions look great, they're also fully customisable, which ensures you can choose according to your exact requirements.

Ideal for both trade and domestic use, there's 10 complete package systems available. Alternatively, you can build your own custom workshop by selecting the individual component parts to suit your space and budget. Whichever option you choose, the benefit of this system is the fact further units can be added as required.

The packages comprise heavy-duty tool chests, floor and wall cabinets, plus accompanying back panels, all finished in a high quality, stylish black and grey metal.

Additional features include:

- Your choice of wood or stainless worktops
- Top quality super smooth ball-bearing drawer runners
- Gas struts to hold top cabinet doors open
- Lockable floor cabinets
- Modular design for easy additions

Package prices start from around £1,000 and you can view the full range here: **www.machinemart.co.uk/c/modular-workshop-systems**.

RUSTINS Advanced Wood Preserver – now available in grey

Rustins is launching a new Grey colour to its successful Advanced Wood Preserver range, which is already available in Clear, Medium Brown, Dark Brown and Green.

Vince McDonagh, Marketing and Design Manager at Rustins, said: "We asked our consumers what they'd like to see next from Rustins and the overwhelming response was for a grey colour in our popular wood finishing range. Consumers love our wood preserver as they don't have to wait for the paint to dry before applying a second coat."

Rustins Advanced Wood Preserver is water-based and therefore low odour and non-flammable. It relies on nanotechnology to give deep penetration into the wood, allowing you to re-coat while the wood is damp. Its performance is much greater than standard wood preservation products and offers long lasting protection against dry rot, wet rot, fungi, wood-boring insects and their larvae.

For more information on this and other products from Rustins, see **www.rustins.co.uk**.

What's new from

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

D&M TOOLS

NEW MACHINES FROM HOLZMANN

MANUFACTURER: Holzmann
D&M GUIDE PRICE: See our website

We've added a range of new products to our growing selection of Holzmann woodworking machines. These include the **TK255 sawbench**; **KAP305ECO DB mitre saw**; **HOB260ABS 240V 254 ×160mm planer/thicknesser**; **TS200 240V table saw with 1,100W induction motor and 200mm blade with sliding table carriage**; and the **TK305 305mm DUO circular sawbench & mitre saw**. All products include free delivery. See our website for full details and other Holzmann machinery, including panel saws, plunge saws, scrollsaws and spindle moulders.

TK255 sawbench

KAP305ECO DB mitre saw

HOB260ABS 240v 254 × 160mm planer/thicknesser

TS200 240V table saw with 1,100W induction motor and 200mm blade with sliding table carriage

TK305 305mm DUO circular sawbench & mitre saw

FESTOOL 240V/110V OF1010 REBQ-PLUS ROUTER

MANUFACTURER: Festool
D&M GUIDE PRICE: See our website

The new OF 1010 R router from Festool is extremely versatile, extremely precise and extremely easy to handle. Whether guided freely or on the guide rail, the OF 1010 R router is the ideal tool for fine routing work. A compact size and low weight allow it to be accurately guided along edges, lines or curves, and for routing profiles, grooves, rebates and dovetail joints, the OF 1010 R impresses with a wide variety of possible applications.

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

D&M TOOLS

THE TOOL SUPERSTORE

HAND, POWER TOOLS & MACHINERY SPECIALIST

DM-TOOLS.CO.UK

EXTENSIVE RANGE OF HAND TOOLS

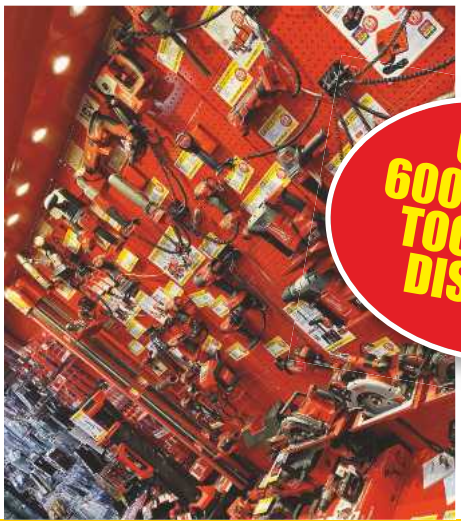
Have you visited us at our Twickenham Superstore?

With over 600 power tools on display from all the leading manufacturers, as well as an extensive range of hand tools and accessories our Superstore is well worth a visit!

We also have an area dedicated to a wide selection of woodworking machinery by leading manufacturers including Record Power and Scheppach, which is available to view on request.

Our fully trained and experienced staff are always on hand to help or advise you on your purchase.

So whether you are shopping with us on-line or in-store you can be assured of the highest level of service and care.



OVER 600 POWER TOOLS ON DISPLAY

73-81 HEATH ROAD • TWICKENHAM • TW1 4AW

020 8892 3813 • SALES@DM-TOOLS.CO.UK

MON-SAT 8.30am-5.30pm (CLOSED BANK HOLIDAYS)

IVAC 230V SWITCH BOX & FILL LEVEL METER

Geoff Ryan looks at two handy workshop accessories from **Toolovation**, which allow you to take control of dust in your workshop

I've always taken the dangers of wood dust seriously and try to control it at source where practicable. I have a 100mm ducted extraction system in my workshop and also a workshop vac. Both systems have fine filters and are fitted with cyclones to keep the filters as clear as possible. The ducted system deals with all the big machines and the vac deals with sanders, routers, pocket-hole jig, plunge cut saw, and other powered hand tools. I also have a workshop air filter system, which I run as required and if things are going to get really dusty, such as sanding on the lathe, I wear a Trend Airshield Pro.

The iVAC Switch Box is supplied excellently packaged and a glossy user manual tells you all you need to know. There's also a short power lead and two sockets mounted on the front: one for the power tool and one for the vacuum

Power tool take off

My workshop vacuum is nothing fancy – an inexpensive Performance Power 1,250W with power tool take off. This has given me many years of good service and I appreciate the convenience of the take off as the vacuum starts automatically when the tool is switched on. The cyclone is amazingly efficient and it's been over two years since I changed the dust bag in the vac even though it gets regular use. Last year, however, the take off system stopped working. I stripped it down and was able to repair it – I'm a retired electrical engineer, but please don't meddle with electric if you're unsure what you're doing. A couple of months ago, it failed again and was beyond repair. Faced with the prospect of having to buy another complete 'shop vacuum, I instead explored the availability of a separate control box. There are switch box devices available for hundreds of pounds, but I came across one for just under £70 on the Toolovation website – the iVAC Switch Box. After checking out some reviews on YouTube, I decided it would be a suitable solution.

As these types of device are connected to a single 13amp plug, the maximum total load – power tool plus vacuum – that can be accommodated is 2,900W

iVAC Switch Box

The price included delivery by Royal Mail and it arrived four days after I placed the order. Packaging was excellent and the included glossy colour user manual was the best I've seen in a long time. Some self-adhesive stickers are also included together with some brochures for other items sold by Toolovation. The box has a short power lead – 3ft or approximately 900mm – and two sockets on the front: one for the power tool and one for the vacuum. The control switch has three positions: Auto – the vacuum will start automatically when the power tool is turned on; 'Off' – the vacuum is permanently off; and 'On' – the vacuum is permanently on, which is useful if you want to use the vac but not the power tool.

The switch has a soft rubber cover to keep dust out and a 13amp circuit breaker is mounted on the front. An external earth terminal is provided if you want to connect a separate earth lead to your vacuum or extractor, although this isn't generally required. As these types of device are connected to a single 13amp plug, the maximum total load – power tool plus vacuum – that can be accommodated is 2,900W.

User adjustments

When a motor starts, the starting current can be several times the full load current, and if both power tool and vacuum were to be powered up simultaneously, the high current might trip the breaker. To avoid this, there's a short, one second delay before the vacuum is switched on. You can change this to two seconds if you prefer, and this is done by removing the small cover on the rear of the box and altering the position of one of the small switches. Similarly, when the power tool is turned off, the vacuum will continue to run for eight seconds to ensure all dust is cleared from the tool and its hoses – again, this can be adjusted to 16 seconds if desired.

Using the box's four mounting lugs, I mounted it to my mobile vacuum. To overcome the limitations of the supplied short power cable, I added an extension lead with a single rubber socket

The Fill Level Meter arrived in two separate packages: one containing the device and the other a 5V USB type power supply with a selection of pin types, including a UK compatible one

The cable between sensor module and display module and the power cable between display module and power supply, are both a little longer than the 2.6m stated in the manual

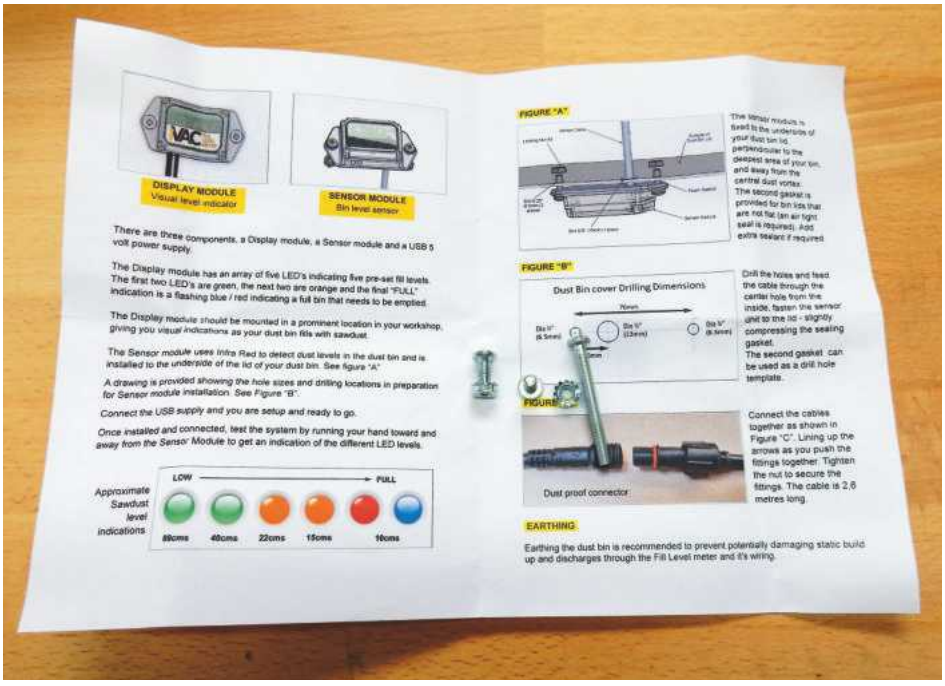
One other user adjustment available is the setting of threshold current taken by the power tool required to turn the vacuum on. This is factory set at 150mA but can be changed to 250mA or 500mA. This is all clearly explained in the manual and a table on the rear of the switch box contains all the settings required; however, the vast majority of users won't need to change any of the factory settings, so it's all quite straightforward. One important point to note is that this type of device won't work with vacuums/extractors fitted with an NVR – No Volt Release – switch.

Mounting & customising the Switch Box

There are four mounting lugs on the box, which allow you to mount it on the wall next to a fixed extractor, or, as in my case, on a mobile vacuum. I was able to remove a handle on top of my vacuum and, after checking there was sufficient clearance inside the top cover, screw the box directly onto the top with some self-tapping screws. The only problem with this arrangement is that, when no power tool is plugged in, dust and chippings might lodge in the socket holes and get pushed into the socket when a plug is inserted, so it's important to clear away any debris beforehand. One other issue is the short length of power cable provided – to overcome this, I added an extension lead with a single rubber socket.

Conclusion

I've been using this setup for about a month now and it's been subjected to almost daily use with a mitre saw, router and random orbital sander. In terms of performance, it's been fine although the vac start delay feels like it's slightly longer than one second. I was able to complete a small cut on my mitre saw before the vacuum started... If wearing ear protection, I just keep an eye on the vac and watch to see it give a kick as it starts up, then I begin cutting. The switch off delay is perfect, however.



The mounting bolts supplied were too short for my system, but luckily I had some suitable alternatives

iVac Fill Level Meter

The sales literature supplied with the Switch Box also included information about a Fill Level Meter for dustbins. This was of interest to me as the only way to check the bin on my big extractor system is to disconnect the hoses and lift the heavy cyclone and lid assembly off manually. I had a look on the Toolovation website and

Lifting the lid on the dustbin is a very awkward task. The cable from the Sensor Module runs through a hole in the wall from my extractor cupboard into the workshop

The sensor head needs to be fixed in a position where it's perpendicular to the deepest part of the bin and away from the central dust vortex

decided it would meet my needs. At just over £65 including delivery, it seemed like a good option.

Packaging of the Fill Level Meter was good although not quite as fancy as the Switch Box. Two separate boxes arrived: one containing the device and the other a 5V USB type power supply with a selection of pin types, including a UK compatible one. The instruction manual was well written with colour photos and bolts included for mounting the sensor head to the lid of the dustbin.

Set up

The cable between sensor module and display module and the power cable between display module and power supply are both a little longer than the 2.6m stated in the manual, and should be adequate for most installations. To allow the sensor module cable to be passed through a 13mm hole in the lid of the dustbin, a dust-proof 3-pin connector allows the cable to be split.

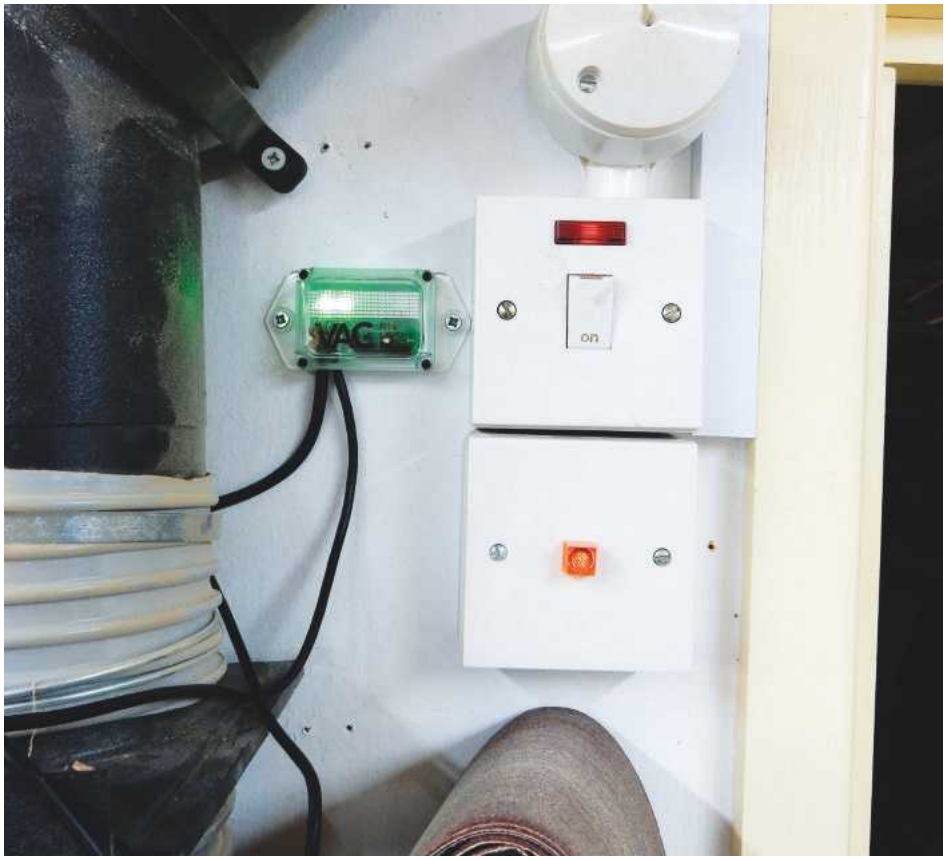
The mounting bolts supplied were too short for my system, as I have a 19mm plywood panel on top of the lid to support the weight of the steel cyclone. This didn't pose a problem, however, as I already had some suitable bolts.

The cable from the Sensor Module runs through a hole in the wall from my extractor cupboard into the workshop. The sensor head needs to be fixed in a position where it's perpendicular to the deepest part of the bin and away from the central dust vortex. The rear of the sensor has a thin foam rubber gasket stuck to it, which ensures an air tight seal. A second gasket is supplied for situations where the inside of the lid isn't flat. The Display Module is mounted next to my extractor controls. I have a 45amp pull switch attached to a cord that runs the length of my workshop through eyelets screwed into the ceiling, which allow me to turn it on and off from any position. When the extraction is running, the bottom orange LED is lit as I'm unable to hear it running when wearing ear protection. Note that most pull switches are only rated at 5 or 6 amps for lighting circuits and as such, aren't suitable for controlling loads like a large extractor, for example.

The LED display on the Module is bright and easy to see with different colours indicating the level of dust. When the dust extractor is running, the level indication may not be accurate due to suspended dust particles, so it's best observed when switched off. Also, the Sensor Module will need to be wiped occasionally to maintain performance. The manual recommends earthing of metal bins to help prevent static build up and possible damage to the unit. In my case, I already have a copper earth wire running through the plastic ducting system, connected to the metal cyclone. Static discharge is a real risk and I've had nasty shocks from flexible hoses with spiral wire support in them when used on a thickness sander.

Conclusion

Since fitting the system, I haven't yet filled the bin to the top but I've undertaken a number of tests by putting buckets upside down, covered in sawdust, inside the main bin in order to gauge the response. Even with a layer of dust covering the sensor, it worked as it should and I'm confident I can rely on it going forward.



The Display Module is mounted next to my extractor controls

SPECIFICATION

iVAC Switch Box

- Automated dust control – for your health, safety and convenience
- 1 or 2 second vacuum 'ON' delay – user configurable
- 8 or 16 second vacuum 'OVER-RUN' – user configurable
- Manual control option for added convenience and remote switching
- Use less power – vacuum is only 'ON' when required
- Reduced noise – vacuum turns 'OFF' when not required
- Use with any vacuum – up to 2,700W power rating
- Four fixing tabs – allows you to mount on your wall, bench or vacuum
- Earth terminal provided for grounding accessories

Typical price: £69.54

THE VERDICT

PROS

- Well packaged; excellent documentation; simple to use; user configurable if required; good layout and clear labelling; works well; good value

CONS

- Short lead; start-up delay feels slightly longer than necessary

RATING: 4.5 out of 5

SPECIFICATION

Fill Level Meter

- Gives visual indications of your drum's sawdust level
- Flashing warning as the drum nears full capacity
- 2.6m connection wire
- Bright LEDs show up even in bright light conditions
- Fast and easy installation

Typical price: £63

THE VERDICT

PROS

- Well packaged; excellent documentation; straightforward to install; easy to understand indication; good value

CONS

- Other than the supplied bolts not being long enough for my application, I can't think of anything else

RATING: 5 out of 5

Both items are available from Toolovation through the main website – **www.toolovation.co.uk** – or eBay shop – **www.ebay.co.uk/str/toolovation** – where items may be slightly cheaper as there's no postage charge

CREATE YOUR OWN

Tormek T-8 Custom

Every craftmanship is unique. Every tool is unique.
We believe your sharpening system should be the same.
With Tormek T-8 Custom you can now choose your grinding wheel, honing wheel and add the right jigs and accessories for your unique craft or tool. Create your own Tormek T-8 Custom and explore the possibilities.

MADE IN SWEDEN

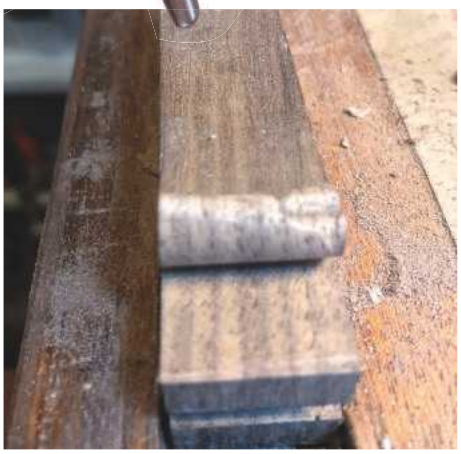
TORMEK®
Sharpening Innovation

HENRY TAYLOR BEVEL EDGE CHISELS

You'd be hard pressed to find a decent set of chisels that keep such a sharp edge at this price elsewhere, says **Simon Frost**

The chisels required some flattening prior to sharpening, but no more than expected

The stained beech handles are durable and attractive, although I found the rounded profile wasn't ideally suited for fine work with smaller chisels



Paring is a pleasure using such sharp tools

In terms of price, this set of five bevel edge chisels from Henry Taylor sits comfortably in the mid-range, at £130 for the set, including a basic fabric tool roll. More expensive than run-of-the-mill DIY chisels and not as costly as some professional tools, it's unusual to find a set of such high-quality chisels as reasonably priced.

At blade sizes of 25mm, 19mm, 12mm, 9mm and 6mm, it's an excellent all-round set. Most woodworkers are unlikely to need bevel edge chisels in sizes beyond this range very often, although if you're hand-cutting dovetails, you'll need to purchase a 3mm or smaller chisel separately for daintier sets of pins.

Long-lasting edge

I flattened the backs of all five blades using my sharpening films adhered to dead-flat float glass, and although they varied in flatness a little, none were out of flat any more than one would expect from a new set. The blades are hand-forged in Sheffield from high speed steel, and due to their hardness, take a bit of work on the films – or stones – and final stropping to get deadly sharp, but this results in an edge that lasts very well indeed.

Handles & ferrules

The handles are an attractive dark stained beech and secured with handsome brass ferrules, making them suitable for use with or without a mallet. They're well balanced and nicely finished, although I found the rounded profile a little bulky when applied to the smaller blade sizes, and felt a further refined handle shape providing more secure grip would be better suited to finer work.

The blades are perfectly adept at cleaning up waste from dovetails, although I felt the handle shape was better suited to less intricate work

These can site in a knife line and chop through hardwood with ease, although the smallest chisel in this set won't do for daintier dovetails

I daresay that many would be tempted to remove the jarring red 'Diamic' stickers from the handles, too, but that's a matter of personal preference.

Conclusion

If desired, wooden handles can always be adapted or replaced by the user – what matters most is that cutting edge. These chisels are capable of paring beautifully smooth, thin slithers of material and chopping waste very cleanly and accurately from hardwoods. You'd be hard pressed to find a decent set of chisels that keep such a sharp edge at this price elsewhere.

SPECIFICATION

Blade length: Approximately 125mm (5in)
The set includes: F55 – ¼in (6mm); F56 – ⅜in (9mm); F57 – ½in (12mm); F59 – ¾in (19mm); F60 – 1in (25mm)

Typical price: £130
Web: www.classichandtools.com

THE VERDICT

PROS

- Excellent value for money; keep a sharp edge very well

CONS

- Handles can be a little cumbersome for fine work

RATING: 4.5 out of **5**

NEW STORE NORTHAMPTON OPENS AUGUST!

Machine Mart

65 SUPERSTORES NATIONWIDE

Britain's Tools & Machinery Specialist!

Clarke 10" TABLE SAW WITH STAND

CTS16

- 1600W motor
- 250mm blade size
- 0-45° tilting blade
- Cutting depth: 73mm at 90° / 53mm at 45°

£109.98 EXC.VAT
£131.98 INC.VAT

INCLUDES LEFT & RIGHT TABLE EXTENSION

Clarke 4" BELT/ 6" DISC SANDER

CS4-6E

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

£99.98 EXC.VAT
£119.98 INC.VAT

BEST SELLER

"Excellent machine, very solid and exactly as described. Very happy with the purchase" See www.machinemart.co.uk

Clarke 10" TABLE SAW WITH EXTENSION TABLES (250mm)

CTS14

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

£129.98 EXC.VAT
£155.98 INC.VAT

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

Clarke 8" TABLE SAW

CTS800B

- 600W motor
- 200mm blade dia.

ONLY £72.99 EXC.VAT
£87.59 INC.VAT

Clarke MULTI FUNCTION TOOL WITH ACCESSORY KIT

- Great for sawing, cutting, sanding, polishing, chiselling & much more
- Variable speed

£36.99 EX.VAT
£44.39 INC.VAT

CMFT250

Clarke GARAGES/WORKSHOPS

FROM ONLY £259.00 EXC.VAT
£310.80 INC.VAT

IDEAL ALL-WEATHER PROTECTION

BRIGHT WHITE INTERIOR

LENGTH UP TO 24'

- Ideal for use as a garage/workshop
- Extra tough triple layer weatherproof cover
- Heavy duty powder coated steel tubing
- Ratchet tight tensioning

ZIP CLOSE DOOR

MODEL	SIZE (LxWxH)	EXC.VAT	INC.VAT
CIG81015	4.5 x 3 x 2.4M	£259.00	£310.80
CIG81216	4.8 x 3.7 x 2.5M	£299.00	£358.80
CIG81020	6.1 x 3 x 2.4M	£319.00	£382.80
CIG81220	6.1 x 3.7 x 2.5M	£379.00	£454.80
CIG81224	7.3 x 3.7 x 2.5M	£459.00	£550.80

Clarke 1" BELT/ 5" DISC SANDER

- Includes 2 tables that tilt & lock

£74.99 EX.VAT
£89.99 INC.VAT

CBS1-5B

- Quality Induction 250W motor

Clarke DRILL PRESSES

- Range of precision bench & floor presses for enthusiast, engineering & industrial applications

B = Bench mounted
F = Floor standing

FROM ONLY £69.98 EXC.VAT
£83.98 INC.VAT

MODEL	MOTOR (W) SPEEDS	EXC. VAT	INC. VAT
CDP5EB	350 / 5	£69.98	£83.98
CDP102B	350 / 5	£84.99	£101.99
CDP152B	450 / 12	£159.98	£191.98
CDP202B	450 / 16	£199.00	£238.80
CDP10B	370 / 12	£199.98	£239.98
CDP352F	550 / 16	£239.00	£286.80
CDP452B	550 / 16	£249.00	£298.80
CDP502F	1100 / 12	£598.00	£717.60

CDP152B

Clarke 4" BELT/ 8" DISC SANDER

- Includes two tables
- 550W 230V motor

£169.00 EXC.VAT
£202.80 INC.VAT

CS4-8

Clarke DUST EXTRACTOR/ CHIP COLLECTORS

CWVE1

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

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

MODEL	MOTOR	FLOW RATE	BAG CAP.	EXC.VAT	INC.VAT
CWVE1	1100W	183 M3/h	50Ltrs	£109.98	£131.98
CDE35B	750W	450 M3/h	56Ltrs	£159.95	£191.94
CDE7B	750W	850 M3/h	114Ltrs	£169.98	£203.98

Clarke PLUNGE SAWS

CPS160

INC. 2X 700mm GUIDE RAILS

MODEL	MOTOR	EXC.VAT	INC.VAT
CPS85	550W	£59.98	£71.98
CPS160	1200W	£119.00	£142.80

Clarke BELT SANDERS

CBS2

Makita

- Ideal for surface removal, sanding and finishing

FROM ONLY £37.99 EXC.VAT
£45.59 INC.VAT

ABRASIVE SANDING BELTS IN STOCK

MODEL	MOTOR	M/MIN	EXC.VAT	INC.VAT
Clarke BS1	900W	380	£37.99	£45.59
Clarke CBS2	1200W	480	£79.98	£95.98
Makita 9911	650W	75-270	£99.98	£119.98

Clarke CIRCULAR SAWS

- Great range of DIY and professional saws
- Ideal for bevel cutting (0-45°)

FROM ONLY £44.99 EXC.VAT
£53.99 INC.VAT

CON185

*Includes laser guide

MODEL	MOTOR	MAX CUT 90/45 (mm)	EXC.VAT	INC.VAT
CCS185B	1200W	65/44	£44.99	£53.99
CON185*	1600W	60/40	£59.98	£71.98

Clarke DISC SANDER (305MM)

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

£144.99 EXC.VAT
£173.99 INC.VAT

CDS300B

Clarke ELECTRIC POWER FILE

CPF13

- Variable belt speed
- Tilting head

*Black & Decker

FROM ONLY £49.98 EXC.VAT
£59.98 INC.VAT

ARM ADJUSTS

MODEL	MOTOR	BELT SIZE (mm)	EXC.VAT	INC.VAT
CPF13	400W/230V	13x457	£49.98	£59.98
KA900E*	350W/230V	13x455	£59.98	£71.98

Clarke DETAIL SANDERS

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

CDS-1V

ONLY £26.99 EXC.VAT
£32.39 INC.VAT

280W

ALL MODELS INC. SANDING SHEETS

Clarke SHEET SANDERS

CON320

- Ergonomic design for optimum comfort

VARIABLE SPEED

FROM ONLY £24.99 EXC.VAT
£29.99 INC.VAT

MODEL	SHEET SIZE	MOTOR	EXC.VAT	INC.VAT
COS210	190X90mm	200W	£24.99	£29.99
CON320	230X115mm	320W	£35.99	£43.19

Clarke 18V CORDLESS LI-ION STAPLE / NAIL GUN

- Includes 300 nails and 400 staples
- 1x 2Ah 18V Li-Ion battery

SPARE NAILS / STAPLES IN STOCK

1x2Ah

Powered by Li-ion

CONSN18LIC

ELECTRIC AND CORDLESS MODELS IN STOCK

ONLY £119.98 EXC.VAT
£143.98 INC.VAT

Clarke CONTRACTOR 18V BRUSHLESS COMBI DRILLS

- 2 forward and reverse gears

FROM ONLY £99.98 EXC.VAT
£119.98 INC.VAT

Powered by Li-ion

4Ah Li-Ion

CON180LI

MODEL	VOLTS	BATTERIES	EXC. VAT	INC. VAT
CON18LIC	18V	2x 2.0Ah Li-Ion	£99.98	£119.98
CON180LI	18V	2x 4.0Ah Li-Ion	£129.00	£154.80

Clarke POWER PLANERS

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

CON950

MODEL	WIDTH OF CUT	MOTOR	EXC.VAT	INC.VAT
CEP450	60mm	450W	£34.99	£41.99
CEP720	82mm	720W	£44.99	£53.59
CON950	110mm	950W	£69.98	£83.98

Clarke 3-IN-1 MULTI SANDER

CMS200

ONLY £46.99 EXC.VAT
£56.39 INC.VAT

1/3 SHEET SANDER

DISC SANDER

Clarke PALM SANDERS

- Ideal for detail sanding of corners & hard to reach areas

CPS125

ONLY £19.98 EXC.VAT
£23.98 INC.VAT

INC DUST EXTRACTION

Clarke HIGH VELOCITY FANS

GIANT SIZES UP TO 36"

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

MODEL	SIZE	EXC.VAT	INC.VAT
CBF20	20"	£36.99	£44.39
CFF18B100	18"	£39.98	£47.98
CFF18C100	18"	£39.98	£47.98
CPF18B100	18"	£49.98	£59.98
CAMAX24	24"	£169.00	£202.80
CAMAX30	30"	£219.00	£262.80
CAMAX36	36"	£269.00	£322.80

Clarke VENTILATORS

FROM ONLY £159.98 EXC.VAT
£191.98 INC.VAT

CAM400 CON500

MODEL	SIZE	AIR FLOW	EXC.VAT	INC.VAT
CON305 (110V)	12"	3900m³/hr	£159.98	£191.98
CON350 (110V)	12"	3900m³/hr	£199.98	£239.98
CAM400 (230V)	16"	7200m³/hr	£299.00	£358.80
CON400 (110V)	16"	7200m³/hr	£329.00	£394.80
CAM500 (230V)	20"	9900m³/hr	£359.00	£430.80
CON500 (110V)	20"	9900m³/hr	£379.00	£454.80

VAC KING WET & DRY VACUUM CLEANERS

- Compact, high performance wet & dry vacuum cleaners for use around the home, workshop, garage etc.

FROM ONLY £49.98 EX.VAT
£59.98 INC.VAT

* SS = Stainless Steel

MODEL	MOTOR	CAPACITY DRY/WET	EXC. VAT	INC. VAT
CVAC20P	1250W	16/12ltr	£49.98	£59.98
CVAC20SS*	1400W	16/12ltr	£62.99	£75.59
CVAC20PR2	1400W	16/12ltr	£64.99	£77.99
CVAC25SS*	1400W	19/17ltr	£69.98	£83.98
CVAC30SSR*	1400W	24/21ltr	£92.99	£111.59

Clarke RANDOM ORBITAL SANDER

- Adjustable front handle improves control
- 7000-14000rpm

CROS3

INC DUST BAG AND SELECTION OF 125MM DIAMETER SANDING DISCS

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

Clarke OSCILLATING BOBBIN SANDER

COBS1

- Dust collection port
- Inc. 6 sanding sleeves/bobbins

£139.98 EXC.VAT
£167.98 INC.VAT

Clarke BOLTLESS SHELVING/ BENCHES

- Simple fast assembly in minutes using only a hammer

FROM ONLY £33.99 EX.VAT
£40.79 INC.VAT

150 KG (evenly distributed) Strong 9mm fibreboard shelves PER SHELF

CHOICE OF 5 COLOURS
RED, BLUE, GREY, SILVER & GALVANISED STEEL

350 KG (evenly distributed) Strong 12 mm fibreboard shelves PER SHELF

MODEL	DIMS WxDxH(mm)	EXC.VAT	INC.VAT
150kg	800x300x1500	£33.99	£40.79
350kg	900x400x1800	£52.99	£63.59

Clarke WHETSTONE SHARPENER (200MM)

CWS200B

- Produces razor sharp cutting edges on chisels, planes, etc.
- Inc. 3 tool holding jigs, workpiece clamp & support frame, polishing paste & water trough

ONLY £126.99 EXC.VAT
£152.39 INC.VAT

Clarke PLANERS & THICKNESSERS

CPT800

- Ideal for DIY & Hobby use
- Dual purpose, for both finishing & sizing of timber

FROM ONLY £199.98 EXC.VAT
£239.98 INC.VAT

MODEL	PLANING WIDTH	MAX THICK. CAPACITY	EXC. VAT	INC. VAT
CPT600	6" (152mm)	120mm	£199.98	£239.98
CPT800	8" (204mm)	120mm	£249.98	£299.98
CPT1000	10" (254mm)	120mm	£339.00	£406.80

Clarke OSCILLATING BELT & BOBBIN SANDER

- Sand concave, convex, straight or multi-curved pieces
- Dust collection port
- Inc. sleeves, drum & belt

£189.00 EXC.VAT
£226.80 INC.VAT

COEBS1

PAY Monthly

- Spread the cost over 18, 24, 36 or 48 months
- Any mix of products over £300
- 18.9% APR, 10% Deposit*

5 MIN APPLICATION!

EASY TO USE WEBSITE

NOW OVER 21,000 PRODUCTS ONLINE!

For hard-to-find, specialist items visit the Xtra section on machinemart.co.uk

FREE 500 PAGE CATALOGUE

Over 400 PRICE CUTS & NEW PRODUCTS

GET YOUR FREE COPY NOW!

- IN-STORE
- ONLINE
- PHONE

0844 880 1265

Clarke 40" WOODTURNING LATHE

Ideal for woodturning in the workshop

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

BENCH MOUNTED

CWL1000B

ONLY £139.98 EXC.VAT £167.98 INC.VAT

BEST SELLER

LOCKABLE TAILSTOCK

Clarke 40" WOODTURNING LATHE WITH COPY FOLLOWER

Ideal for DIY, furniture or joinery workshops where repeat quantities are required

• Large 980mm distance between centres • Variable speeds 600-2200rpm • Inc. copy follower assembly, tool rest, drive centre tail stock assembly, face plate, eye shield, 2 chisels & stand

INCLUDES COPY FUNCTION

ONLY £398.00 EXC.VAT £477.60 INC.VAT

INCLUDES STAND

CWL1000CF

Clarke BENCH BANDSAWS

• Produces fast, precise mitre & longitudinal cuts • 250W motor • 8" throat size • Cuts in all types of woods

£109.98 EXC.VAT £131.98 INC.VAT

CBS205

NEW

• Great for both home & professional use • Induction 300W motor • Table tilts up to 45° • 9" throat size

£199.98 EXC.VAT £239.98 INC.VAT

REMOVABLE DUST TRAY

CBS225

Clarke PROFESSIONAL BANDSAWS

Top Quality Bandsaws - ideal for professional workshop use. Strong steel body with solid cast iron table

• Table tilts 45° • Adjustable blade guide • Supplied with stand, 4TPI wood cutting blade, rip fence, mitre guide, mitre gauge and push stick • Induction motors • Includes stand

MAGNIFIED MITRE GUIDE

QUICK RELEASE FENCE

DRIVE-BELT TENSIONING

SOLID GROUND CAST IRON TABLE

CBS300

FROM ONLY £209.00 EXC.VAT £250.80 INC.VAT

MODELS ALSO FEATURE:

MULTI-STEP DUST EXTRACTION OUTLET

FLEXIBLE LED WORKLIGHT

REMOVABLE DUST TRAY

BLADE TENSIONING CONTROL

MODEL	THROAT DEPTH	MAX CUT 90°	MAX CUT 45°	EXC. VAT	INC. VAT
CBS250C	245mm/10"	115mm	65mm	£209.00	£250.80
CBS300	305mm/12"	165mm	115mm	£449.00	£538.80
CBS350	340mm/14"	225mm	160mm	£569.00	£682.80

TURBO AIR COMPRESSORS

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

FROM ONLY £99.98 EXC.VAT £119.98 INC.VAT

8/260

ALSO HUGE RANGE OF CLARKE AIR TOOLS IN-STORE & ONLINE

MODEL	MOTOR	CFM	TANK	EXC.VAT	INC.VAT
8/260	2HP	7.5	24ltr	£99.98	£119.98
11/260	2.5HP	9.5	24ltr	£119.98	£143.98
8/550	2HP	7.5	50ltr	£129.98	£155.98
11/550	2.5HP	9.5	50ltr	£149.98	£179.98

Clarke 13" MINI WOOD LATHE

£169.98 EXC.VAT £203.98 INC.VAT

CWL325V

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

Clarke STATIC PHASE CONVERTERS PC60

• Run big 3 phase woodworking machines from 1 phase supply • Variable output power to match HP of motor to be run

CONVERT 230V 1PH TO 400V 3PH

FROM ONLY £249.00 EXC.VAT £298.80 INC.VAT

MODEL	MAX. MOTOR HP	FUSE	EXC.VAT	INC.VAT
PC20	2HP	10Amps	£249.00	£298.80
PC40	3.5HP	20Amps	£289.00	£346.80
PC60	5.5HP	32Amps	£339.00	£406.80

Clarke ROUTERS

CONTRACTOR

• Powerful heavy duty machines ideal for trade and DIY use

FROM ONLY £44.99 EXC.VAT £53.99 INC.VAT

CR4

MODEL	MOTOR (W)	PLUNGE (mm)	EXC.VAT	INC.VAT
CR1200	1200	0-55	£44.99	£53.99
CR4	2000	0-66	£89.98	£107.98

Clarke GRINDERS & STANDS

• Stands come complete with bolt mountings and feet anchor holes

6" & 8" AVAILABLE WITH LIGHT

STANDS FROM ONLY £47.98 INC.VAT

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

With sanding belt *8" whetstone & 6" drystone

MODEL	DUTY	WHEEL DIA.	EXC.VAT	INC.VAT
CBG6RP	DIY	150mm	£36.99	£44.39
CBG6250	HD	150mm	£39.98	£47.98
CBG6RZ	PRO	150mm	£44.99	£53.99
CBG6SB#	PRO	150mm	£59.98	£71.98
CBG8W* (wet)	HD	150/200mm	£64.99	£77.99

RECIPROCATING SAWS

FROM ONLY £37.99 EXC.VAT £45.59 INC.VAT

CON850

BEST SELLER

• 850W motor • 24mm stroke length • Includes 3 wood & 3 metal blades

MODEL	MOTOR (W)	EXC.VAT	INC.VAT
CRS710V	710W	£37.99	£45.59
CON850	850W	£54.99	£65.99

Clarke MITRE SAWS

• For fast, accurate cross, bevel & mitre cutting in most hard & soft woods • 2000W motor • Laser guide

FROM ONLY £139.98 EXC.VAT £167.98 INC.VAT

CMS10S2B

NEW

MODEL	BLADE DIA/BORE (mm)	MAX CUT DEPTH/ CROSS	EXC.VAT	INC.VAT
C2MS210MP	216/30	65/305	£139.98	£167.98
CMS10S2B	255/30	90/340	£159.00	£190.80
C2MS250MP	255/30	90/305	£179.00	£214.80

Clarke WOODWORKING VICES

Record

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

WV7

MODEL	MOUNTING	JAW (WIDTH/OPENING /DEPTH)mm	EXC.VAT	INC.VAT
Clarke CHT152	Bolted	150/152/61	£14.99	£17.99
Record TV75B	Clamped	75/50/32	£22.99	£27.59
Clarke WV7	Bolted	180/205/78	£33.99	£40.79

Clarke JIGSAWS

CONTRACTOR

CON750

BEST SELLER

FROM ONLY £25.99 EXC.VAT £31.19 INC.VAT

*DIY #Professional

MODEL	POWER (W)	DEPTH OF CUT (WOOD/STEEL)	EXC. VAT	INC VAT
CON750#	750W	80/10mm	£25.99	£31.19
Bosch PST700E*	500W	70/4mm	£44.99	£53.99

Clarke SCROLL SAWS

• 50mm max cut thickness • Air-blower removes dust from cutting area • Table tilts 0-45°

FROM ONLY £84.99 EXC.VAT £101.99 INC.VAT

CSS400C

BEST SELLER

MODEL	MOTOR	SPEED RPM	EXC. VAT	INC. VAT
CSS400D	120W	400-1600	£84.99	£101.99
CSS16VB	90W	550-1600	£99.98	£119.98
CSS400C	90W	550-1600	£129.00	£154.80

Clarke 12" DOVETAIL JIG

£59.98 EXC.VAT £71.98 INC.VAT

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

1000's Xtra SPECIALIST WOODWORKING TOOLS ONLINE – MACHINEMART.CO.UK

VISIT YOUR LOCAL SUPERSTORE

OPEN MON-FRI 8.30-6.00, SAT 8.30-5.30, SUN 10.00-4.00

BARNSLEY Pontefract Rd, Barnsley, S71 1EZ	01226 732297	**EXETER** 16 Trusham Rd. EX2 8QG	01392 256 744
B'HAM GREAT BARR 4 Birmingham Rd.	0121 358 7977	**GATESHEAD** 50 Lobley Hill Rd. NE8 4YJ	0191 493 2520
B'HAM HAY MILLS 1152 Coventry Rd, Hay Mills	0121 7713433	**GLASGOW** 280 Gt Western Rd. G4 9EJ	0141 332 9231
BOLTON 1 Thynne St. BL3 6BD	01204 365799	**GLOUCESTER** 221A Barton St. GL1 4HY	01452 417 948
BRADFORD 105-107 Manningham Lane. BD1 3BN	01274 390962	**GRIMSBY ELLIS WAY,** DN32 9BD	01472 354435
BRIGHTON 123 Lewes Rd, BN2 3QB	01273 915999	**HULL** 8-10 Holderness Rd. HU9 1EG	01482 223161
BRISTOL 1-3 Church Rd, Lawrence Hill. BS5 9JJ	0117 935 1060	**ILFORD** 746-748 Eastern Ave. IG2 7HU	0208 518 4286
BURTON UPON TRENT 12a Lichfield St. DE14 3QZ	01283 564 708	**IPSWICH** Unit 1 Ipswich Trade Centre, Commercial Road	01473 221253
CAMBRIDGE 181-183 Histon Road, Cambridge. CB4 3HL	01223 322675	**LEEDS** 227-229 Kirkstall Rd. LS4 2AS	0113 231 0400
CARDIFF 44-46 City Rd. CF24 3DN	029 2046 5424	**LEICESTER** 69 Melton Rd. LE4 6PN	0116 261 0688
CARLISLE 85 London Rd. CA1 2LG	01228 591666	**LINCOLN** Unit 5. The Pelham Centre. LN5 8HG	01522 543 036
CHELTENHAM 84 Fairview Road. GL52 2EH	01242 514 402	**LIVERPOOL** 80-88 London Rd. L3 5NF	0151 709 4484
CHESTER 43-45 St. James Street. CH1 3EY	01244 311258	**LONDON CATFORD** 289/291 Southend Lane SE6 3RS	0208 695 5684
COLCHESTER 4 North Station Rd. CO1 1RE	01206 762831	**LONDON** 6 Kendal Parade, Edmonton N18	020 8803 0861
COVENTRY Bishop St. CV1 1HT	024 7622 4227	**LONDON** 503-507 Lea Bridge Rd. Leyton, E10	020 8558 8284
CROYDON 423-427 Brighton Rd, Sth Croydon	020 8763 0640	**LUTON** Unit 1, 326 Dunstable Rd, Luton LU4 8JS	01582 728 063
DARLINGTON 214 Northgate. DL1 1RB	01325 380 841	**MAIDSTONE** 57 Upper Stone St. ME15 6HE	01622 769 572
DEAL (KENT) 182-186 High St. CT14 6BQ	01304 373 434	**MANCHESTER ALTRINCHAM** 71 Manchester Rd. Altrincham	0161 9412 666
DERBY Derwent St. DE1 2ED	01332 290 931	**MANCHESTER CENTRAL** 209 Bury New Road M8 8DU	0161 241 1851
DONCASTER Wheatley Hall Road	01302 245 999	**MANCHESTER OPENSHAW** Unit 5, Tower Mill, Ashton Old Rd	0161 223 8376
DUNDEE 24-26 Trades Lane. DD1 3ET	01382 225 140	**MANSFIELD** 169 Chesterfield Rd. South	01623 622160
EDINBURGH 163-171 Piersfield Terrace	0131 659 5919	**MIDDLESBROUGH** Mandale Triangle, Thornaby	01642 677881
		NORWICH 282a Heigham St. NR2 4LZ	01603 766402
		NORTHAMPTON OPENING SOON	01604 267840
		NOTTINGHAM 211 Lower Parliament St.	0115 956 1811
		PETERBOROUGH 417 Lincoln Rd. Millfield	01733 311770
		PLYMOUTH 58-64 Embankment Rd. PL4 9HY	01752 254050
		POOLE 137-139 Bournemouth Rd. Parkstone	01202 717913
		PORTSMOUTH 277-283 Copnor Rd. Copnor	023 9265 4777
		PRESTON 53 Blackpool Rd. PR2 6BU	01772 703263
		SHEFFIELD 453 London Rd. Heeley. S2 4HJ	0114 258 0831
		SIDCUP 13 Blackfen Parade, Blackfen Rd	0208 3042069
		SOUTHAMPTON 516-518 Portswood Rd.	023 8055 7788
		SOUTHEND 1139-1141 London Rd. Leigh on Sea	01702 483 742
		STOKE-ON-TRENT 382-396 Waterloo Rd. Hanley	01782 287321
		SUNDERLAND 13-15 Ryhope Rd. Grangetown	0191 510 8773
		SWANSEA 7 Samlet Rd. Llansamlet. SA7 9AG	01792 792969
		SWINDON 21 Victoria Rd. SN1 3AW	01793 491717
		TWICKENHAM 83-85 Heath Rd.TW1 4AW	020 8892 9117
		WARRINGTON Unit 3, Hawley's Trade Pk.	01925 630 937
		WIGAN 2 Harrison Street, WN5 9AU	01942 323 785
		WOLVERHAMPTON Parkfield Rd. Bilston	01902 494186
		WORCESTER 48a Upper Tything. WR1 1JZ	01905 723451

5 EASY WAYS TO BUY...

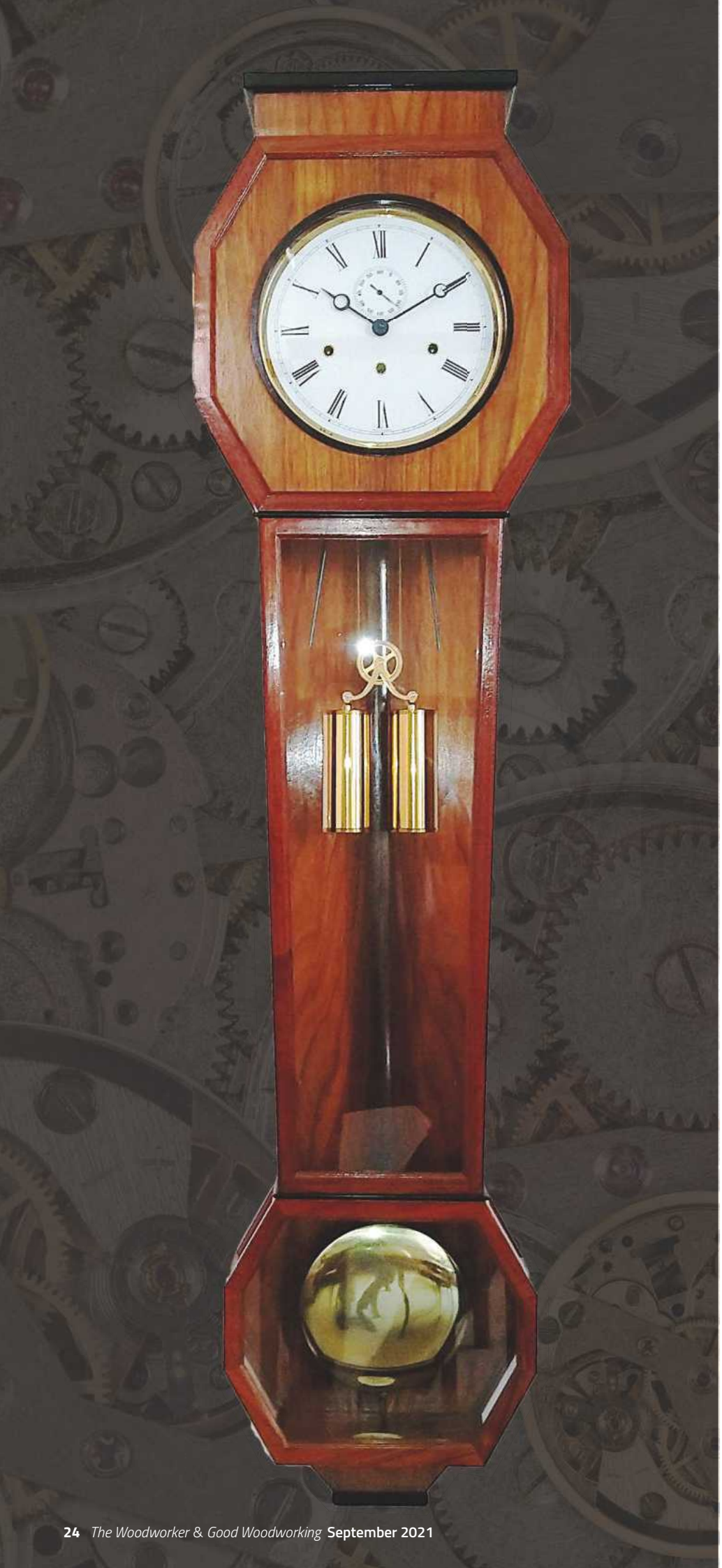
SUPERSTORES NATIONWIDE

ONLINE www.machinemart.co.uk

TELESALES 0115 956 5555

CLICK & COLLECT OVER 10,500 LOCATIONS

CALL & COLLECT AT STORES TODAY



WW PROJECT

AS TIME GOES BY PART 2

Picking up from completion of the case framework in part 1, **Peter Skilton** makes the backboard, under bracket, pediment, front and octagonal panels, before finishing and putting it all together

In part 1 (see *WW* August 2021 issue), I looked at general considerations made prior to starting the project, construction of the case framework and assembly, before introducing a range of jigs required for jointing. Here, in part 2, I'll take you through the final steps for completing the wall clock, which include making the backboard, under bracket, pediment, front and front octagonal panels, before finishing and final assembly.

Backboard

The backboard needed to be strong enough to support the weight of the movement and sufficiently strong to allow the finished clock to be suspended from a single point

Fig.6 Section through pediment

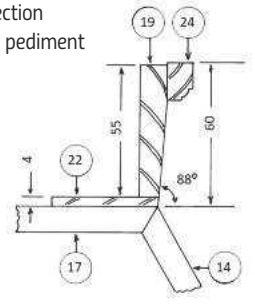


Fig 6. Section through the pediment side showing the 2 degree taper (the same as on the front) and one of the Fixing Strips (Item 22)

Not to scale

15 Scribing around the inside of the frame to mark out the back

16 Backboard cut to outline of the frame

17 Backboard passing through rebate in the bottom of the lower octagon

near to the top edge. Given the interior surface was to be veneered with matching leaves of American walnut, a smooth, stable material was also required. I decided to use a piece of good quality 9mm external grade plywood in preference to solid timber or MDF. To minimise the risk of the plywood bending, a balancing veneer was also laid on the reverse, which resulted in a final thickness of 10mm.

With the case framework complete, it was laid on to the backboard, ensuring the best figured grain would still be visible once the movement was fitted, and a line scribed on the backboard to exactly fit the framework. The backboard was then cut to this line and dry fitted into the rebate around the frame. To tidy the only exposed plywood edges, American walnut lipping was applied to the top and side edges exposed above the top of the upper octagon.

To spread the load that would be present on the single suspension point, a key-hole-shaped hole was cut in a brass plate and screwed to the backboard over the top of a similar shaped hole in the plywood. I soldered a couple of 2BA nuts near to the brass edges and used two countersunk 2BA screws to rigidly fix the load-spreading plate to the backboard. Alternatively, a single, large mirror plate from the DIY store would probably have achieved much the same goal! A trial assembly of the clock movement and gong on to the backboard was carried out at this stage (**photos 19** & **20**).

Under bracket

A bracket to fit beneath the base of the lower octagon was formed from three pieces of well-seasoned beech, glued with growth rings in opposing directions. Before cutting the block to shape and applying the veneer, a 10mm deep rebate was formed at the rear of the bracket (**photo 21**) to engage with the extension of the backboard that would protrude through the rebate in the base of the lower octagon.

A dovetailed mortise, also 10mm deep, was cut in the top of the bracket to engage with a matching dovetailed tenon that was fixed to the underside of the base. The angled sides and front of the bracket were chosen to be the same as those of the lower octagon – 60°. The sloping sides of the bracket were veneered with pieces of American walnut veneer and a base of 10mm deep American walnut was glued to the underside before applying the contrasting, ebony beaded moulding (**photo 22**).

With the under bracket slid over the tenon and screwed to the extension of the backboard, a rigid, non-glued, right-angled joint was then ensured between the base of the lower octagon and backboard.

Pediment

As mentioned previously, the sides taper in both width and depth. The angle of taper is 1.7° in width and 3.4° in depth. Ideally, the taper on the pediment should match these two angles. To simplify construction, however, the sides and front of the pediment were both given a taper of 2°. Detail showing the cross-section of the beech side of the pediment is shown in **Fig.6** and **photo 24**.

Mitre joints were formed between the pediment sides and front, then reinforced with beech corner blocks. 4mm thick strips of beech, mitred at the corners, were glued beneath the pediment sides and front. Slightly elongated holes, to allow for natural movement of the wood, were formed in these strips to allow fixing to the top of the upper octagon. Once a successful dry fit to the top of the upper octagon was achieved, the pediment was veneered with matching offcuts of American walnut on the front and sides. Fixing of the ebony moulding to the pediment's vertical section completed assembly of this component.

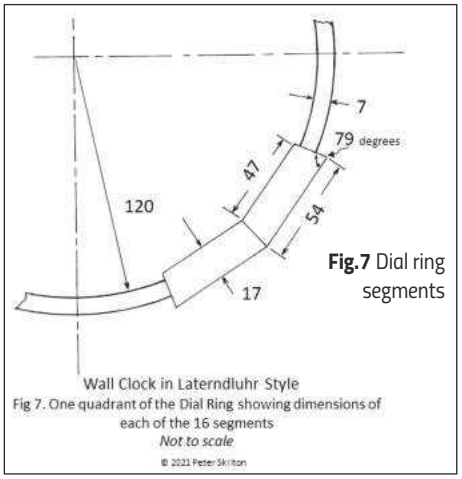


Fig.7 Dial ring segments

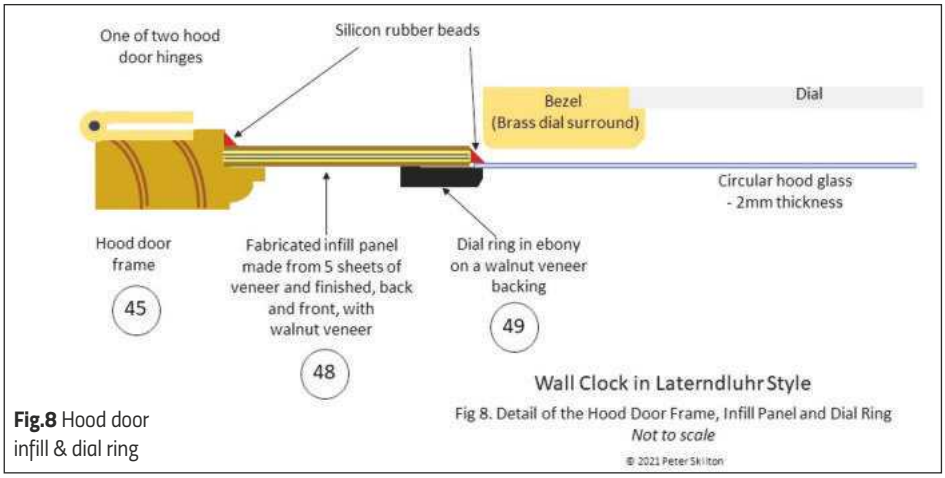


Fig.8 Hood door infill & dial ring

CUTTING LIST

PART NUMBER	PART NAME	NUMBER REQUIRED	DIMENSIONS (mm) (No allowance for waste)			NOTES (Unless stated otherwise, all material is American walnut and NO allowance has been made for waste)
Lower octagon including under bracket Backboard			**Length**	**Width**	**Thickness**	
31	Exterior grade 9mm plywood	1	1,380	360	10	Prepare to size shown with final trimming to fit rebates in upper and lower octagons and sides. Matching leaves of American walnut veneer and a balancing veneer bring the finished thickness to nearly 10mm
32	Lipping for the top edge – above suspension point	1	150	10	5	Used to cover exposed edge of plywood
33	Lipping for the sides – adjacent to suspension point	2	45	10	10	Used to cover exposed edge of plywood
Front – lower octagon			**Length**	**Width**	**Thickness**	
34	Upper and lower frame member – horizontal	2	200	20	11	
35	Middle frame member – vertical	2	76	20	11	
36	Inclined side member	4	100	20	11	
	Loose tongue	8	10	6	3	Approximate dimensions – cut to suit
37	Locating strip – bottom	1	197	11	9	Grooved for 150mm to fit over brass strip in base of lower octagon
38	Locating strip – top	1	188	14	5	Ebony – drilled with 4.5mm holes for two 4mm locating pins
Front – middle panel			**Length**	**Width**	**Thickness**	
39	Top	1	220	20	11	220mm length includes a 5mm tenon on each end
40	Side	2	651	20	11	
41	Bottom	1	180	20	11	180mm length includes a 5mm tenon on each end
42	Radiused bead – upper	1	250	16	5	Ebony
43	Radiused bead – lower	1	210	19	5	Ebony – extra 3mm width on lower bead provides a locating lip and takes some of the middle panel's weight
	Loose tongue – to fit radiused bead to top/bottom	2	180	5	3	Not shown in drawings
Front – upper octagon – hood door			**Length**	**Width**	**Thickness**	
44	Upper and lower frame member – horizontal	2	240	20	11	
45	Middle frame member – vertical	2	152	20	11	
46	Inclined side member	4	120	20	11	
	Loose tongue	8	10	6	3	Approximate dimensions – cut to suit
47	Door stop	1	120	11	4	Screwed to middle frame member via slotted holes for adjustment
48	Infill panel	1	330	330	3	Fabricated from five pieces of veneer – American walnut facing
49	Dial ring	16	54	17	4	Ebony strips with a 79° angle at each end

Continued overleaf...

Other materials			Length	Width	Thickness	
	Matching leaves of American walnut veneer for front of backboard	2	1,380	180	0.6	
	Balancing veneer for rear of backboard	1	1,380	360	0.6	
	American walnut veneer for under bracket and pediment					Available as offcuts from the backboard veneer
	Load-spreading plate around suspension point	1	125	25	1.6	A brass plate (16 gauge) was fabricated for this purpose and fixed with countersunk screws to the backboard. A large mirror plate could have been used
	Hinges for front – upper octagon – door	2	39			Brass
	Brass strip to locate lower octagon front on base	1	140	9	2	Loose or glued into slot on lower octagon – base
	Brass angle brackets for the front – middle panel to accept locating pins	4				16-gauge brass, bent to 90° and drilled for fixing screws (two each) and a 4.5mm hole for locating pins
	Locating pin for front – lower octagon	2	34	4mm diameter		Brass with a washer soldered at the mid-point
	Locating pin for front – middle panel	2	25	4mm diameter		Cut from 4mm wire nail with a 'blued' finish
	Clamps to secure backboard	4	20	9	2	Four or six are likely to be needed – recessed into backboard
	Magnetic strip	2	120	3	2	Used to hold hood door closed

Front

This comprised three glazed panels: one to enclose each octagon and a middle panel, tapering in width from 240-200mm. Construction started with the middle panel as this was basically the same as that used for the sides, except here no joints were exact right angles.

Front – middle panel

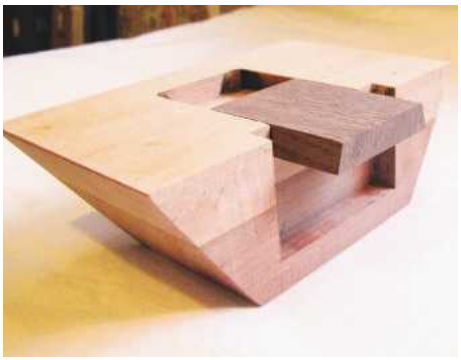
Unlike the upper and lower octagons and case sides, the two side members of the front middle panel had a moulding cut along both long edges. The top and bottom of the panel had a moulding formed just along the inside edge. The shoulders of tenons were cut at a 2° angle away from a right angle to match the gradual taper from top to bottom. Radiused beads of ebony were fitted to top and bottom, allowing an extra 3mm width on the lower bead to take the weight of the panel as it located on the lower octagon's open frame. Most of the extra 3mm was later cut away, however, to make space for the falling weights (**photo 27**).

Four, right angle brass brackets were made and drilled to retain the middle panel. The two brackets at the bottom of the middle panel (**photo 28**) dropped over the 4mm diameter, double-ended pins used to locate the lower octagonal panel in the lower octagon's open frame. The two brackets at the top of the middle panel were positioned

18 Backboard passing through rebate in the top of the upper octagon

19 A trial assembly of the gong and movement bracket

20 Rear view of backboard showing raised fixing screws for gong and bracket, plus countersunk screws for the load spreading suspension plate



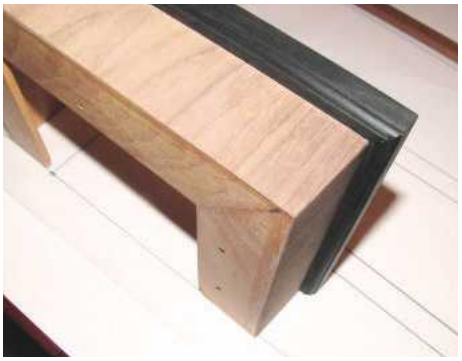
21 Under bracket with trial fitting of dovetailed tenon

22 Base and moulding fitted

23 Under bracket complete

24 Here you can see the 2° bevel on the side – and front – of the pediment

25 Pediment showing corner blocks and one side fixing strip



26 Pediment – view from below

to line up with the 4.5mm holes in the upper octagon's open frame and engage with the pair of single-ended 4mm diameter pins.

Front – octagonal panels

The frame material for both panels had a rebate cut for glazing and a moulding formed on the inward-facing edge – there wasn't any moulding cut on the outer-facing edge. A simple jig was made to ensure an accurate angle was formed on the faceplate sander as it was used to finish the butt joints between each of the octagonal panel's eight frame members (**photo 29**). The butt joints were reinforced with a short, hidden tongue locating in rebates on the end of each section of the frame (**photo 30**). The rebates for the tongues were formed in the end-grain of each frame member using an adaption to the router table to support the 20 × 11mm cross-section material (**photo 31**).

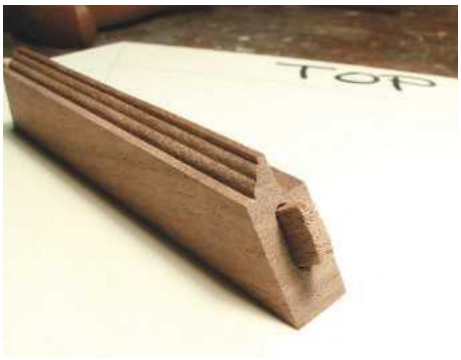
The previously made 150° formers were again used to ensure accurate alignment of the sides of both octagonal panels, one of which is shown in **photo 32**.

The top locating strip for the lower octagonal panel was shaped to allow

27 Cut-away section of lower radiused bead on the front middle panel

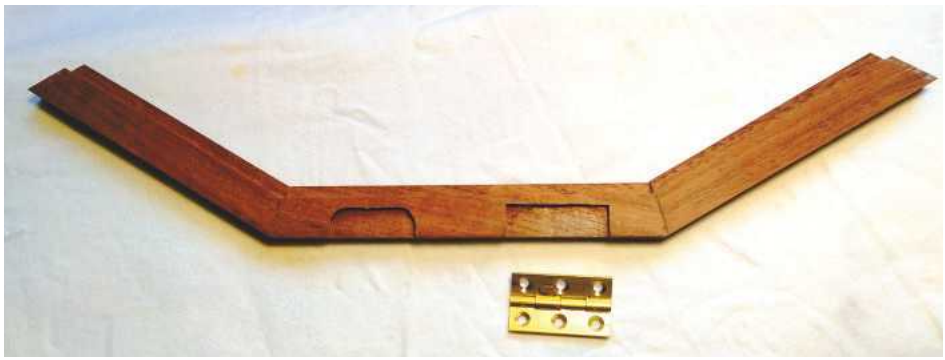
28 Brass angle brackets on the front's middle section

29 Forming the angled butt joint on one of the octagonal front panels

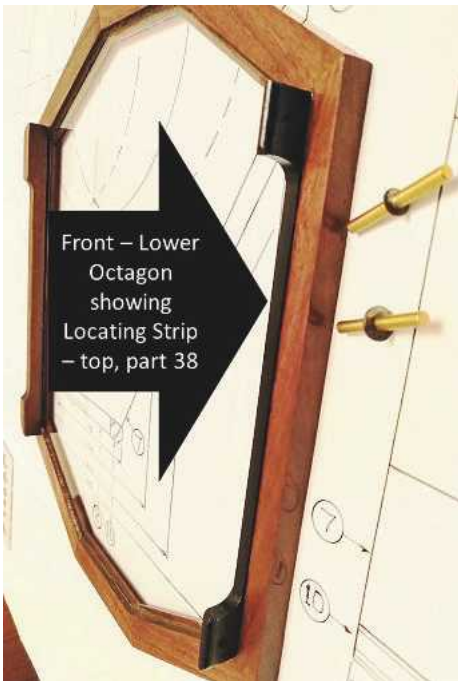


30 Loose tongue in place

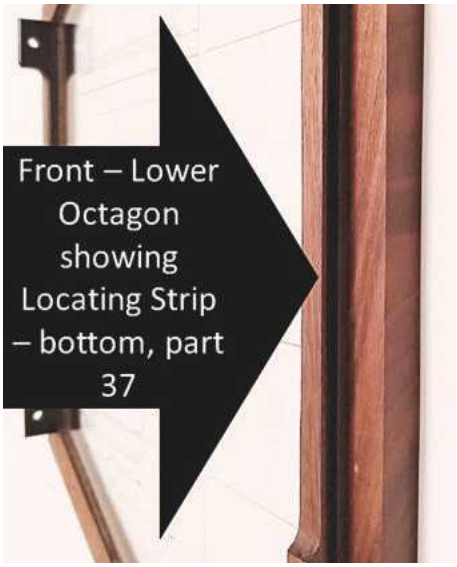
31 Covered area around the cutter, allowing frame member to be supported while cutting the mortise



32 Cutting rebates for upper panel hinges before completing the frame assembly



33 Top of front lower octagon, showing locating strip and locating pins



34 Lower octagon front panel – bottom locating strip

35 Adjustable door stop with magnetic strip

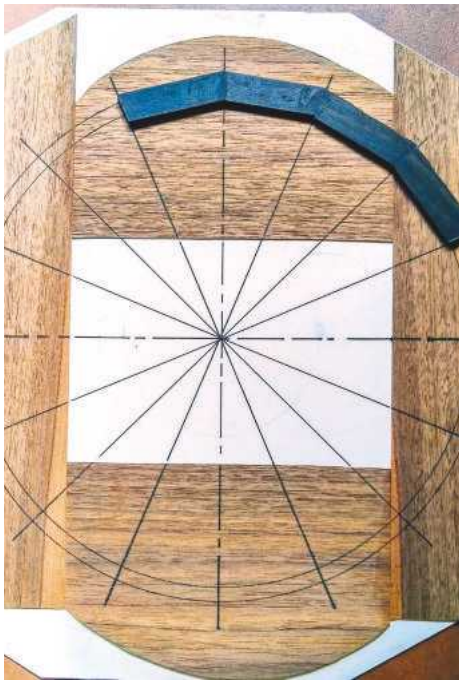
the falling weights to pass unhindered into the lower octagon as the clock ran down (**photo 33**) and the lower edge of the same panel had a grooved locating strip glued in place to fit over the brass strip in the octagon base (**photo 34**).

Due to the upper octagonal panel's slender cross-section – effectively the hood door – and the upper octagon's narrow sides, a slim, DIY magnetic catch was devised for keeping the hood door closed (**photo 35**). The magnetic catch was formed by two 3mm wide strips of magnetic tape: one fixed to the door and the other to a door stop, which was screwed to the upright via slotted holes to allow for adjustment.

As a temporary solution to allow the clock to be completed and put to use, the upper panel was initially fitted with an octagonal sheet of 2mm-thick plastic. My original plan had been to fill the area between the octagonal frame and the dial with an infill panel in which frets would be cut to allow the sound of the chimes and strike to be clearly heard. I found it difficult to design a fret pattern that matched the overall style of the remainder of the clock. Looking at many different examples of early 19th-century Laterndluhr clocks, I found no

36 Here you can see the area to be filled, with either a fret or infill panel

37 Dial aperture cut in the infill panel



38 Veneer glued to thick card and ebony strips glued to veneer. *No* glue between veneer and card directly beneath ring

39 Dial ring being assembled on pieces of walnut veneer

40 Dial ring cut using an overhead routing jig. Cut outer circle first

41 To avoid the finished ring breaking away, set cutter depth to leave a very thin wafer of veneer

examples of a fret in the hood. In addition, there was no problem with the sound of the chimes escaping from the closed case, so I decided to go for a plain infill panel with the dial surrounded by a slender, contrasting ebony ring. The ring also provided a recess for a 244mm diameter plain circle of 2mm-thick glass over the clock face.

To keep the weight of the door to a minimum, I used five sheets of veneer for the infill panel, the outer two layers being American walnut, and with a radius arm on the router, a 6mm cutter was used to form the aperture (**photo 37**).

The 7mm wide dial ring was made from offcuts of 4mm-thick ebony glued to pieces of walnut veneer and, since I was very restricted by the size of offcuts, 16 sections had to be used for the ring, which was cut to a circle using an overhead routing jig and the router radius arm. Dimensions for the ring segments are shown in **Fig.7** and the **photos 38-43**. Finally, **Fig.8** shows the detail, along with part numbers of components around the infill panel.

Finishing & final assembly

Following a dry assembly to ensure all front panels fitted and the movement ran down without fouling any of the woodwork, the case was broken down for polishing and glazing. Over many days, layers of French polish were built up using a polishing rubber and small brush for the fine mouldings. Once a uniform, smooth sheen had been achieved, a fine wire wool was used to produce a perfectly smooth surface, which was then treated with clear wax – a timeless surface finish that could have been achieved anytime over the last 200 years. The backboard was located into the rebate in the case framework and screwed to the top of the upper octagon and base of the lower octagon. At points in between these widely separated fixing points, four short brass strips were rebated into the side frames and backboard. These strips were screwed to the case sides and simply clamped against the backboard

42 Dial ring glued to infill panel and panel cut to fit front of upper octagon

43 Dial ring viewed through back of the infill panel, showing recess for the circular dial glass

44 Dry assembly prior to polishing and glazing

45 Collection of parts – less back – after polishing and waxing, ready for reassembly

to provide extra strength (**photos 46** & **47**).

2mm-thick glass was cut to fit the case apertures. Each of the glazing bars was prepared with a very thin bead of brown silicon rubber on to which the glass was positioned and gently pressed in place. A second, fine bead was then produced around the edge of each piece of glass and left to cure. As previously mentioned, brown putty would traditionally have been used for this purpose, but the prospect of ever being able to replace a pane of glass without damage to the frame led to the choice of a silicon rubber alternative.

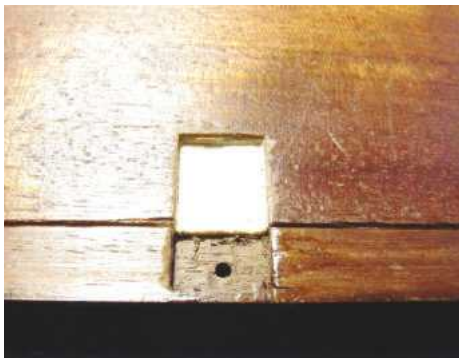
Finally, as a reminder of the origin of the material used to construct the clock and to retain a tangible item from the Robinson's of Ilkley Model 383 Campaign Bed, I salvaged the brass badge from the few pieces of timber remaining and mounted it, with a few words for posterity, behind the pediment (**photo 48**). This also shows a couple of parts not visible in any of the other drawings or photos in this description.

I still sometimes struggle to pronounce the word 'Laterndluhr' – I can always just point at it, but I'm still extremely pleased with the appearance and my decision to opt for octagons over squares.

Finally, if any readers decide that they wish to embark on building such a clock case for themselves, I'm happy to supply a copy of the full-size plan that I found essential in building the prototype. For those interested, email **tegan.foley@mytimemedia.com** and your requests will be passed on and dealt with by myself.

48 Acknowledgement of the source of timber used for the clock and part numbers of pediment

46 Brass clamping strips



47 Shallow rebate cut in side frame and back, to clamp back against the frame

49 The completed Laterndluhr-style wall clock

WIN!

1ST PRIZE: Clarke CBB217B HD Plus seven-drawer mobile cabinet

2ND PRIZE: Clarke CBB209B HD Plus nine-drawer tool chest

In conjunction with **Machine Mart**, we're giving two lucky readers the chance to kit out their workshops with one of these fantastic tool storage solutions from **Clarke**

This month, we have two fantastic prizes up for grabs, courtesy of Machine Mart, giving two lucky readers the chance to win either first prize of a **Clarke CBB217B HD Plus seven-drawer mobile cabinet**, or second prize of a **Clarke CBB209B HD Plus nine-drawer tool chest**. Both offer fantastic storage opportunities for a multitude of workshop tools, ensuring they stay secure and tidy at all times. Details of both prizes can be found below and to see other tool chests and cabinets available from Machine Mart, visit the website: **www.machinemart.co.uk**.

1ST PRIZE: Clarke CBB217B HD Plus seven-drawer mobile cabinet – worth £323.98

This top-of-the-range seven-drawer tool cabinet is manufactured to offer excellent tool storage. Designed to be both stylish and ergonomic, the CBB217B HD Plus features great looking 125mm industrial grade chrome spoked wheels for superb mobility around the workshop, extra large drawer pulls for easy, effortless access to tools and an extra large chrome side handle, which can be fitted to either side of the unit.

Other features include drawer liners in each of the seven drawers for protecting expensive tools and soft, cushioned matting on the cabinet top, which provides a non-slip work surface.

FEATURES

- Extra heavy-gauge double wall steel construction with reinforced base
- Multi ball-bearing drawer runners allow for a super smooth sliding action
- Single key lock security for all drawers together (two keys) plus independent push in soft lock for drawer stability
- All drawers feature full width aluminium pull handles and protective anti-slip liners
- Chrome side handle allows for controlled movement, plus four 125mm industrial spoke castor wheels – two fixed and two swivel with brake
- **Dimensions (W×D×H):** 758 × 468 × 975mm
- **Weight:** 52.8kg

2ND PRIZE: Clarke CBB209B HD Plus nine-drawer tool chest – worth £167.98

For the ultimate tool storage solution, this top-of-the-range heavy-duty nine-drawer tool chest displays quality features from every angle. It also includes a lift-out tote tray for extra tool and fastener storage.

FEATURES

- Multi ball-bearing drawer runners for a super smooth sliding action
- Special push-lock feature for added safety prevents drawers opening accidentally if the unit is tilted
- All drawers feature full width aluminium pull handles and protective anti-slip liners
- All drawers lock simultaneously when the top lid is closed – secured by a single tumbler style lock (with two keys)
- Full width piano hinge welded and riveted onto top lid
- **Dimensions (W×D×H):** 710 × 315 × 420mm
- **Weight:** 28.7kg

Machine Mart®

HOW TO ENTER

To be in with a chance of winning either a **Clarke CBB217B HD Plus seven-drawer mobile cabinet** or a **Clarke CBB209B HD Plus nine-drawer tool chest**, just visit **www.getwoodworking.com/competitions** and answer this simple question:

QUESTION: Name one of the features found on the **CBB217B HD Plus seven-drawer mobile cabinet**

The winners will be randomly drawn from all correct entries. The first prize winner will be chosen, followed by the second prize winner. The closing date for the competition is **17 September 2021**. Only one entry per person; multiple entries will be discarded. Employees of MyTimeMedia Ltd and Machine Mart are not eligible to enter this competition

Everything you need for your kitchen project

Leading specialist ironmongery supplier, IronmongeryDirect, stocks all the essentials needed to complete a kitchen project. From cabinet knobs and handles to hinges and soft-close drawer runners, as well as splashbacks, lighting and storage, the company has a vast choice of products in stock, available in various sizes, finishes and styles to suit any aesthetic.

Cabinet knobs & handles

For the perfect finishing touch that can make all the difference to a kitchen, IronmongeryDirect has a huge range of cabinet knobs and handles. For a more traditional look, the collection includes the Hampstead Millard Cabinet Cup Pull Handle, or for those looking to tap into the knurled hardware trend, the Carlisle Brass 13mm Knurled T-Bar Cabinet pull handle in matt black makes an attractive statement. Hinges are a small but essential addition for kitchen projects and using a high-quality hinge such as the Blum CLIP Cruciform Cabinet Mounting Plate ensures a long-lasting kitchen cabinet.

Drawer closers & drawer runners

To create a harmonious environment, drawer closers, such as the Blum Tandem Blumotion soft-close drawer runners, offer a sleek and quiet alternative to traditional drawer closers and also prolong the life of cabinets. Adding creative lighting can also improve the overall aesthetic of the space and under-cabinet

spot lighting and strip lighting, such as the Sensio Opal LED under cabinet strip light with a warm white hue, offers an effective way to introduce drama and illumination.

IronmongeryDirect has over 18,000 products in stock, which are regularly reviewed to guarantee exceptional value, all with flexible delivery options including next day delivery. To explore the full range of kitchen products available from IronmongeryDirect, see **www.ironmongerydirect.co.uk**.

Ironmongery Direct
Trusted to deliver

CHOOSING WOOD FOR FURNITURE MAKING

WW TECHNIQUE

In the next part of this series, **John Bullar** discusses the subject of selecting appropriate timber for your furniture making projects

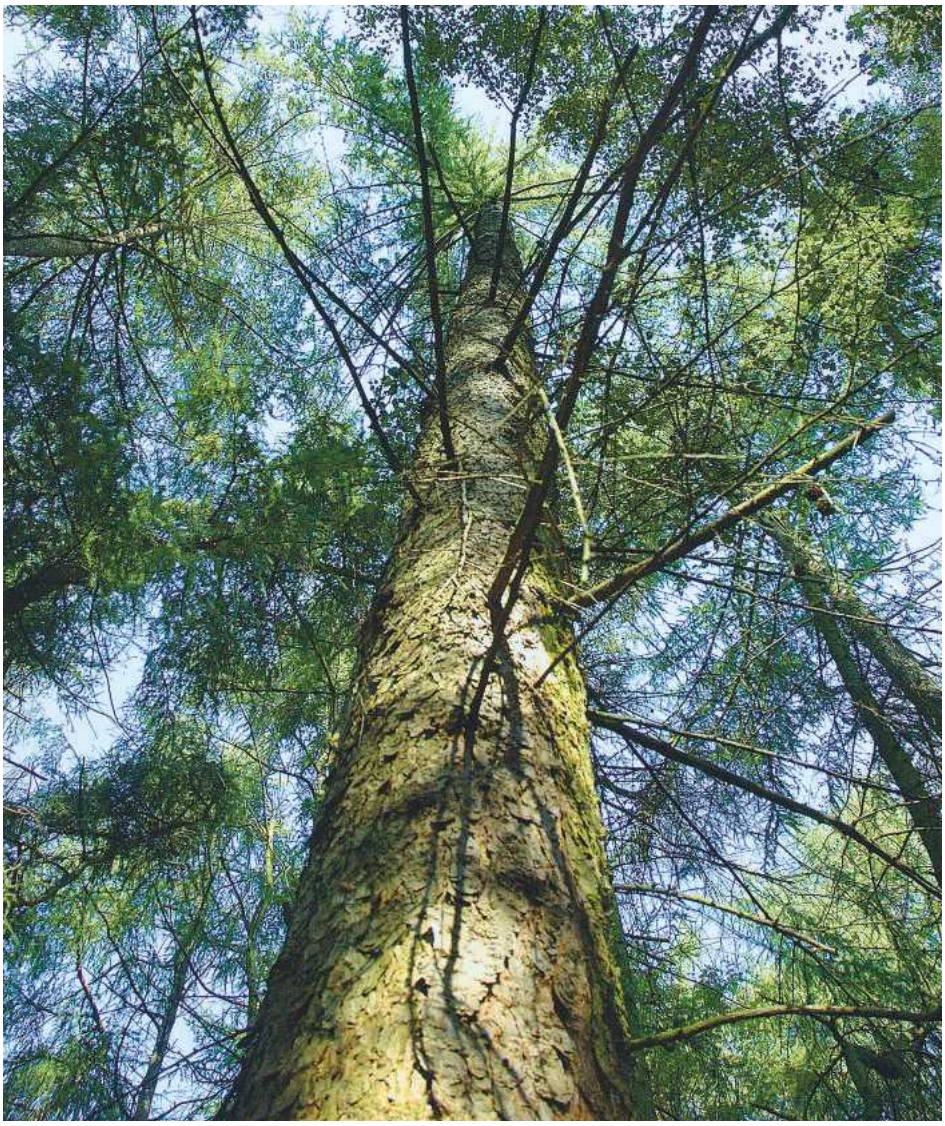
Wood can be beautiful stuff. If every piece you use looks great, there's a good chance that, when put together, your finished furniture will look great too. But as well as appearances, the timber you choose also needs to work well and last. As such, there's a lot to think about when it comes to selecting appropriate pieces for a furniture project.

Furniture makers mostly start with their wood ready converted into boards, which have been dried. I think it's helpful to look into the provenance of the timber you choose, as well as how it's converted from tree trunks and what the maker's buying options are.

Buying choices

The easiest way to buy wood is ready sawn and planed from a hardware superstore. Stock such as this can be good for small construction jobs but it's not usually interesting, nor is it ideal for fine furniture making. For greater variety and better quality, you can go to one of the large wood suppliers who will stock a range of kiln-dried boards in hardwoods. Some of these may be native, but many are imported from around the world. For a charge, the supplier will plane boards and saw them to length for you.

If you want to be a little more adventurous, however, there are small specialist wood conversion companies dotted around the country. As well as buying wood from forests, they fell local trees for land owners or councils and turn them into fine native timbers.



1 Softwood trees with tall, straight trunks and small branches are efficient mass producers of wood

What sort of wood?

There are hundreds of different types of timber available from local suppliers. These can be divided into two main groups: softwoods and hardwoods. You might expect softwoods to be softer and hardwoods harder, but this isn't always true. For example, yew is a softwood but exhausting work to saw – it's one of the few woods considered strong enough to make longbows since Robin Hood was a lad! On the other hand, balsa is a hardwood, but children

With patience, you can convert a small log yourself to make an item such as a little box, stool or breadboard

can cut it with a craft knife to make models. The strict definition is that softwoods come from trees with needles while hardwoods come from broad-leaved species

Softwoods

Softwood trees are efficient mass producers of wood with tall, straight trunks and small branches well suited to dense forests. All but the roots and very top of the trunk are used for timber (**photo 1**).

The mass of small branches on a softwood tree produces a lot of knots. Many of these are dead knots from lower branches that died in the dark of the forest floor. These knots are awkward to plane and finish, making the timber uneven (**photo 2**). Softwoods tend to crush while you cut them, thus making accurate work more difficult.

Hardwoods

Hardwood trees grown in open spaces produce a stout main trunk, which can be converted into good, usable timber for the furniture maker. Higher up, the tree divides into curved branches, which have no use for conventional furniture making (**photo 3**).

2 A softwood tree produces a lot of knots from the mass of small branches

3 Hardwood trees grown in open spaces produce a stout main trunk, which can be converted into good, usable timber

4 Hardwood trees like these oaks are grown close together so the branches are high up and the main trunks are tall

Commercial forests for hardwood timber are grown close together. This means the branches are high up where the light can reach the leaves and the main trunks are long. Tall, straight trunks produce long, straight boards, which therefore makes the wood more valuable and desirable (**photo 4**).

Hardwoods have more complex fibres than softwoods, making the grain patterns more interesting. As well as the main fibres running from top to bottom, ray-fibres also run between the centre and outside of the trunk (**photo 5**). Each hardwood has its own patterns of rays. These are more visible in oak than other species, especially when it's 'quartersawn' – that is, cut on a line that passes close to the centre.

From tree to board

After felling the tree, the timber convertor slices the trunk into boards. This may be done in a large factory timber mill, or using a mobile horizontal bandsaw mill. Using a mobile unit, the convertors can tackle large logs without heavy lifting and transport equipment (**photo 6**). Once the log has been sliced, the boards are kept in sequence both for ease of stacking and also because boards kept together from the same tree are more valuable (**photo 7**).

Distorted wood

You can imagine the main fibres of wood similar in structure to a bunch of straws. Water easily gets into the ends of the fibres and works its way along them, swelling them up as it goes. The fibres become fatter when they're wet, but there's very little change to the length.

When wood dries it becomes thinner and narrower. This shrinking effect is stronger towards the outside of the tree trunk, causing the annual growth rings to straighten and previously flat wood to distort in shape. One of the furniture maker's key skills is to cope with these changes, which are known as 'wood movement'.

Moisture levels

Trees carry water up their trunks to the leaves, so when a tree is felled there's a huge amount of water trapped in the wood. Often the water weighs more than the wood itself. When the wood and water weigh the same we say that the moisture content is 100%'. For making stable indoor furniture, we want

5 This oak log has been cut into quarters, showing the rays running between the centre and outside of the trunk as well as the fibres running from top to bottom

the moisture content – MC – to be reduced to around 10-12%. A moisture meter will read the percentage of water left in the wood. Basic meters insert pins into the surface of the timber to measure electrical resistance. As they leave little holes, suppliers may be unhappy with you using this type on boards before you buy them. The better types are able to measure the level deep inside the wood without marking it, simply by placing the meter against the surface.

Dried wood

Traditionally, wood was air-dried after cutting by letting the wind blow through the boards. Wood intended for outdoor use will often still be dried in that way (**photo 9**).

For indoor furniture, the wood is normally either air-dried in a ventilated drying shed (**photo 10**) or else dried at raised temperature in a 'kiln'. The wood kiln is warmed with blown air, which circulates to dry out the wood. Sometimes there's also a dehumidifier built in. Strips of wood or plastic are laid between the boards to separate them, allowing air to pass through the gaps, carrying moisture away (**photo 11**).

After drying, the boards can be separated out from the stack but still kept in the order they were cut. At this stage the boards will have rough edges showing the outline of the tree, possibly with bark – these are referred to as 'waney-edged' boards (**photo 12**).

6 The main trunk is sliced into boards on a horizontal bandsaw mill

7 When the log has been sliced, the boards are kept in sequence

8 A moisture meter reads the percentage of water left in the wood

9 Traditionally, wood was air-dried outside, letting the wind blow through the boards

10 After drying, the wood is stacked up in a well-ventilated shed

Choosing boards

After it's been dried, the wood may be stacked up high. Choosing the timber you want often involves being able to assess boards from their ends and edges. You might need to persuade the supplier to move stacks around so you can check the quality. The colour of un-planed boards can be very deceptive, so ask to see a small piece planed before buying a large quantity.

Once you've found the right material of the right quality, you'll need to measure the boards, taking note of any defects or unusable pieces. Choosing timber for a specific project calls for thinking on your feet (**photo 13**).

11 Inside a drying shed or kiln, strips of wood or plastic are laid between the boards to separate them

12 Sawn boards will have waney edges, showing the outline of the tree

Environmental credentials

Before you put a lot of effort into making a special piece of furniture, you might want to check that the wood you use has been responsibly grown and cut down without harm to the forest. You can do this by ensuring you only buy certified wood.

The Forest Stewardship Council (FSC) is an independent worldwide organisation that protects forests for the future; it provides a scheme to certify wood. After it has passed through distributors and suppliers, the end user of FSC certified wood can be confident it's been responsibly harvested. Most large suppliers sell FSC certified wood. Some small local wood convertors also sell FSC wood, while others will be able to explain their own way of ensuring the wood they supply is responsibly felled.

Popular furniture wood

Oak (**photo 14**) is a plentiful hardwood renowned for its strength and lasting quality. It's mostly sold in two categories: European oak and American white oak. European – sometimes specified as English, French, etc. – has more character and colour, which ranges from pale biscuit to deep, rich brown.

The outer 50mm or so is called sapwood; this is pale in colour and prone to rotting and

13 Once you've found the right material of the right quality, you need to measure out your boards

14 Oak is a favourite for furniture makers due to its warm colour, easy workability, and strength

15 Ash is similar in working properties to oak, but less durable and paler in colour

woodworm when damp, so furniture makers often remove sapwood, choosing to use only the darker heartwood. It saws well and has a strong uniform grain, making it ideal for cutting joints and for use in tables and heavy-duty furniture.

Ash (**photo 15**) is a light, strong hardwood with straight grain patterns and an attractive pinkish grey colour, sometimes with dark streaks when described as olive-ash. It's good to work into furniture frames and chair legs but discolours easily and must be protected from damp.

Elm (**photo 16**) is an attractive, strong hardwood that comes in many varieties. There are far less elms growing due to the damage caused by beetle-spread diseases, but you can still buy some elm in big, wide boards, which is ideal for seats.

Walnut (**photo 18**) is the most beautiful of native hardwoods. The grain patterning is highly variable typically with rich streaks of warm browns, blacks and greys. American walnut is less variable and more purplish brown in colour. Walnut is fine-grained, crisp and delightful to work in fine, detailed furniture. Other fruitwoods, such as cherry, are paler and also good to work, but none compare to walnut.

Pine is a basic softwood, light in weight with a warm yellow colour. It's prone to loose knots and resin pockets, but useful for lightweight internals and furniture back panels. There are many varieties of pine as well as other softwoods wrongly labelled as pine.

Manufactured wood products

Some people prefer to make furniture using only solid wood. Manufactured boards, however, can solve a lot of problems with seasonal stability, especially if the furniture is positioned near a radiator, for example. Many ways have been developed to convert wood into a more stable, consistent material. Medium density fibreboard (MDF) is used a lot for hidden panels or with veneered surfaces. Chipboard is made from coarser wood fibres and less densely packed so it tends to have voids, which weaken it.

Plywood is built up from thin layers of wood running alternately lengthways and crossways within the board. Because ply has grain running in both directions, it's less liable to distort with changes in air moisture. Plywood is good for use in large furniture panels where the edges are hidden (**photo 17**). Other engineered materials, such as block-boards, are relatively stable and easy to obtain while retaining some of the beauty associated with solid wood.

Storing wood

Having bought your timber, it's essential that you store it somewhere flat for a few weeks to ensure it's stable and won't distort when made into a piece of furniture. It must be laid on a flat surface or across rafters rather than, say, leaned against a wall, otherwise the boards will develop a banana shape.

Starting from scratch

Sometimes you may find a piece of wood you want to convert yourself, which you can use to make a small item such as a jewellery box or breadboard. There are furniture makers who convert their own wood and although it involves a lot of work and equipment, it can be successful. Even so, I wouldn't recommend tackling this on any scale until you have considerable experience, although experimenting with small pieces of certain timbers can often lead to interesting and informative discoveries.

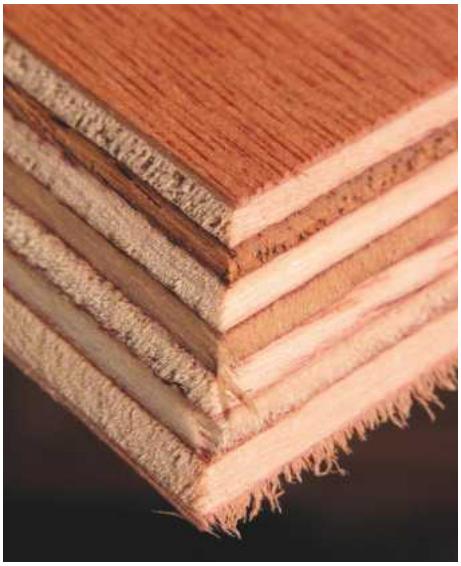
Conclusion

Carefully made furniture can be spoiled by unexpected wood movement as it adapts to a change of humidity or temperature, so whatever wood you choose, make sure it's dry and stable before starting work on it.

NEXT TIME

In the October issue, John looks at how furniture makers choose and use planes for flattening surfaces and straightening the edges of wood

16 Elm varies greatly but is good for large-scale work, has a warm colour, as well as striking grain



17 Plywood has grain running in both directions, making large panels less liable to distortion

18 Walnut is a beautiful timber with rich colour streaks and a crisp grain – excellent for fine shaping

Hammer®

CALL NOW 01908 635000 FOR YOUR PERSONAL OFFER!

SENSATIONAL RESULTS FOR AN UNBEATABLE PRICE

Solid, cast iron planing tables, 3 knife quick-change, self-setting cutterblock system plus many other exceptional details on the A3 combine to achieve the striking surface planing and thicknessing results. The innovative machine technology of your A3 also offers sensational value for money – see for yourself! The 3 knife quick-change, self-setting cutterblock enables planer knife changes in a matter of seconds and produces a finish that will please even the most critical eye.

For mortising you can, as an option, equip your Hammer with the horizontal mortiser.

A3 31

A3 41

A3 26

FELDER GROUP UK Ltd.
Unit 2 Sovereign Business Park, Joplin Court, Crownhill, Milton Keynes, MK8 0JP | **Tel. 01908 635000** | **uk.felder-group.com**

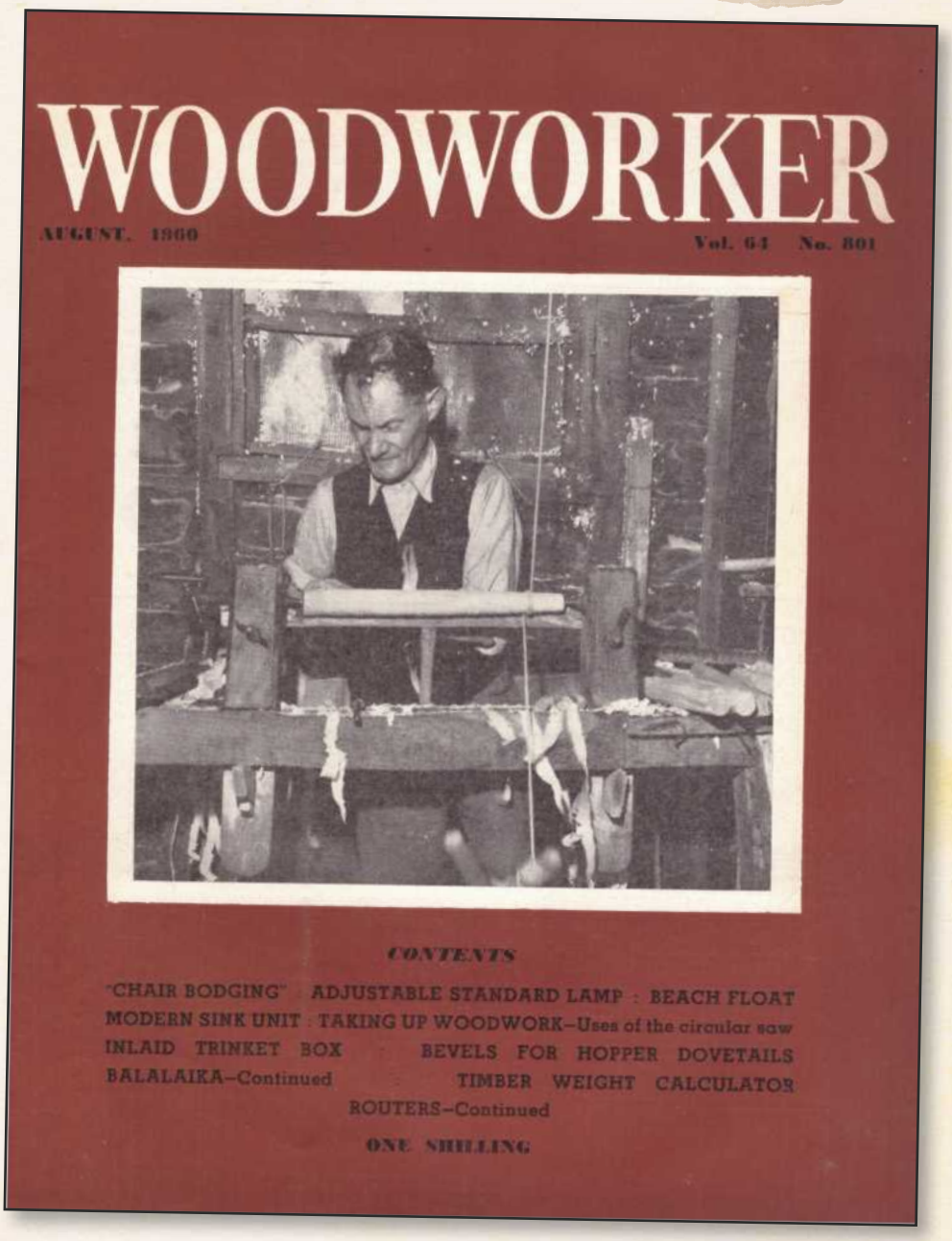
HAMMER®
For the highest requirements for price and performance

A surprising turnaround

Turning to *The Woodworker* of August 1960, **Robin Gates** celebrates the revival of the chair bodger's ancient craft

In his book *Woodland Crafts in Britain* – Batsford, 1949 – sub-titled 'An account of the traditional uses of trees and timbers in the British countryside', Herbert Edlin says that 'The Chiltern Hills, stretching through the four counties of Oxford, Buckingham, Bedford and Hertford, on the north-west of London, still harbour the last handful of men to work at the ancient craft of chair bodging.'

Little more than a decade later, J Geraint Jenkins of the Welsh Folk Museum writing in *The Woodworker* of August 1960 noted that Owen Dean of the tiny hamlet of Hampden Row, the very last of the bodgers, had died in April of that same year. In turning the legs and stretchers for Windsor chairs, Mr Dean had followed the trade of his father and grandfather in the usual way of things before World War II, and with his passing it might reasonably have been expected that the chair bodger's pole-lathe would fade into obscurity.



Last glimpse of a dead craft

Youngsters growing up in the post-World War II years were tuning in to rock 'n' roll and the city, not aspiring to treadle granddad's antiquated wooden machine deep in the hills. Besides, who wanted – or could afford to make – traditional Windsor chairs when more exciting designs were being turned out in their millions by factories using the new technologies of moulding plastic and extruding metal. Surely chair bodging and the pole-lathe would join cave painting and the flint axe in a museum of obsolete arts and crafts?

And it must have seemed like the last glimpse of a dead craft when Mr Dean was pictured hard at work on that 1960 front cover. Oblivious to the photographer, squinting into a storm of airborne shavings, we see him focusing intently on his chisel. The treadle has commenced its down stroke, and while the chair leg is spinning towards him, he must make his cut. The moment he lifts his left foot the pole will unbend, pulling the drive string with it and sending the leg rotating rapidly in reverse, at which point Mr Dean must pull his chisel back.

A worldwide community

So we can see that the chair bodger's pole-lathe operates by a rhythmic up-down movement of the foot, a corresponding up-down movement of string and pole, and consequent back and forth rotation of the work necessitating that the cutting tool be continually applied and withdrawn – a sequence of events demanding perfect coordination of eye, hand and leg, and surely a feat of muscle memory that's essential to success in all skilled manual work. Thomas Hardy describes this so well in *The Woodlanders* while referring to copse-work, 'an occupation which the secondary intelligence of the hands and arms could carry on without requiring the sovereign attention of the head'. We can imagine Mr Dean's thoughts might stray to that evening's supper or some repair required to his bicycle while his feet and arms are turning chair legs at the rate of one every two minutes with no loss to his usual high standard of production. By the 1960s, not a few might-have-been chair bodgers were no doubt lending their secondary intelligence of hands and feet to a drum kit instead.

But 60 years on from Owen Dean turning his last leg for the Wycombe bench men and framers who completed the Windsor chair, reaction against the uniformity of mass production has seen a revival of bodging and pole-lathe turning he could scarcely have imagined. People wanting to make things by hand and work in harmony with Nature have joined with the dozen enthusiasts who set up the Association of Pole-Lathe Turners and Green Woodworkers in 1990, creating a worldwide community building their own pole-lathes and forging tools, once more turning a fine leg, baker's rolling pin or domestic bowl, among the trees.

triton
MASTERS OF WOOD

DON'T ADJUST ADAPT

AUTOJAWS

AUTO-ADJUSTS TO MATERIAL THICKNESS WHEN CLAMPING

- Fully adjustable constant-clamping force
- Quick-release, single-handed clamping
- Saves set-up time
- Drill Press / Bench Clamps for use on drill presses, in T-slots & clamping tables

TRAA FC3
AUTOJAWS™ FACE CLAMP

TRAA DPBC3
AUTOJAWS™ DRILL PRESS / BENCH CLAMP

75mm (3") Clamping Capacity / 10 - 180kg (25 - 400lb) Clamping Force

TRAA FC6
AUTOJAWS™ FACE CLAMP

TRAA DPBC6
AUTOJAWS™ DRILL PRESS / BENCH CLAMP

150mm (6") Clamping Capacity / 25 - 250kg (25 - 250lb) Clamping Force

Find your nearest stockist at tritontools.com

3YR GUARANTEE

WW PROFILE

A quartet of perfection

Furniture maker and designer **Tom Galt**'s passion for creating sleek, hand-crafted pieces is strongly evident, as **Martin Pim-Keirle** discovers

If you ever find yourself in Shrewsbury, and feeling peckish, there's a café above the shops on Milk Street that serves the best poached eggs on toast you'll ever eat – probably. Perfectly cooked eggs, perfect bread made into perfect toast, and perfect homemade ketchup. Just three things on a plate that together reveal the chef as a person of rare talent. You see, with something that simple, there's nowhere to hide – every single element has to be, for want of a better word, perfect.

I bring this up not as the result of a missed breakfast, but because it's the best analogy I can find for Tom Galt's work. His superb – and now award-winning – French oak writing desk pictured here is about as pure an example of its type as you could find. A broad sweep of immaculate and well-chosen timber rests effortlessly across a quartet of slim legs that seems to taper almost to a point, its flawless front perfectly smooth save for two drawer pulls that appear to grow organically from the face of the desk. And just like those eggs, everything is there, on a plate as it were, in all its natural splendour. There's no intricate carving, no ornate inlay, and no rainbow of timbers, mainly because those things aren't necessary. It would, in a way, be overkill. Here's piece of furniture that was judged on those qualities most fundamental to good furniture, and not found wanting.

Winning the Celebration of Craftsmanship & Design New Talent Award in 2019 was the culmination of months of effort for Tom, and represents a significant – perhaps the most significant – milestone in his ongoing transition to full-time furniture designer and maker. The judges' comments weren't stinting in their praise, either: "A fully resolved design, immaculately crafted with exquisite hidden details. Elegant and contemporary with great poise." Not bad for a man who only decided to take formal training in his craft just over three years ago.

Background

Tom's background is in engineering: a degree in the subject preceded 10 years working in recycling and renewable energy. The work was varied and Tom was successful in his field, both as an engineer and manager, but practical work – actually making something with his own hands – was a rarity, and much of his time was spent in front of a computer. Despite Tom's success, the passion for woodwork he'd felt since his school days eventually won out, as he explains: "I decided I wanted to take a break from engineering to see what I could do with furniture making. I didn't want it to be one of those things I always wished I'd tried. If I try it and it doesn't work out then that's OK, but I don't want to regret not having tried it in the first place."

Perhaps the major turning point for Tom came with the decision to take a one-week course at the Waters & Acland Furniture School, based in the English Lake District National Park: "It was a really intense week – I was exhausted by the end – but loved every minute of it. Before the week was out, I'd already booked myself onto the Designer-Maker course, which I started in September 2018."

So was it a shock to suddenly find himself immersed in the world of fine furniture making?

Judges described Tom's desk as: "A fully resolved design, immaculately crafted with exquisite hidden details"

A third, hidden drawer can be released after removing the left-hand one

Tom reveals all: "I'd made lots of things prior to going to W&A, but not to that level of quality. It was something I've always loved doing, but prior to this, I just didn't have the knowledge, skills and tools to make furniture to a higher standard. I'd made a bed, dining table, coffee table, bathroom cabinet, etc. and while they still work well, they're a bit rustic!

"There was a lot of trial and error… I picked up some knowledge from watching YouTube videos, and bought and read a few woodworking books and magazines, but looking back, there were lots of gaps in my knowledge. I didn't know how to use a plane properly, and I didn't know how to sharpen a tool to a razor-sharp edge."

Waters & Acland Furniture School

Tom speaks in glowing terms about the tuition he received at the School: "I learnt to properly use the full range of hand tools. Cutting your own mortise & tenons or dovetails is the only way to improve – learning from what you get wrong and then trying again until you get it right."

The course focused on understanding and getting the best from hand tools before introducing industrial machinery into the mix. This foundation was crucial, and helped Tom to develop a better relationship with the materials he was using: "Working to a higher standard makes you think much more carefully about the piece of wood you're using. When you go to a timber yard, you're choosing between hundreds of different species – with the experience I picked up at W&A, I'm now a lot more selective about the board I pick for a particular design."

Influences & design process

Tom volunteers the fact he's a big fan of iconic Danish furniture designer, Hans Wegner – "In my opinion, his desks and chairs are hard to beat" – and although Tom's still developing his own style, it would be fair to say that this influence is certainly visible in terms of the clean lines and elegant minimalism exemplified in his portfolio of work so far.

While Wegner may not be an unexpected influence for an aspiring maker with a passion for sleek, handcrafted wooden furniture, Tom's expression of admiration for the work of the legendary Dieter Rams while at Braun speaks of a designer seeking wider influences.

"I agree with his principles of good design and try to follow them in my approach to creating functional objects," says Tom of Rams' much-cited '10 commandments' for designers everywhere. If you aren't already familiar then these are certainly worth a quick browse online. Words like 'long-lasting', 'aesthetic', 'thorough' and 'useful' seem extremely apt when read in the context of Tom's furniture.

Tom's experience as an engineer has certainly been beneficial in the workshop: a natural affinity for the accuracy required when measuring and marking out, an in-depth understanding of the Computer Aided Design process, and a wealth of practical experience taking projects from CAD to reality.

"All my recent work has been fully CAD modelled before starting any making. I'm typically working on sketches and CAD models of one or two designs in tandem with making a previously resolved design. This allows me to see the finished form and refine it before I get to a point where I'm potentially wasting wood. The pieces I'm doing take ages to make, so when you start cutting up big slabs of oak, you want to be sure that the piece works – visually, ergonomically and structurally."

Tom firmly believes in the benefits that can be reaped from a fastidious and comprehensive design process, as he tells me: "It's easy to just leave aspects of the design and say you'll figure them out during making, but whenever I do that it ends up taking longer as mistakes get made or problems turn up that weren't properly anticipated."

When it comes to realising his creations, Tom sees the tools and techniques available as part of a continuous spectrum of options, and certainly doesn't feel that using the latest CNC processes are any less valid than working with hand tools. This view is part of a down-to-earth and pragmatic attitude to his craft: "In terms of pure satisfaction, it's hard to beat hand tools. In order to run a viable business, it's hard to beat power tools."

"For me it's a question of economics," Tom explains. "I can pay someone with a five-axis CNC router to process a few key parts of my design in a matter of hours, or I could spend

Side table in ash

Fine craftsmanship and exquisite details come as standard with Tom's work

a couple of weeks making jigs and doing them all by hand. If it allows me to make a piece of furniture financially viable, then I've got no problem with it."

And because absolutely everything must be hand-finished anyway in order to reach the lofty standards of perfection that Tom has set for himself, in many ways this is simply a case of machines doing the heavy lifting, while allowing the maker to focus on their craft.

The desk

Like any great piece of furniture, Tom's desk began with a careful choice of wood: "I hand sorted through a few tonnes of boards, looking for something that would work well, was stable and relatively free of defects," he recalls. "I needed a good tone match between the two boards, as well as a balance between some medullary rays, but not so much as to distract from the overall design."

This care and attention to detail can be seen again and again throughout the piece. The flawless intersecting mortises in the legs are a work of art in their own right, and that's before you learn that the outer surfaces of those legs are curved to a radius of 16m in an arc, which sweeps around the entire piece. Then there's the immaculate inset drawer pulls, not to mention the neat hidden drawer, which is released using a brass mechanism of Tom's own design. All in all, the desk took the best part of three months to make, plus many hours of design leading up to its making.

Clearly this exacting approach chimed with visitors at the 2019 Cheltenham exhibition, with Tom's desk winning the New Talent Award, as well as finding itself in a very healthy third place for the 'People's Choice' vote, an impressive ranking when you consider that over 300 pieces were on display, many of them from established craftspeople. This may have been helped, in part, by Tom's willingness to engage with the public, staying on at the exhibition and talking to anyone who was interested in hearing about the desk as well as his furniture making ethos in general.

Ash desk with ebonised legs – one of Tom's projects while studying at Waters & Acland

The exposure he received as a result of not only exhibiting his work, but also committing to being present and visible for the duration, started to pay instant dividends. A conversation with one particular visitor resulted in Tom delivering his most significant sale to date just two weeks later.

There's something deeply impressive about the effort required to achieve the pure, simple pieces Tom creates. Like many a great pop song, the final form is so pure and bold that it comes as a shock when you delve beneath the surface and discover just how much work went into achieving the end result.

As well as continuing to expand his furniture making portfolio, Tom has built up a healthy following on Instagram – **@galt.designs** – where he regularly posts photos and descriptions of the projects he's working on. The most recent of which is a stunning frame and panel wardrobe in teal eggshell, which, at the time of writing, is awaiting its door pulls. This is surely one of many new commissions bound to come Tom's way, and the future certainly looks to be an exciting place for this talented furniture designer-maker.

FURTHER INFORMATION

To find out more about courses offered by Waters & Acland, see **www.watersandacland.co.uk/furniture-school**

Cutting perfect dovetails requires skill, concentration, and a very bright light!

Tom's other work, such as this chair in ash, confirms his love of sleek minimalism

Robert Sorby

MADE IN SHEFFIELD, ENGLAND - SINCE 1828

NEW

Turning Made Easy!

- Easy to set-up and use
- Fits a wide range of woodturning lathes
- High quality components for a smooth operation
- Suitable for all levels of woodturning
- Cantilever roller positioning for optimum tool support
- Heavy duty construction
- Quick and easy adjustment
- Maintenance free

PROUDLY MADE IN SHEFFIELD, ENGLAND

HELPS REDUCE VIBRATION & CHATTER

LIFETIME GUARANTEE

MADE IN BRITAIN

YouTube

Robert Sorby SteadyPRO

Turning Made Easy

For more information and to find your nearest stockist, visit our website

www.robert-sorby.co.uk

Robert Sorby, Athol Road, Sheffield S8 0PA ENGLAND
Tel: +44 (0) 114 225 0700 E-mail: sales@robert-sorby.co.uk

FOLLOW US ON SOCIAL @ROBERTSORBY

Due to a clash of branding with an International Manufacturer, the Robert Sorby HollowPro is now the Robert Sorby SteadyPro.

Made In Sheffield Mark, a symbol of the City region's ongoing commitment to quality and excellence. MADE IN SHEFFIELD

PART 3

Making a hat display stand, decorative buttons & mirror frame

In the final part of this series, **Andrew Hall** makes a stand for displaying turned hats, a mirror frame using the ring saved from a wet-turned hat, plus various decorative buttons for placing around the brim

In the final part of this hat-turning trilogy, I'll explain how to make a stand for displaying hats, as well as decorative buttons for placing around the brim, and a mirror frame, which uses the ring saved from making a wet-turned hat.

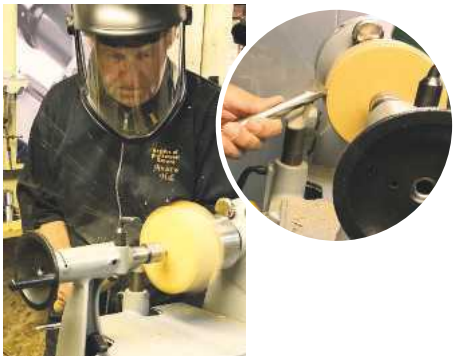
To watch the accompanying video on my YouTube channel, which shows these items being made, see **https://youtu.be/1o0vhKc7Qng**.

HAT STAND

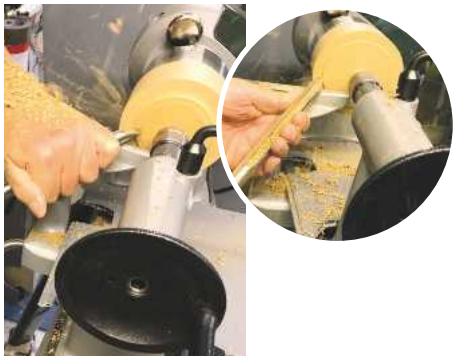
1 A typical hat stand, which is used to display my signature hat. This is a useful exercise for practising the three main cuts in turning: bead, cove and 'V' cut. It covers both between centre spindle turning and faceplate/bowl blank turning

2 The stand is made from English oak harvested in Northumberland and air-dried to a moisture content of about 12-14%. I start with two blanks: 100 × 100 × 45mm for the base, and a 300 × 50 × 50mm spindle section. Note the small crack on the oak spindle. When turning the spindle from square to round, it's essential to wear an impact-resistant face visor. Faceplate turning the base starts by drilling a 50mm hole 3mm deep to hold the materials for turning from square to round. Note: I use anti-slip mat under the material, which is held with a non-slip glove. If in doubt, clamp the material to the table using a G clamp

3 Here you can see the hole after drilling and expanding the chuck jaws to an optimum circle, gripping the material 360°. Most chucks have an optimum circle when they're expanded 3mm from closed



4 Here the blank is being trued up to a disc, maintaining bevel contact using the 12.5mm swept-back bowl gouge. Protruding the tool 75mm beyond the tool holding jig ensures I achieve a lovely long wing, which is ideal for shear cutting. To see this cut in action and to learn about the tool sharpening techniques I use, visit my YouTube channel – search for 'Andrew Hall Woodturner' – where you can watch two comprehensive videos on tool sharpening



5 Cleaning up the surface of the base requires using an overhand grip, whereas in the previous steps, I'm using an underhand grip with bevel contact. The overhand grip removes wood rapidly, but it's not the best of cuts for finish. Oak is the most difficult wood to turn, but is actually my favourite for making furniture. To get the best finish from the tool, I use a push cut, maintaining bevel contact and laying the fibres down

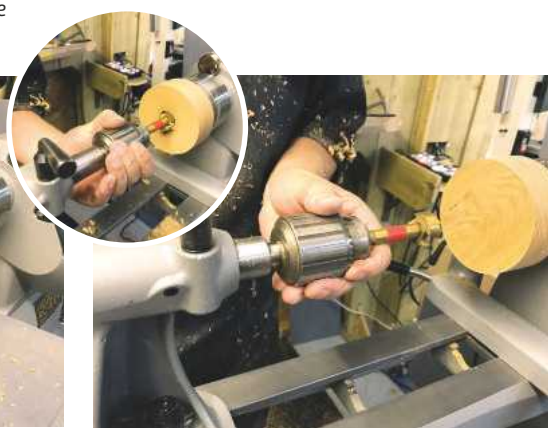
6 I like to maintain my Record Power Coronet Herald lathe and frequently clean the bed and toolrest using a medium garrison block. Doing so allows the tool to travel beautifully across the toolrest and banjo and the tailstock moves with ease, making the whole turning experience more enjoyable

7 For turning a dovetail, I mark out a 50mm recess. I then cut the recess using a parting tool held in an arc cut rather than horizontal. Cutting horizontal will create a scrape and produce a poor surface finish whereas cutting in an arc will create a shaving and a much better surface

8 Using the 10mm swept-back bowl gouge, I produce a decorative button with a small bead. Next, I use a 10mm round skew chisel ground to 6° to produce a crisp dovetail and clean recess

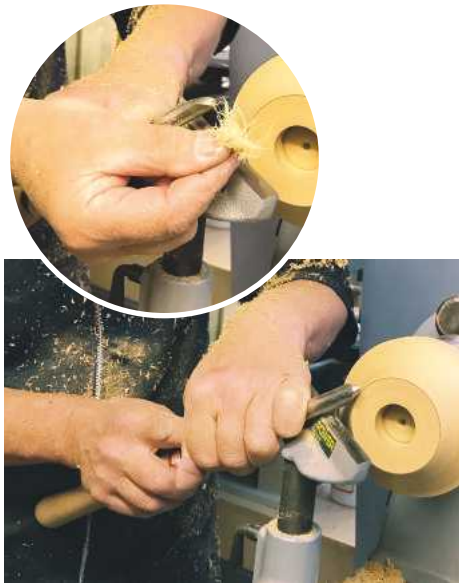
9 I sand the base using 120, 180, 240, 320 and 400 abrasives. I always wear my dust mask or Air Cap, have the Camvac extracting chips and the AC400's fine filter running, which removes very fine dust. Janet also wears a dust mask while doing the photography for the article and Indy, our sheep dog, has to leave the workshop when I'm sanding

10 The material is reversed round and the surface cleaned up using an underhand grip and draw cut. This is great for the rapid removal of materials



11 For drilling the spindle, I mortise using a sawtooth bit held in a Jacobs chuck. Drilling speed is always safest below 500rpm and I drill to the depth of the 25mm section, always cleaning any shavings out using a soft brush. Safety note: shavings get hot so don't use your fingers to remove them as you run the risk of cutting or burning yourself on the sharp edge

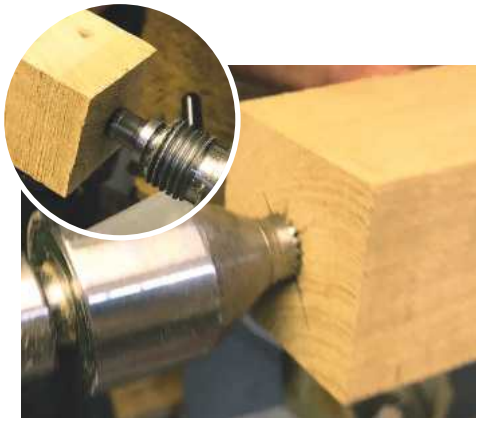
12 Using a scooping cut and overhand grip, I remove the material using the bottom one-third of the wing, creating a cove on the front of the base



13 As I said before, oak is notoriously difficult to turn, so it's a good idea to experiment with different cuts. A push cut is far superior to a pull cut, but a shear cut is the best. To do this, the back hand is lowered right down and the flute almost closed; this creates a very fine shaving and a lovely finish from the tool

14 Once sanded through the grits to 400 as before, the base is now ready for finishing

15 For the spindle, I start by marking the centre. You can either finger gauge by protruding the pencil just under half the width, marking round from all four sides, or use a steel rule and draw from corner to corner, then make a hole using a bradawl or gimlet



16 Here you can see the new multi-point centres available from Record Power: the Hawk and the Falcon drive centre and revolving multi-tipped tailstock centre

17 Using a spindle roughing gouge, I turn the spindle from square to round, which allows me to achieve the largest diameter possible

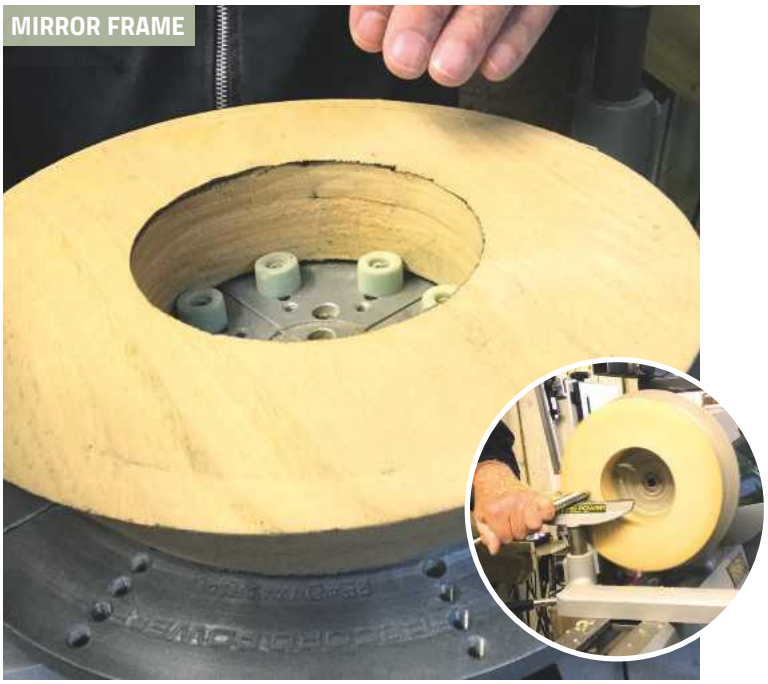
18 Safety note: I'm so pleased I wear a face visor. The crack in the oak wasn't as stable as I thought and although I was standing to one side, a fairly large section flew off. Luckily it missed me, but it may not have. Worst case scenario, the visor would have saved me, thanks to its high impact screen

19 With the same sawtooth bit used to drill the mortise in the base, I calliper the size of the bit for the tenon. Safety note: always round callipers off before using them. Bought new, these are sharp and if used on rotating wood, can catch and potentially cause a nasty accident

20 It's now time to practise some beads, coves and 'V' cuts, using a10mm swept-back bowl gouge. You can also use a spindle gouge or skew chisel for this process, but the skew is my favourite

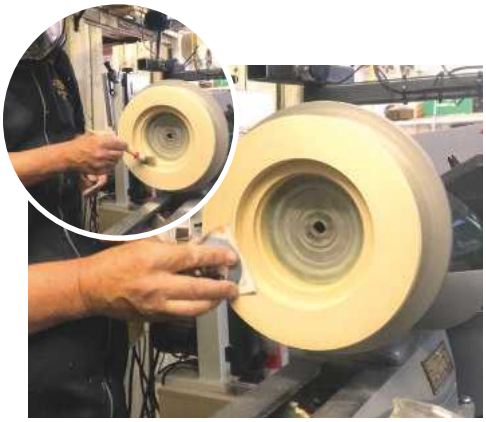
21 I sand the spindle through the grits, starting at 120 and finishing at 400 grit

MIRROR FRAME



1 Next, the mirror frame is made using the ring of wood saved when turning the hat in part 2. The piece I'm using as the example was turned about six months ago and is at 12% moisture content. Not all of the rings dry successfully and some do crack despite trying to slow down the drying process by sealing the end-grain with wood glue. The actual ring from the Scots pine hat did crack, but I simply added it to the fire wood pile. Using button jaws – maximum speed of 600rpm – I true up the rear surface of the ring in the same way as I cleaned up the surface on the stand base, using a swept-back bowl gouge

2 Using a parting tool, another ring is removed to create the bead for the frame



3 The inside of the rebate can then be cleaned up using a 10mm swept-back bowl gouge. I sand through the grits using a Simon Hope arbor to create a flat surface. I always dust in between each grit to ensure I get rid of any residue left from a previous abrasive. This is often the cause of small scratches, which can appear when taking the project off the lathe

4 Turn the frame around and alter the buttons to suit the diameter. Note: lathe speed shouldn't exceed 600rpm. Tool the front surface in the same way as the rear and prepare ready for sanding. Your tool skills will naturally improve as it's easier to turn at a higher speed – less resistance creates a better cut. This step offers a great opportunity to improve tool skills. Sand the frame using the same process as for the rear and it's then on to finishing

DECORATIVE BUTTONS

1 The final project is the decorative buttons, which can be used to decorate the rim. To do this, take a piece of sapele or dark wood measuring 100 × 50 × 50mm and turn from square to round using a spindle roughing gouge. You want to produce a tenon or spigot to fit the optimum circle of your chuck jaws

2 Here you can see a selection of button sizes. Note the multi-point markings: in my opinion, these have been a game-changer for taking material off the lathe – for example, trying a tenon in a mortise. They can so easily be located accurately, running true if required to go back on the lathe for any reason

3 The buttons are turned using a 10mm swept-back bowl gouge, then sanded through the grits as previously. Always remember to support your wrists when doing this. The next step is to add texture using a knurling or small spiralling tool

4 Here I'm applying Chestnut Products' friction polish. I buy it in a litre bottle and for ease of use decant into small medicine bottles, which can be bought from a chemist. This way, if you knock the bottle over by mistake, you don't waste much. I apply it using Chestnut's Safety Cloth

5 I part off using a 3mm parting tool, then glue the button onto the hat. Hot-melt glue ensures they are held securely

6 The fruits of my labour. I also made some small buttons, which help to create extra effect on the rim. They can be finished in whichever way you prefer, but I lacquer mine using Chestnut's melamine lacquer

nova™

Smart Tools, Powerful Solutions

Available now!

NEW! VIKING DVR DRILL PRESS

NOVA's latest machine is the 16" DVR Floor Standing Drill Press.

The Viking's DVR Motor has superior power and a highly responsive variable speed range, making it the most versatile drill press on the market today.

- Self starting function
- Electronic braking
- Digital speed readout
- No belts, quiet and smooth operation
- Sensors for superior safety, use and maintenance

RRP: £1,125.00 inc. VAT

For UK & Ireland, find your nearest stockist online

www.craft-supplies.co.uk

@craftsuppliesservice

service@craft-supplies.co.uk

Craft Supplies

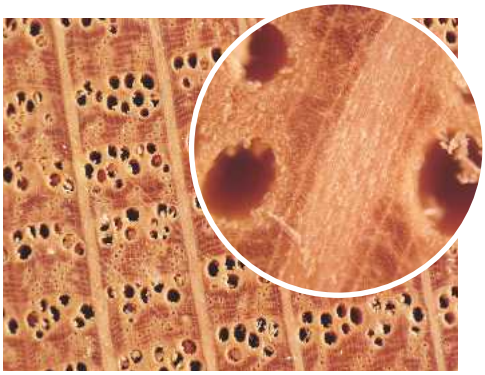
BE INSPIRED, BE CREATIVE

WOODWORKER'S ENCYCLOPAEDIA A-Z PART 30

In part 30 of this series, **Peter Bishop** watches his Ps and Qs before trickling into the Rs for a bit of a rabbet

Pores

A pore is another name for a vessel. Collectively they form the principle food conducting element in hardwoods. Most pores will be visible, on a cross-section, to the naked eye, or at the very least with a ×10 hand lens. Their unique configuration can be extremely helpful when it comes to identification.



A piece of very porous red oak – you can see that the distance between the rows or pores varies quite considerably. The rows of pores are the growth rings; the up-down lighter lines are 'rays'. All hardwoods have rays, but they're most strongly evident in oak

Porous woods

Woods that contain pores, as above, are known as hardwoods, or angiosperms.

Black and white timber-framed home in the Petite-France district, Strasbourg, France

Post & pan or panel

This is another way to describe black and white timber-framed houses. Buildings with traditional timber frames and infilled panels of wattle and daub, or bricks.

Powderpost beetles and damage shown to a wooden floor

Powderpost beetle

Another little nasty! This one's Latin name is *Lyctoxylon dentatum* and it's in the same family as the death watch beetle. You'll often find damage from this chap just under the bark of freshly felled logs. They're also quite invasive and will cause damage inside buildings.

Applying one of several layers of beeswax with a cloth

Using linseed oil to preserve the wooden parts of a boat. This prevents the wood from drying out too quickly as well as preventing splits and shrinkage. Linseed oil also protects against moisture and dirt

Preservation

We apply preservative treatments to wood in order to help them become more durable and last longer. Some timbers have a natural, in-built durability but even these can have their life extended. One key point to remember is that treating wet wood is probably a waste of time. This is due to the fact that the preservatives will be diluted by existing moisture and penetration won't be as good due to the same moisture being present. We treat against insect and fungal attack. Some methods of applying preservatives are simple, while others are more complicated. The objective, however, is for the preservative to penetrate the wood surface to a depth that creates a barrier against attackers. The depth or penetration will depend on the method of treatment and the structure of the wood to which it's applied. The ideal sequence is to prepare your components ready for assembly and then treat them with a preservative. This way, you'll create a continuous 'skin' through which the little nasties will have to break through to gain a foothold. The moral here is to not cut through the preservative treatment once it's been applied.

Prime grade or quality

Basically what it says on the box: if you want top quality material then ask for some 'prime' stuff.

Profiles

Another name for mouldings but specifically referring to the outer shape – 'profile' – of the moulding or mouldings.

Projection

In woodworking terms, we talk about the amount of 'projection' a cutter might have from the block into which it's fixed. Our small workshop tools will usually have blades pre-set or easily adjusted to the correct projection. On large, commercial machines this might be done at a setting up centre before the blocks are loaded onto the shafts. One thing's for sure and that's if there's too much projection, things might get tasty! I've seen cutters bent back and, occasionally, broken right off, so do take care with yours.

Properties of wood

The properties of wood refer to their mechanical and physical features, of which there are many.

20 × 20mm PSE timber

PSE

This is the short version of 'planed square edge'. When you buy PSE stuff you should be confident that it's been planed with square edges. If you recall from an earlier instalment, PAR stuff doesn't necessarily have to be square.

Matchboard, available in a range of widths, sizes and lengths, is ideal for both internal and external work

PTGVLS

Another short version that you may see. It's 'planed, tongued & grooved and 'V' jointed one side' – 2s will mean both sides.

P2s

The last one for now – this is 'planed two sides', so two out of the four sides are planed, leaving the other two rough.

Harvesting a stand of eucalyptus pulpwood in Australia

Pulp & pulpwood

Pulp is the main constituent of fibreboard, cardboard and paper. The raw material may come from waste products such as chips, shavings recycled wood, etc. Some tropical, fast growing trees are grown to feed directly into this market. The pulp produced is simply mashed up from this lot and broken down into wood fibres.

Stanley Yankee Handyman No.133H ratchet screwdriver

Pump or Yankee screwdriver

As a youngster, I aspired to have one of these because they looked so easy to use. Eventually I managed to purchase one but by that time we had drills, then drivers took their place. In fact, I don't know if I still have mine! It was a great invention if you had a lot of screws to drive home. Providing you'd drilled your pilot holes, these screwdrivers were certainly a lot quicker to use. The main shaft is driven by a ratchet – you press down and it turns the head. The direction can be both ways and the ratchet can be locked off to create a fixed-head screwdriver.

Stanley Dynagrip three-piece nail punch set

Punches

A punch can also be called a 'set', which we covered earlier on. They're used to punch nails level or below the surface into which they've been driven.

Longhorn beetle pupa in a tunnel of dead wood

Pupa

In relation to our wood-boring beetle friends, the pupa – or chrysalis stage – is the point at which the larvae metamorphoses into a chrysalis before emerging as an adult beetle.

View of a roof using common purlin framing. The purlins are the large beams perpendicular to the rafters

Purlins

In the structure of a roof the purlins are lengths of timber that run across the roof trusses, or rafters, joining them together.

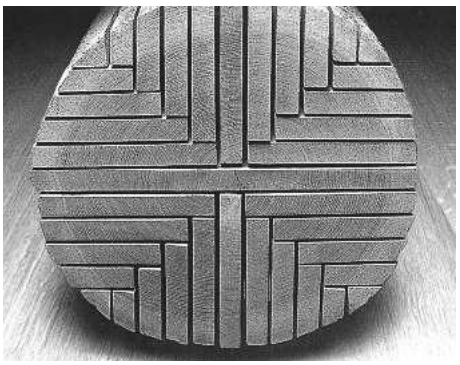
Using a push stick

Push blocks & sticks

If you have any powered equipment in your workshop, you'll definitely need some of these. Both are used to save your digits getting anywhere near a cutting blade. Depending on what and how you're cutting, a push stick is probably the most useful. Don't waste your money buying blocks or sticks – they're so easy to make using some gash stuff. I usually make half a dozen push sticks at the same time and dot them around the machines. It's surprising how quickly they get shortened or chewed up; just imagine if it was your fingers instead!

Putty

I've included this out of interest although we tend not to use quite as much as we once did. Putty is made from a mixture of chalk powder and linseed oil. It can also be coloured by adding stains or bought in a limited range of shades. It should be covered and sealed in its original container, but it can still go hard. To rework putty, simply make sure it's warm and work it up in your hands. If it's very dry, just add a bit more linseed oil, but not too much otherwise it'll just go runny.



A quartersawn log

Qtd, quartered & quartersawn

Qtd is a short abbreviation for 'quarter' as in quartersawn, etc. Quartered is the term used for quartersawing. There are a number of ways to do this; some produce true quartersawn material and some 'bastard' cuts. The first is expensive because there is greater waste and the latter less so. In true or full quarter cutting, the face of the planks cut will follow the radii from the centre outwards. In oak, for example, this will produce planks with a high degree of 'flower', which is the name of the decorative feature we all love to see.

Quadrant moulding is used to cover the expansion joints for laminate flooring, or it can be used to bridge gaps between internal corners

Quadrant mould

This moulding is a quarter round and used to finish off in corners around panels, etc. It can be made in any size from tiny to large. A bit boring but it's seen everywhere!

Queen post trusses as seen in an ancient barn

Queen posts

We described a single 'king' post under the Ks and now we have the 'Queen' posts as well. These are two vertical timbers that support rafters in a roof and are most likely to be designed into the structure so that the roof space can be utilised more efficiently.

A quirk is a deep depression that separates a convex moulding shape from other mouldings, or more commonly, a flat surface

Quirk groove

A quirk groove is a detail that's sunk into and added to as part of the design within a larger moulding.

Whiteside quirk bead router bit

Quirk bead

The quirk bead is one that has these grooves as an integral part of the design. For example, on corners, two will form a round, corner bead. They can also be used like a 'V' joint to disguise gaps or movements in timber panelling or similar applications. The cutters to create the quirk can be fitted into a hand-held moulding plane or created with a slim router bit.

Locking rabbet joints

Rabbet

'Rabbet' is an old-fashioned name for a 'rebate'. Both are the same, however – a recess along an edge or on an end.

NEXT MONTH

In part 31, Peter gets stuck into the Rs – there's lots of short entries with one or two more detailed explanations when required

FESTOOL

Your fingers – invaluable!

With the new TKS 80 table saw, the risk of most serious cutting injuries during sawing is reduced. While you concentrate on your work, we protect your most valuable tools – your fingers.

Discover more at www.festool.co.uk

Tools for the toughest demands

Completion of the ship – masts now installed and the quay in readiness

Mayflower 400
Bonfire & Pyromusical

Postponed from 2020 due to the COVID-19 pandemic, to mark their 50th anniversary and raise £100,000 for charity, **Great Torrington Cavaliers** will burn a full-size replica of the *Mayflower* in a spectacular bonfire celebration, as **John Greeves** discusses here

Mayflower II replica built in Devon from 1955–56, which sailed to the USA in 1957, recently restored for the 400th celebration

Last year – 2020 – marked the 400th anniversary of the *Mayflower*'s historic voyage of the Pilgrim Fathers to America in 1620. It's estimated that over 30 million people today can trace their ancestry to those who first set forth in search of a new life in a distant land many years ago.

Mayflower 400 was due to involve a year-long national and international commemorative programme embracing a shared history with extensive events planned in many towns and cities in the UK, Holland and the USA. Plymouth City Council alone planned to host 100 events to mark its part in the *Mayflower* story. Unfortunately, due to the COVID-19 pandemic, many of these events were cancelled or postponed to the following year. One of the many commemorative events undertaken was the building of a full-size replica of the *Mayflower* by Great Torrington Cavaliers (GTC), a group awarded the Queen's Award for Volunteer Service in 2016. This fundraising organisation has, for the last 50 years, created large detailed historical structures, such as the Houses of Parliament, The Great Train Robbery and

BT Open Reach drill holes for the 40ft logs that will support the 5ft platform. Mast holes are also drilled

The 40ft larch logs arriving on site in March 2018

Progress so far as of June 2018. The 4×2 timber framework begins to bebuilt. Horizontal ends are then cut to required lengths, outlining the hull's shape

HMS *Victory*, before finally setting them alight in order to raise considerable sums for charity.

Not only do the Great Torrington Cavaliers wish to commemorate the 400th anniversary of the Pilgrim Father's crossing, albeit belatedly, in 2021, but as Andy Pitcher – carpenter and rigger – tells me, they also want "to celebrate the 50th anniversary of the Cavaliers," which happily coincides with the 400th. Like many others, Andy is one of many members who's given freely of his time in building a replica of the *Mayflower* to mark this very anniversary.

The logistics for this type of venture are vast and require not only careful execution in terms of the build itself, but also detailed planning of the event throughout. The Cavaliers are lucky in that they possess a wide skill-set, including builders, riggers, carpenters and other personnel, all of whom play a significant part in the staging of this 2021 event.

Overview

The original *Mayflower*, which carried the Pilgrim Fathers to America, was a typical merchant vessel of her day, square-rigged and beak-bowed with high castle-like structures fore and aft. The ship had three masts and was believed by historians to be in the region of 90-110ft in length and 25ft wide with a draft of 13ft. Three levels existed below deck, including the cargo hold, gun deck and main deck. It took the original *Mayflower* 66 days to sail to America with 102 passengers and 30 crew members on board. The Torrington replica ship built for the 400th anniversary is constructed so it appears resting in water alongside a 17th century Plymouth quay. In terms of external details and size, the replica appears accurate in all its outward appearance, having a fore, main and mizzen masts, crows nests, bowsprit and even gun ports and other features faithfully produced. Below deck, the reality is quite different, however. The ship has a forecastle door and stairway, but there's no access to the decks below. A large grating covers the hold area, thus creating an illusion of 'below decks' yet none exists. The ship reminds me of a life-size film set. In fact, The Great Fire of London structure, built in 2000 by the Cavaliers, did just that and was later used in a film.

The present replica is not intended to be

March 2019 – construction of the main deck with grating visible

March 2019 – construction is coming along steadily

Mast stage one – April 2019 – mast plugs are removed and the bottom half lowered in

A drone's view of the mast

The hull is starting to take shape, with cladding slowly added. There won't be a keel as the finished ship will appear as if afloat

Hull progress as of April 2018

Construction progress as of August 2019. Gun ports are visible with cladding required just to the bow


Extensive work has been carried out on the stern end of the ship up to the poop, half and upper decks


September 2019 – bow progress continues as the larch planks are reduced down and steamed


The ship is now fully clad and gun ports inserted


Progress on the stern as of March 2020


Beak head under construction and the quayside is starting to take shape

seaworthy, so only the outward appearance is important. Within, the internal structure doesn't have a keel, futtock frames and knees, but is instead supported by a strong 4×2 framework, which sits on the raised platform.

Obtaining the plans

There's usually a two-year interval after the last bonfire before the Cavaliers decide on their next major builds, which occur every five years. This build was different, however. Andy knew the significance of the event, both to the 400th *Mayflower* anniversary and to the Great Torrington Cavaliers, also marking the 50th anniversary of their formation. With all this in mind, planning started immediately after the 2015 event. Andy contacted numerous maritime museums in the hope of obtaining plans. One museum had parts of a plan on parchment, but in the end, Andy turned to the modelling world and was able to obtain a detailed version. Paradoxically, in the world of models everything is scaled down. Armed with his 800mm plan, Andy explains that he "basically scaled the wooden model plans up to full-size, and that's what we built."

Local and national sponsors were then found and timber sourced.

Sourcing the timber

Nothing was cut down purely for the Cavaliers' replica build. RHS Garden Rosemoor, a public display garden run by the Royal Horticultural Society in north Devon, donated many 40ft larch trees. which they had to fell due to the fact they overhung the road. Other timber came from local wood owners. Often with woodland management, trees are felled and then left to rot, but in this case, much local timber


March 2020 – forecastle beak head and bowsprit are still to be added


Upper deck, forecastle and stern end now completed


Painting the hull exterior


The *Mayflower* in all its painted glory, in 2020


Masts are lowered into position

was donated to the project. The Cavaliers were also given old pallets and other upcycled timber, which they would use within the build.

Following the event, a contribution alongside other charities will be made by the Cavaliers to the planting of new trees, in order to offset their carbon footprint.

The build

Once the timber was sourced, a series of holes were marked and drilled out by Open Reach – a functional division of BT Group – also one of the event sponsors. Into these holes tree trunk lengths were then inserted, which were 5ft off the ground. The idea was always, as Andy says: "To build a platform in the shape of the bottom of the boat, which, to the onlooker, appears cut off at the waterline." The use of the platform dispensed with the need for a keel and for the time-consuming task of cladding the underside of the hull. Open Reach also bored 5ft deep holes, which the masts would eventually go in. These, in turn, were capped by 10ft trunks, later removed when the lower parts of the masts were inserted.

Where the keel should have been, uprights were placed every 2ft at the beginning of the build and it was from these that Andy and his team measured out from so they could form the ship's outline. "The actual framework was made out using 4×2 timber, which spanned horizontally across," Andy says. "Every 3ft from the centre these horizontals were screwed to a vertical pole, to create stability." The horizontal ends were then cut off to the required lengths – to give the outline of the ship – and these were then reinforced with plywood cut to the required shape, which secured the ends. Once the skeleton, or framework, of the ship was built, cladding was then added to the outside of the hull, up to the working – main – deck. This was also supported by the 4×2 timber framework underneath. The mast plugs were then removed by crane and the bottom half of the masts lowered in. As the site is very windy, the top half of the masts will only be raised about a month before the bonfire takes place. "The overall length of some of the masts will be about 65ft feet," Andy confirms, "with 10ft disappearing below the platform. Cables will be attached to the tops of the masts and these will stretch over the quay, so that when the masts collapse during the burn, they won't pose a threat to public safety."

Challenges encountered

The COVID-19 pandemic has undoubtedly caused work to be very intermittent, but in terms of the build, the cladding of the hull around the bow presented the biggest build challenge, as Andy explains: "As soon as you start coming into the bow, it doesn't stay straight and instead starts going up as you're twisting it." The team used a number of processes to solve this difficulty, starting with 5 × 1in larch planks, which were reduced down to about ⅞in, were then soaked for about a week in a bath before being nailed into place on the hull. A steamer was also used with each piece being individually attached to ensure the planking didn't twist or buckle up.

"The amount of rigging needed for the ship is ridiculous," Andy tells me. There are 12 ladders on each mast, and £2,500 of rope used for the overall rigging when, finally, all three masts will be raised to their full height. Sails will be fitted but not unfurled, as the boat is actually alongside a quay with its 17th century properties before the event takes place.

The event

The actual bonfire event is due to take place on Saturday 28 August 2021. A professional pyrotechnics team will be brought in to undertake all safety aspects connected to the burn and bonfire. Before the bonfire takes place, the structure will be inspected, with a fire officer and fire engine remaining on standby.

Steve Blake, the Project Leader, explains that the build actually started in Easter 2018, but that planning and logistics were being coordinated long before this time. Steve acknowledges the generous assistance by local and national sponsors and volunteers, all of which have been pivotal in terms of the event being possible. "This year we hope to attract a crowd of 12,000 and raise £100,000 for charity," he says. Nothing, it seems, is beyond the Cavaliers' realm of possibility. As Steve reminds me, their motto sums up the ambition of all members: "Let's put on events, the likes of which Torrington has never seen before," and I firmly believe they'll succeed in doing so.


Work is now completed. Here you can see the steps from quayside to the ship

FURTHER INFORMATION

Great Torrington Cavaliers – **www.torrington-cavaliers.co.uk**

The Mayflower 400 events programme – **www.mayflower400uk.org/events/**

WW PROJECT

THE (HALL) TREE OF LIFE

Matthew White takes inspiration from a vintage effect hall tree and creates his own walnut version that incorporates even more storage space

Pottery Barn hall tree – the inspiration behind my modified version in walnut

My version is slenderer in appearance and customised to suit specific requirements

I've been wanting to build a hall tree for the house since coats, shoes and cold weather gear tends to pile up by the garage entrance. It took a while, but I finally found inspiration in a model produced by Pottery Barn called the 'Declan', a stylish blend of modern and rustic that matched the rest of the decor. There were a few problems, however:

1. The original design came in two sizes: 965mm and 1,626mm, neither of which fit the 1,270mm wall space I had available.
2. It's made of poplar. Sorry, but back where I'm from, we use poplar for workbenches and framing for sheds.
3. It's expensive, considering I can get poplar for next to nothing at my local timber yard.

Given those issues, along with the fact I had a few days off from work and enough spare walnut on hand to put it together, I decided to construct my own to exceed the original's quality while still coming in well under budget. To construct your own, you'll need a table saw, router (table), bandsaw or jigsaw, and a drill for counter-boring screws. Let's get started!

Upright supports

You'll notice there are only a few major components required for the hall tree design. Lucky us. The website for the original also gives the measurements for most of the components, which comes in handy: **Feet:** 114 × 406 × 50mm; **uprights:** 38 × 64 × 1,499mm; **shelf supports:** 114 × 38 × 355mm; **hook boards:** 100 × 38 × (*).

For most of the construction, I used 50mm stock, coming in at around 29mm planed, which seemed strong enough for what was required.

1 The two bases marked out on a single block of 50mm walnut – also marked are the notional locations for upright posts

2 The two bases trimmed to correct length/width **(NOTE: BLADE GUARD REMOVED FOR CLARITY)**

Start by cutting the four upright posts – 32mm – as well as the two bases – 51mm – (**photo 3**). This will give you a rough idea as to the scale of the project.

Using the source photos alongside your parts, sketch a pattern for the S-curve support on the bottom (**photo 5**). I built mine from 6mm plywood and trimmed it until I had something that looked correct, ensuring I accounted for the tab between the supports.

Next, trace the pattern onto your material (**photo 1**) and cut it to shape. I found it easiest to start with a jigsaw, refining the shape with a bandsaw, then stacking and finalising the pair with a spindle sander. If you're missing any of that, a sander or a half-round file can do the job as well, just a little slower.

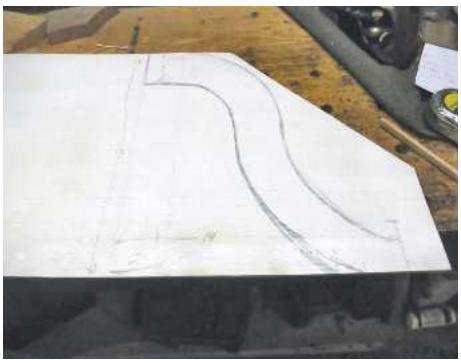
In a similar way, draw some patterns and cut the brackets for your shelves (**photo 6**). Again, I referred to photos of the original and ended up with something close, using a 610mm radius for the sweep on top. Likewise, a sander comes in handy when cleaning up the edges and keeps everything uniform. Before gluing, you also need to cut a 25mm block to finish off the bottom.

Next, set everything out and finalise the

3 Ripping the posts **(NOTE: BLADE GUARD REMOVED FOR CLARITY)**

4 Blanks prepared for the shelf support

5 Pattern for the S-curve



6 Pattern prepared for the S-curve base support

7 S-curve pattern in place between posts and base

8 Once all parts are cut to size, carefully glue everything up and clamp the whole stack in place

9 Shelf supports after rough cutting on the bandsaw

10 Final sanding of the supports using disc and spindle sanders

11 The posts glued up with base and shelf supports in place

12 The planed and chamfered profiles once added

13 Attaching the posts and S-curve supports to the bases with 10 × 50mm Festool Dominos

spacing/etc. I kept the top shelf flush with the end of the post and placed the second shelf 406mm down, although in retrospect, 356mm would have likely been better.

Once all the parts are cut to size, carefully glue everything up and clamp the whole stack in place (**photo 8**). This will take a few steps but needs to be done in one go so as not to introduce undue stress in the assembly and also keep both sides uniform. After both are glued and clamped, make any adjustments as required before the glue sets.

Bases & drilling, routing & jointing

After the supports are dry, reinforce the joints with countersunk screws from the sides and finish them off with caps. With these sanded flush, use a 45° chamfer bit in a hand-held router to hit the long sides of the uprights as well as the three front edges of the bases.

Next, we'll attach the bases to the completed uprights. Using a framing square, start by checking the bases are square and that they exactly match the S-curves. If they're too tall/short, trim or sand the affected surfaces back.

To attach the bases, I used a Domino jointer (**photo 13**) for the posts and a 100mm screw driven through the base into the curves, all reinforced by glue. If you don't have a Domino or something similar, pre-drill a few holes in the base and drive some heavy-duty screws up to keep things together. I'd stay away from biscuits as I doubt they'd be strong enough to take this much stress. After assembly, use the sander to take care of any glue that's squeezed out.

Hook boards

There are two horizontal boards, which will contain the hooks as well as keeping the two supports held up. This will inevitably put a large amount of stress on the four points where these boards intersect, as any pressure or twisting of the uprights will end up here.

Cut a pair of boards to length and use the same chamfered router bit to hit the front edges (**photo 19**). At this point, I also placed and marked locations for the hooks. I had a box of rustic coat hooks lying around, so I set up a row of eight on top, which gave me a spacing of a little over 150mm between each (**photo 20**).

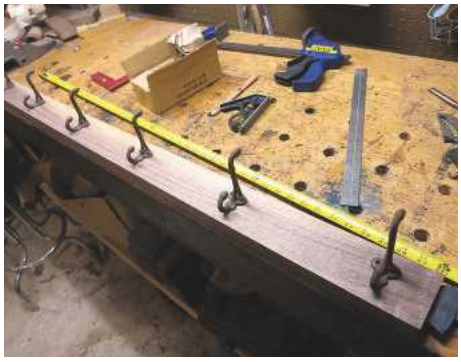
Rather than be fancy and make something intricate to hide the joints, I went with more screws and plugs. As before, pre-drill four holes at each intersection, set the uprights in place, and screw the boards down (**photo 21**). The spacing on mine was ~1,295mm and 813mm from the floor. In order to keep things even,

14 Pre-drilling and counter-boring screw holes for additional support

15 Routing the outside edges

16 10mm walnut plugs

17 Preparing hook boards and shelf slats



18 Planning layout and spacing of the coat hooks

19 Final surface clean-up with an added chamfer

use a large framing square before finalising the placement.

The screws will allow for more flexing in the final product while still being fairly strong – 16 × 64mm self-tapping screws should hold for a while, right? Again, finish this up by capping the holes (**photo 23**), trimming down the plugs and sanding flush.

Shelves

There are two shelves that still need to be added, each one consisting of seven individual staves. This is a little tedious, but the end result is worth it. Each stave is 12 × 38mm, with a 12mm spacing between each one (**photo 24**). My calculations tell me this will be close to the 356mm we'll need to cover the whole thing, so that's a relief.

I cut seven staves from the same 50mm material as before, then resawed each one down to the 12mm thickness required. I had some significant warping due to internal stresses on several pieces, so if you've dedicated thinner material, I'd recommend the latter.

You'll also notice the tops of the original shelf staves are gently rounded (**photo 26**). To do this, I used a large roundover bit set in the router table and only cut with the last half of the bit. This gave me a smooth radius across the top, but still afforded me 6mm of thickness on the sides. Sand all pieces and pre-drill for the screws to hold them in place (**photo 27**).

Beginning at the front of the brackets, set your first stave in place and screw it down so it's flush. With the aid of a 12mm stop, work your way back, adding one stave at a time and screwing it down with small fasteners. If you've measured correctly, you should end less than 12mm shy of the uprights.

20 Pre-drilling and counter-boring screw holes to attach coat hook boards to the posts

21 Starting the screws

22 Accurate assembly is key!

23 Plugging stretcher screw holes

Finishing

Stand the tree up and admire your progress. Good? Bad? Ugly? Indifferent? In any case, we're almost done! I thought about going with my normal stain and poly scheme, but the original was really meant to resemble a rustic antique. Something like linseed oil would probably be more authentic in this instance...

To darken the wood, extenuate the grain and don't get overly glossy – I used dark walnut Danish oil (**photos 28** & **29**). This gets brushed on and in one step, gives a good colour and decent protection from damage. Start at the very top and work your way down, cleaning up any drips as you progress. Once you get to the end, use a clean rag to wipe away any excess that you may have missed. Let the assembly dry completely, add your hardware and some felt under the bases, then you'll be ready to add all your outdoor accessories!

24 Finalising slat spacing

25 Rounding over slat edges

26 Slats once sanded and pre-drilled

27 Slats screwed in place

28 Surface protected with dark Danish oil

29 The final deep, satin colour

LETTERS

LETTER OF THE MONTH

NEIGHBOUR MAKES WORK FOR IDLE HANDS

The wingless totem pole

Dear Tegan,
It all started as a 'just' job. I was part way through restoring a very nice extending dining table when my neighbour stopped me in the road outside my front gate. He had a wingless totem pole under his arm, which he seemed determined to show me.

"Look" he said, "this was made by Mathias Joe and he's signed it on the back. He died in 1910, so it's over 100 years old!"

I had no idea who he was talking about, but it transpires that Mathias Joe, also known as Chief Joe Capilano, was born in 1840 outside of Squamish, British Columbia. He was appointed by the Roman Catholic Church as the leader of the First Nation Squamish People in British Columbia from 1895 until his death in 1910. He fought for the recognition of native rights and lifestyle for his people and I guess he must have had some clout, because in 1906, he travelled to London and met with King Edward VII to speak of the need to settle outstanding land claims in British Columbia. The King was sympathetic to his cause.

While this was all very interesting, I was wondering where the conversation was going. My neighbour continued: "I'd like to donate this totem pole to a museum, but it really needs a pair of wings making and fitting before I can do that". And so the scene was set.

I found a good deal of information about Mathias Joe online, but only one photo of him holding a totem pole that was almost identical to the one my neighbour had entrusted to me. I was able to use this to measure several reference points and then measure the corresponding reference points on the actual totem pole. I was then able to calculate the relative scale between the two. I used several comparative reference points and the scale consistently came out at 1:12.4.

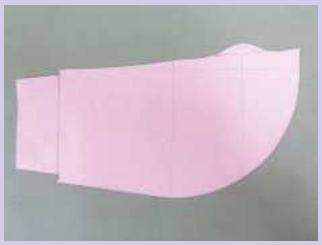
Using this scale, I was able to determine the span of the wings, their maximum chord, the radius on the ends of the wings and the position and shape of the 'eyes' on the original wings. The rest was easy – I transferred the pattern onto some cedar that I had re-sawn on the bandsaw, cut the outline on the bandsaw, shaped it on the bobbin sander, cut a tenon to fit the mortise in the body of the totem pole and then glued the wings in place. 24 hours later, the totem pole was back with its owner, who's a professional artist, so he should have no problem replicating the design on the wings.
Best wishes, **Chris Finch**

Chief Joe Capilano with totem pole

Totem pole signed by Chief Mathias Joe Capilano

Hi Chris, what an exciting project! Certainly not the every day, but definitely one worthy of sharing, and shouting about! Even without the wings, the finished totem pole looks fantastic! What a colourful addition to our letters page! Thanks again.
Best wishes, **Tegan**

Measurements were taken from online photos to determine scale



Paper template generated from scaled-up dimensions as shown by online photos

Wing produced from template

New wings fitted, ready for painting

MARKING TEMPLATE FOR DOVETAILS

Dear Tegan,
I was sad to see, on page 45 of 'Woodworker's encyclopaedia' in the July issue, that the section on pincers was accompanied by a photo of three pairs of pliers – not the same tool. On a different note, the article on houndstooth dovetails by Andy Standing mentioned using a sliding bevel to mark dovetails. If you need to mark out many, it's a good idea to make your own marking template. I use one that I made from some scrap stainless steel some 30 odd years ago, but you can also make them from wood. Rather than 1:8 for hardwood and 1:6 for softwood, I simply use the compromise of 1:7 for both.
Best regards, **Keith Wyles**

Hi Keith, thanks for pointing out this error and apologies that it crept in. Lesson learned. Thanks also for the handy tip on marking templates for dovetails and sharing the photo of your version. I'm sure other readers will find this very handy and may well adopt this within their own woodworking practices. Thanks again for getting in touch.
Best wishes, **Tegan**

Template with marking knives and small engineer's square used by Keith for marking out. The wooden-handled spear point knife is made from an old 6mm spade bit ground to shape.

He's considered making a new template with a wider folded over piece filed at right angles, thus avoiding the need for a square

Side view of dovetail template made from bent stainless steel, then filed to shape

THE STORY OF THE CHAIR... & THE MUG STAIN


FEATURE Archive

Jerkin & baggy hose

Delving into *The Woodworker* of May 1948, Robin Gates is diverted from a history of 'The Plough' by cameos of medieval craftsmen

WOODWORKER INSTRUCTION CHART No. 21

A long line of ancestors

The Plough

'The Story of the Chair' – as featured in the July 2021 issue. Have any other readers been fooled by the addition of the mug ring stain...? Your secret's safe with us!

Hi Tegan,

I thought the following might provide some slight amusement – it's true, honestly! While settling down recently with a cup of coffee to read the July edition, I quickly became totally engrossed in Robin Gates' article 'Please be seated' ('Archive' – page 34) featuring a reprint from the January 1935 edition on the history of the chair.

While avidly reading the detail of the old article, I glanced up to the top of the page only to spot the impression of a cup ring in the top right-hand corner. How did it get there? Convinced I'd not placed my cup on the magazine – although, being of a certain age, I am prone to occasional bouts of absent mindedness – I gingerly placed my cup over the mark to check the size, and it was an exact fit, so must have been me!

Only after a sudden flash of common sense – which doesn't happen very often – did I check an earlier issue, and of course, there it was again – pre-printed to simulate an old document. Oh dear, I should have gone to Specsavers! Despite not having noticed this before, I absolutely love these reprints – please keep them coming – as well as all the other interesting features you and your team manage to cram into each issue.

Best wishes, **Iain Ferguson**

Hi Iain, your email certainly put a smile on my face, which is very much welcome in these strange times! It's good to know that it's not just me who has similar moments and glad that our designer's added flourishes are well received and appreciated! We'll indeed keep working hard to ensure the magazine is filled with interesting features, and we're incredibly grateful for the continued support of our readers. Thank you!

Best wishes, **Tegan**

READERS' HINTS & TIPS

AXMINSTER TOOLS We share your passion.

Due to major stock issues with the Veritas range, a decision has been made, in conjunction with Axminster Tools, to substitute the original prize for a similar one within Axminster's Rider range. Rider planes represent traditional, quality plane manufacture and feature a ductile iron alloy body, accurately ground sole and carbon steel blade. The new prize – the **Rider No.5½in Jack Plane** – is not only versatile, but also perfect for flattening, jointing and general preparation.

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@mytimemedia.com**, along with a photo(s) illustrating your tip in action. For more information on Axminster Tools, see **www.axminstertools.com**

HANDY FEATHERBOARDS

Using a horizontally-mounted plunge router, Tony's wooden nail-brush featherboard allows him to cut a narrow groove along the edge of a salvaged mahogany plank

I've seen lots of featherboards for sale over the years, all designed to hold workpieces tight against a fence while the workpieces are passing a saw, jointer, spindle moulder or router. Mostly the boards are very sturdy and made of plastic, but they're always quite pricey. Instead, I've come to rely on a cheap and simple alternative: two wooden nail-brushes, which can be bought for just a few pounds at almost any local chemist.

Notched to take an angled batten, then glued and screwed from between the bristles, the brushes take only a few minutes to adapt and are capable of holding any workpiece completely securely. I find one or both of them helpful – and valuable from a safety point of view – when running small pieces over a circular saw.

I find them particularly useful for improving the accuracy of rebates and grooves when running thin or narrow pieces past a router cutter. In the photo here, for example, I'm using a horizontally-mounted plunge router – my favourite tool – to cut a narrow groove along the edge of a salvaged mahogany plank. The idea is to glue a loose tongue into the groove so that I can join sections of the plank, precisely edge to edge, to make a wider top for a small table.

The cutter protrudes through the hole, which is just visible behind the left-hand brush. The arrow reminds me as to the direction of the cutter's rotation, and the vertical slot to the left allows me to raise and lower the arm on which the router is mounted.

With the cutter set and featherboards in place, the grooves can be cut in a single pass. Meanwhile, both hands are freed up to guide the workpiece, and the bristles discourage it from moving backwards or drifting away from the fence.

Tony 'Bodger' Scott

WRITE & WIN!

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

REAL™ DEALS FOR YOU

KEEPING THE TOOL TRADE LOCAL IN CHALLENGING TIMES

FOR EVERY TRADE & TASK

All backed by £100,000,000 stock holding

Access to over 30,000 products from 250 leading brands

Get the right information face-to-face in-store

Network of over 2,000 local stockists & trade merchants

In-store catalogue available to browse

You're never too far from your local Real Deals for You stockist

If you would like more information & to find your nearest stockist, please visit www.realdealsforyou.com

AROUND THE HOUSE WITH PHIL DAVY

Needing to buy some small copper clout nails for an upcoming project recently, I came across some background information I'd never really considered before. While easy enough to obtain, I had no idea that such hardware could be used for poisoning trees! Apparently, these nails are often hammered into tree stumps to kill them off after felling, while only a couple are necessary to finish off a sapling. If angled downwards into the base the copper will gradually oxidise and do its work, preventing the stump from sprouting again. Further research revealed that the idea of using copper to impose a similar sentence on a standing tree is generally seen as a myth by those in the know, such as tree surgeons. Having no experience either way, I'm happy to simply use these elegant nails on my project. Often, what you discover when working with less common materials can be fascinating...

USEFUL KIT/PRODUCT
TREND DLB DIGITAL LEVEL BOX

Long gone are the days when you needed a school protractor to measure the angle on a piece of joinery or similar around the house. A sliding bevel and spirit level are still often the most reliable tools in some situations, especially when it comes to carpentry work such as roofing timbers. Checking these angles can be quite awkward, however. Digital levels are nothing new, but one as compact as Trend's DLB box is handy for a wide variety of work. Setting machine tables, mitre or table saw blades precisely can be tricky if you're relying on a sliding bevel alone, but a digital level will instantly give the required angle.

Digital accuracy

Measuring less than 60mm square, the DLB box is small enough to keep in your pocket and dead easy to use. Its tough alloy rim has a magnetic base so will attach itself happily to steeply tilted, vertical steel or cast-iron surfaces. Front and rear panels are tough ABS plastic, with a clear window for the backlit LCD display.

Powered by a single AAA battery – included – this is inserted in the rear compartment. Two buttons are provided: on/off and zero. Initially the LCD displays 'ERROR' when you switch on, but quickly resets to read the angle of the surface. Pressing the zero button enables you to take both relative and absolute measurements, whether a surface is dead level or not. Accuracy is plus or minus 0.2° for any angle.

The green backlight shuts down after 30 seconds, though the readout is still displayed. Pick the box up and the backlight activates again without having to resort to the power button.

The unit switches itself off after five minutes of inactivity to save battery life. Should you need to check the underside of a sloping surface that's awkward to reach, the DLB automatically inverts the reading when turned upside down. This is particularly handy if you're relying on the strong magnet to secure it to a metal surface.

Conclusion

If you've never used a digital level before you'll probably find yourself checking all sorts, from slightly crooked pictures to more important constructional work. The digital display is easy to read and arguably better than your eyesight! Supplied with a fabric protective pouch, this has a belt loop on the back so there's little chance of losing the box.

A clever little device from Trend, then, which will save time when needing to tilt blades or tables on machinery in particular.

Digital levels are nothing new, but one as compact as Trend's DLB box is handy for a wide variety of work

Its tough alloy rim has a magnetic base so will attach itself to steeply tilted, vertical steel or cast-iron surfaces

Front and rear panels are tough ABS plastic, with a clear window for the backlit LCD display

SPECIFICATION

- Accuracy to +/- 0.2° for all angles
- Auto shutdown in five minutes
- Angle sensor technology
- Zero button to determine the angle changes from initial measurement
- Absolute level sensor
- Large backlight for easy reading of angles
- Automatic digital inversion
- Battery included

Typical price: From £25.40
Web: www.trend-uk.com

Powered by a single AAA battery – included – this is inserted in the rear compartment

The fabric protective pouch has a belt loop on the back, so there's little chance of losing the box

Two buttons are provided: on/off and zero

THE VERDICT

PROS

- Guaranteed accuracy for machine tables and blades; fast to use; compact; handy pouch to protect the tool

CONS

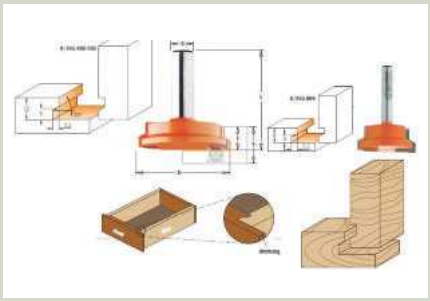
- None

RATING: 4.5 out of **5**

Q&A
ROUTER CUTTERS

Q: A few years ago, I purchased a CMT drawer lock router cutter. I've had a number of attempts with it, sadly with no success of note. The result always has a large gap in the middle of the joint when put together. I realise that one piece needs to be cut face down on the table, and the other vertically up the fence. Can you please advise on the correct set up? The diagram shows two measurements of 6mm each: one appears to be the height from router table surface to top of cutter, but I'm unable to ascertain what the other one refers to.

The other thing is that I'm wanting to make some kitchen chopping boards – timber ready prepared – but would be grateful if you could point me in the direction of a food-safe adhesive. Regards, **Bob Kettle**



CMT drawer lock bits allow you to make strong, perfectly fitting joints quickly and easily

A: I wouldn't worry too much about the dimensions shown in the diagram, though they may be useful as a guide. It appears the router should be positioned so that the cutter's top edge protrudes 12mm above the table. Rather than assume the cutter remains at precisely the same height for both cuts, experiment by raising or lowering it a tad each time. Once you've found the height that gives the neatest joint, label the appropriate offcuts as templates so you can reset the cutter height easily another time. You've probably done plenty of trial runs, but make sure offcuts used are exactly the same size as the finished drawer components.

Regarding a food-safe adhesive, I must admit I've never come across one! If boards are planed accurately and cramped tightly together when gluing then there should be minimal glue lines. For chopping boards it's really the finish that should be safe for food. Recommended is Brandon Bespoke's Pure Mineral Oil, tested in the February 2021 issue. Adding their Wax Oil Treatment gives extra protection and an attractive sheen – see **www.brandonbespoke.co.uk**

AUTUMN PROJECT: MISSION-STYLE COAT RACK

Takes:
One weekend

Tools you'll need:
Marking tools, straightedge, bench and block planes, spokeshave or sanding drum, drill and bits, jigsaw or bandsaw, router and bits, biscuit jointer, hand saw or circular saw

MISSION ACCOMPLISHED

Phil Davy shows you how to make a neat little coat rack in the Mission style – one which is well known for its understated elegance and straight lines

Although I'm more familiar with traditional Shaker furniture, I've always found a certain appeal to Mission furniture. It has an understated elegance to it, predominantly featuring straight lines, with very few curves. Originating in the Spanish missions of California and America's southwestern states some 100 years ago, the Mission style was pretty much the equivalent of what was being produced during the Arts & Crafts period in Britain. It was usually made from oak using quartersawn boards and frequently stained – or fumed – a darker brown to highlight the timber's medullary rays, which would really stand out.

Timber choice & construction

I still have an assortment of European and American oak boards in the workshop bought over recent years when the opportunity seemed too good to pass up. It's obviously best to build

1 Prepare your timber to width and thickness, planing the face side and edge on each board first

2 Saw rear and top boards to length, leaving them a tad oversize for cleaning up with a plane

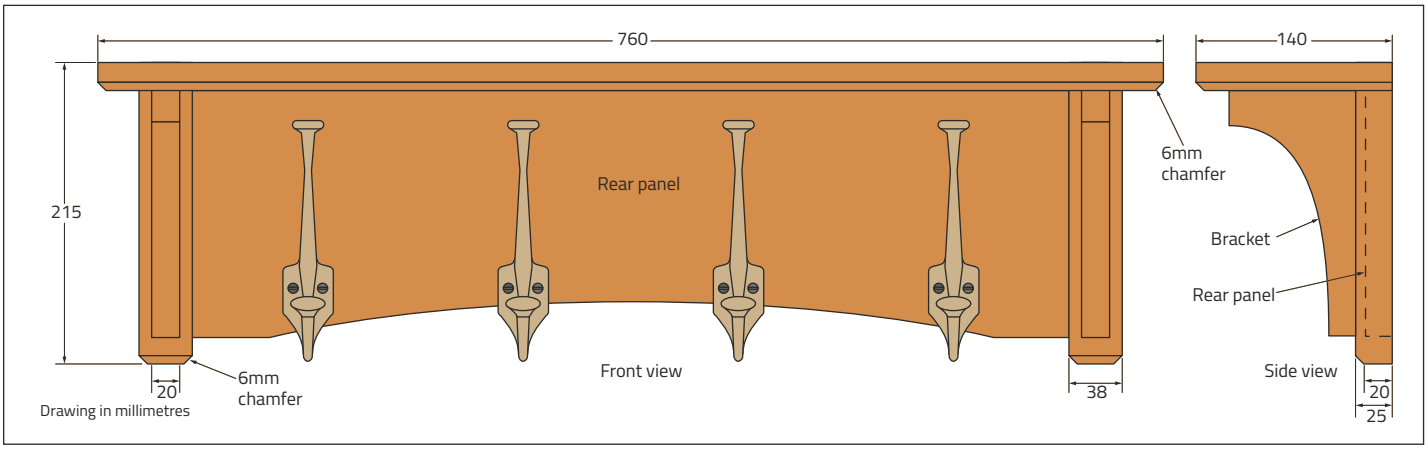


Fig.1 Mission coat rack

any project from exactly the same batch, as a mix of different timbers might not match up. I used a mix of offcuts from a couple of boards, and the visual difference is actually hard to see.

If you're faced with an obvious colour variation, one solution is to bleach the timber once you've completed the project. After rinsing off the bleach and allowing the oak to dry, lightly sand and then use a suitable stain to gain an even colour. Always experiment on offcuts first, though.

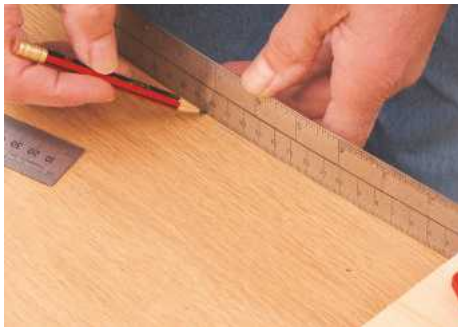
Construction of the coat rack is pretty easy, making use of biscuits for jointing. The most awkward part is probably forming a consistent curve to the lower edge of the main panel. It's harder to produce a shallow curve than one with a tighter radius. After cutting with a jigsaw, I used a spokeshave to clean up the curve, though this is much easier to do in softwood. The most reliable method is to first cut an accurate template from 6mm ply or MDF, taking time to get this precise. With a suitable bearing-guided cutter you can then rout the oak to the exact symmetrical curve, with no cleaning up to do after cutting.

Hardware & finishing

It's a good idea to buy the actual hooks before you start cutting any timber, as you may need to increase the height of the back panel to accommodate them. I got mine from The Door Knocker Company – **www.thedoorknockercompany.co.uk** – based in Shropshire, which sells a fascinating range of period hardware, so you should be able to find something suitable. To give the project some authenticity, I chose cast-iron hardware in its natural grey finish. Unless you obtain hardware with a lacquered finish you should spray grey iron items before fitting, as they'll rust with the slightest hint of moisture in the air. It's not advisable to fit untreated iron to oak, either, as the tannin will react with the metal to create black stains. Use clear or black satin lacquer, depending on the effect you want. You can, of course, make the coat rack any length you like, increasing or reducing the number of hooks as necessary.

Finally, the rack can be sanded and oiled but remove the hooks first. I brushed on two coats of my current favourite finish, Chestnut finishing oil, wiping off the excess after a few minutes.

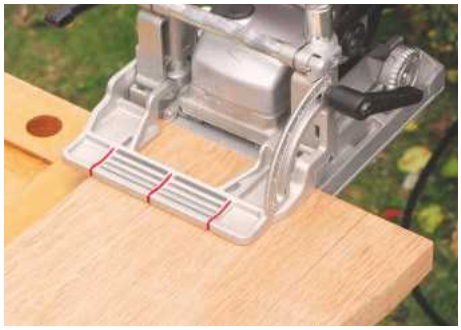
3 Plane the board ends square, working from each end towards the middle to prevent any splitting



4 Draw the lower curve on the back by flexing a steel rule or narrow batten between two cramped offcuts

5 Next, carefully cut the curve on the waste side of the line, either on a bandsaw or with a jigsaw

6 Clean up the curve with a spokeshave. Alternatively, use a sanding drum fitted in a drill stand if you prefer



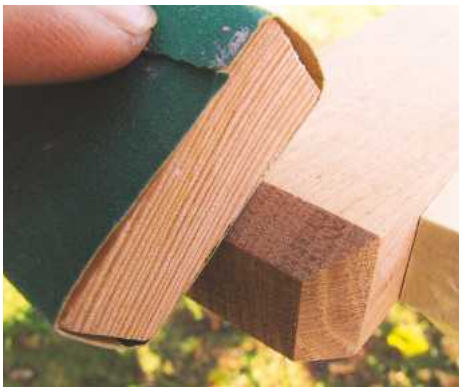
7 Cut slots for biscuits in the ends of the rear panel. These are for attaching the end pieces later

8 Saw the shelf to length and plane the end-grain. Mark out biscuit positions on the shelf and back panel

9 Plane the two end pieces to size, then cut slots. Next, rout a chamfer around their lower edges

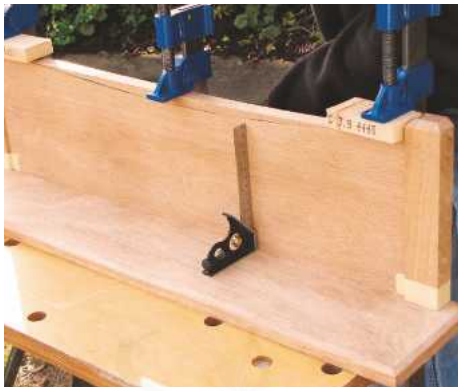
10 Sand the back panel and underside of the shelf before gluing the rack together

11 Cramp end pieces to the panel using PVA glue. I find masking tape makes cleaning up that much easier



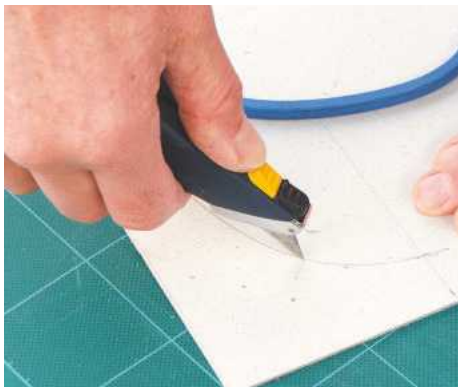
12 If necessary, you can tidy up your routed chamfers with a few strokes from a sanding block

13 Use No.20 biscuits for fixing the upper shelf to the rear panel. This size is also used for the end pieces



14 Glue the rear panel and shelf together, checking for square as you tighten the clamps

15 Trim the upper shelf edge flush at the rear of the coat rack with a smoothing plane



16 The shelf is supported by shaped brackets. A card template will help you to achieve an even curve

17 Draw around the template on both brackets, then cut these carefully with a bandsaw or jigsaw

18 Tidy up the curves of each bracket with a sanding drum or spokeshave, making sure you keep edges square

19 Glue a bracket to each end piece and cramp them together. Check for centrality

20 A single screw fixes the shelf to the top of each bracket. Counterbore and plug the holes

21 Drill a 13mm hole into the rear face of each end piece; this creates clearance

HOLZ MANN MASCHINEN

YOUR JOB. OUR TOOLS.

TFM610V

High Speed Table Router

- 6 Speed table router (11500-24000 1/min)
- 6mm / 8mm / 12mm collets included
- Twin extension tables
- Mitre att
- 50mm max tool dia
- 1.5kw motor

OPTIONAL IMPERIAL COLLETS AVAILABLE

SAVE £30

£329.99 inc VAT
£274.99 ex VAT

TK255 254mm Circular Sawbench

Available August

- Powerful 1800W (S1) motor + 4800 rpm
- Large 940 x 642mm die-cast alu table + width extn
- Rigid rip fence + magnified scale Mitre attachment
- Optional mobile floor stand

SAVE £30

£329.99 inc VAT
£274.99 ex VAT

TK305 Combined 305mm Mitre saw + Sawbench

- Powerful 2000W (S1) motor 230v + 4200 rpm
- Solid die-cast alu table
- 85 / 180mm depth / length of stroke max cutting cap
- Rotary saw table

SAVE £30

£329.99 inc VAT
£274.99 ex VAT

KAP305ECO 305mm Double Bevel Mitre Saw

- Double bevel cutting performance
- Powerful 1800W (S1) 230v motor + 3800 rpm
- Drive belt system = low noise level
- 105 / 330mm depth / length max cutting cap
- Laser for cutting accuracy

SAVE £40

£299.99 inc VAT
£249.99 ex VAT

TS200 200mm Circular Sawbench

Best price/performance ratio for home workshop

- On Test sawbench winner (Austria-2017)
- Solid cast iron table with width extension
- 60 / 750mm max depth / width cutting cap
- Integral sliding table carriage + mitre att
- 1100W (S1) 230v induction motor

SAVE £60

£899.99 inc VAT
£749.99 ex VAT

All prices carriage paid UK Mainland. POA for offshore. Offers end 30th September 2021. Order online or via retailer of your choice.

NMA AGENCIES LTD

01484 400 488 | sales@nmauk.com | www.nmatools.co.uk | Unit 1, Brookfoot Business Park. Brighouse, West Yorks, HD6 2SD

COMIC CUTS

This unusual project by **Edward Pulleyn** is straight out of the school workshop, and here at *The Woodworker* we're always pleased to see this sort of thing – highly commendable!

The design of this storage drum to house my growing collection of comic books is drawn primarily from Postmodernism, as the circular design isn't necessarily practical or efficient, but is unusual for the sake of it. I felt that it would be more aesthetically pleasing than a cardboard box, which seems to be the only other available storage solution for comic books.

I also wanted the unit to subtly reflect the items that were being stored, so I added the iconic *Batman* symbol as an inlay onto one of the circular sides. During the design phase, I also took panels from comic books, and used shapes and images from them to incorporate into the design. The final design I settled on actually began as the 'Owl Ship' from *Watchmen*.

Essential ingredients

All of the comic books stored within the drum must be protected from light, to prevent them from fading, so I decided on a rotating aluminium cover that would allow easy access to the contents while also covering them. The drawer beneath allows tape for sealing comic bags to be stored. I chose plywood as the primary material to keep the unit lightweight but durable.

Machine precision

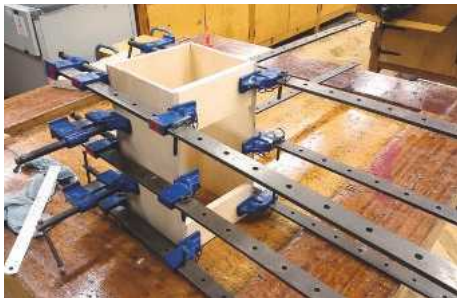
Some of the components, such as the circular sides and their grooves, were cut on a CNC router. I used a laser machine to cut the small *Batman* pieces for the inlay. All the other pieces of wood were cut by hand or using a bandsaw, and the aluminium sheet was bent to shape using a metal roller to form the lid. Pop rivets connected the handle to the lid, and simple comb joints were used for the drawer and main body. I also created a handle for the drawer on a metal lathe, and used a knurling tool to create a grip.

Final tweaks

The main difficulty was ensuring that the lid would fit in its grooves and open and close smoothly. Thankfully, I managed to achieve the perfect shape after lots of readjusting. I also added beeswax to the grooves and rail of the drawer, which would allow them to move more smoothly.

I'm very lucky to have had all of the resources available to me in the design and technology department of Bootham School, as well as the technical expertise and support of my teacher, Eamonn Molloy.

1 Long finger joints connect the main storage box components



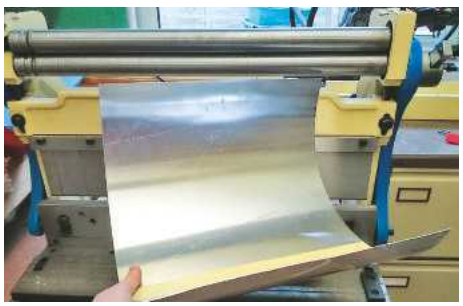
2 I used all the sash cramps I could find to secure the glued-up box assembly

3 The decorative roundel for the end was initially formed on the pillar drill

4 I used a laser machine to cut the small bat motifs for the inlay

5 Drilling a leg stretcher rail was simple using a drill mounted on the engineering lathe

6 The storage drawer is a sturdy plywood box with a false front panel glued to it



7 The aluminium sheet for the rotating lid was carefully rolled into shape

8 Using a palm router, I added a small chamfer around the edges of the drawer front

9 The finished drawer contains rolls of Scotch Magic tape, which are invaluable to collectors

10 The splayed plywood legs are glued and screwed to the ends of the drum

The Woodworker SUBSCRIPTION ORDER FORM

DIRECT DEBIT SUBSCRIPTIONS UK ONLY

Yes, I would like to subscribe to *The Woodworker*

- ☐ Print + Digital: £12.50 every 3 months
- ☐ Print: £10.50 every 3 months

YOUR DETAILS MUST BE COMPLETED

Mr/Mrs/Miss/Ms..... Initial ..... Surname .....

Address .....

.....

Postcode ..... Country .....

Tel ..... Mobile .....

Email ..... D.O.B .....

I WOULD LIKE TO SEND A GIFT TO:

Mr/Mrs/Miss/Ms..... Initial ..... Surname .....

Address .....

.....

Postcode ..... Country .....

INSTRUCTIONS TO YOUR BANK/BUILDING SOCIETY

Originator's reference 422562

Name of bank.....

Address of bank .....

.....

.....Postcode .....

Account holder .....

Signature..... Date .....

Sort code Account number

Instructions to your bank or building society: Please pay MyTimeMedia Ltd. Direct Debits from the account detailed in this instruction subject to the safeguards assured by the Direct Debit Guarantee.
I understand that this instruction may remain with MyTimeMedia Ltd and if so, details will be passed electronically to my bank/building society.

Reference Number (official use only)

Please note that banks and building societies may not accept Direct Debit instructions from some types of account.

CARD PAYMENTS & OVERSEAS

Yes, I would like to subscribe to *The Woodworker*, for 1 year (13 issues) with a one-off payment

UK ONLY:
- ☐ Print + Digital: £52.99
- ☐ Print: £44.99

EUROPE & ROW:
- ☐ EU Print + Digital: £71.99
- ☐ EU Print: £63.99
- ☐ ROW Print + Digital: £71.99
- ☐ ROW Print: £63.99

PAYMENT DETAILS

☐ Postal Order/Cheque ☐ Visa/MasterCard ☐ Maestro

Please make cheques payable to MyTimeMedia Ltd and write code TWW2021 on the back

Cardholder's name.....

Card no: (Maestro)

Valid from..... Expiry date..... Maestro issue no.....

Signature..... Date.....

TERMS & CONDITIONS: Offer ends 31/12/2021. MyTime Media collects your data so that we can fulfil your subscription. We may also, from time to time, send you details of MyTime Media offers, events and competitions but you always have a choice and can opt out by emailing us at **unsubscribe@getwoodworking.com**. Please select here if you are happy to receive such offers by email ❑ by post ❑, by phone ❑. We do not share or sell your data with/to third parties. Details you share with us will be managed as outlined in our Privacy Policy here **www.mytimemedia.co.uk/privacy-policy**.

PRINT + DIGITAL SUBSCRIPTION

- ***Great savings*** on the shop price
- 13 issues ***delivered to your door***
- ***Free*** postage & packaging
- ***Download*** each new issue to your device
- A ***75% discount*** on your digital subscription
- Access your subscription on ***multiple devices***

PRINT SUBSCRIPTION

- ***Great savings*** on the shop price
- 13 issues ***delivered to your door***
- ***Free*** postage & packaging
- ***Never*** miss an issue

POST THIS FORM TO: THE WOODWORKER SUBSCRIPTIONS, MYTIME MEDIA LTD, 3 QUEENSBRIDGE, THE LAKES, NORTHAMPTON NN4 7BF

SUBSCRIBE SECURELY ONLINE

Calls are charged at the same rate as standard UK landlines and are included as part of any inclusive or free minutes allowances. There are no additional charges with this number. Overseas calls will cost more.

GET YOUR FAVOURITE MAGAZINE FOR LESS

DIGITAL SUBSCRIPTIONS AVAILABLE ONLINE!

Delivered to your door when you SUBSCRIBE TODAY!

SAVE 73%*
ON DIGITAL ISSUES

The Woodworker & Good Woodworking is a hands-on magazine aimed at the home woodworker. Its heritage, dating back over 110 years, makes it the authoritative voice on the subject. Edited and written by enthusiasts, there is a real feel for the subject. ***The Woodworker & Good Woodworking*** magazine presents projects and technical advice on all aspects of woodworking, plus features, news, reviews and tests of the new and most popular tools available.

TERMS & CONDITIONS: Offer ends 31st December 2021.
*This digital discount is only available when you subscribe to the 'Print + Digital' package. You can still get a great discount on the digital package, please visit the URL stated below for more information.
Please see **www.mytimemedia.co.uk/terms** for full terms & conditions.

http://tww.secureorder.co.uk/TWW/TWW2021

CALL OUR ORDER LINE 0344 243 9023

Quote ref: TWW2021

Lines open Mon–Fri – 8.00am–8.00pm GMT & Sat–9.30am–3.30pm GMT

KING OF THE CASTLE

Not only easy to play with, when not in use **Terry Diss**' modern chess set also makes a great centrepiece when displayed on a table or sideboard

All the pieces for this chess set can be made from lengths of square-sectioned timber. I passed mine over a table saw – with extreme care. However, unless you have a machine fitted with a sliding table or rigid fence which runs smoothly at 90° to your saw blade, you shouldn't attempt the job in this way – rather, use hand tools instead.

Preparing the timber

Rather than staining timber to colour one set of the pieces, it's better to choose contrasting coloured timbers. Wenge or sapele will contrast well with maple, lime or beech, and you won't need much stock.

I used a flat-tooth saw blade in my saw table to make all the cuts. Never cut any piece unless it's long enough to hold securely with both hands on the fence, and remember to wear eye protection at all times.

Cutting the pieces

The dimensions for the six different playing pieces are given in **Fig.1**. Start with the pawns, which are simple cubes. While it's possible to cut these on the table saw, it may prove safer to set a stop on the chop saw or, even better, practise your hand skills and mark out and cut them all by hand.

I used the following sequence for making the other five pieces using the table saw. Make a simple block with a protruding brass pin to sit against the saw's rip fence. This remains

1 The brass pin in the spacer block sets the position of each saw cut. Work with great care

2 After shaping the head of each piece, reposition the spacer block and cut it to length

3 Use a small round file to cut the shallow indentations, which form the queen's crown

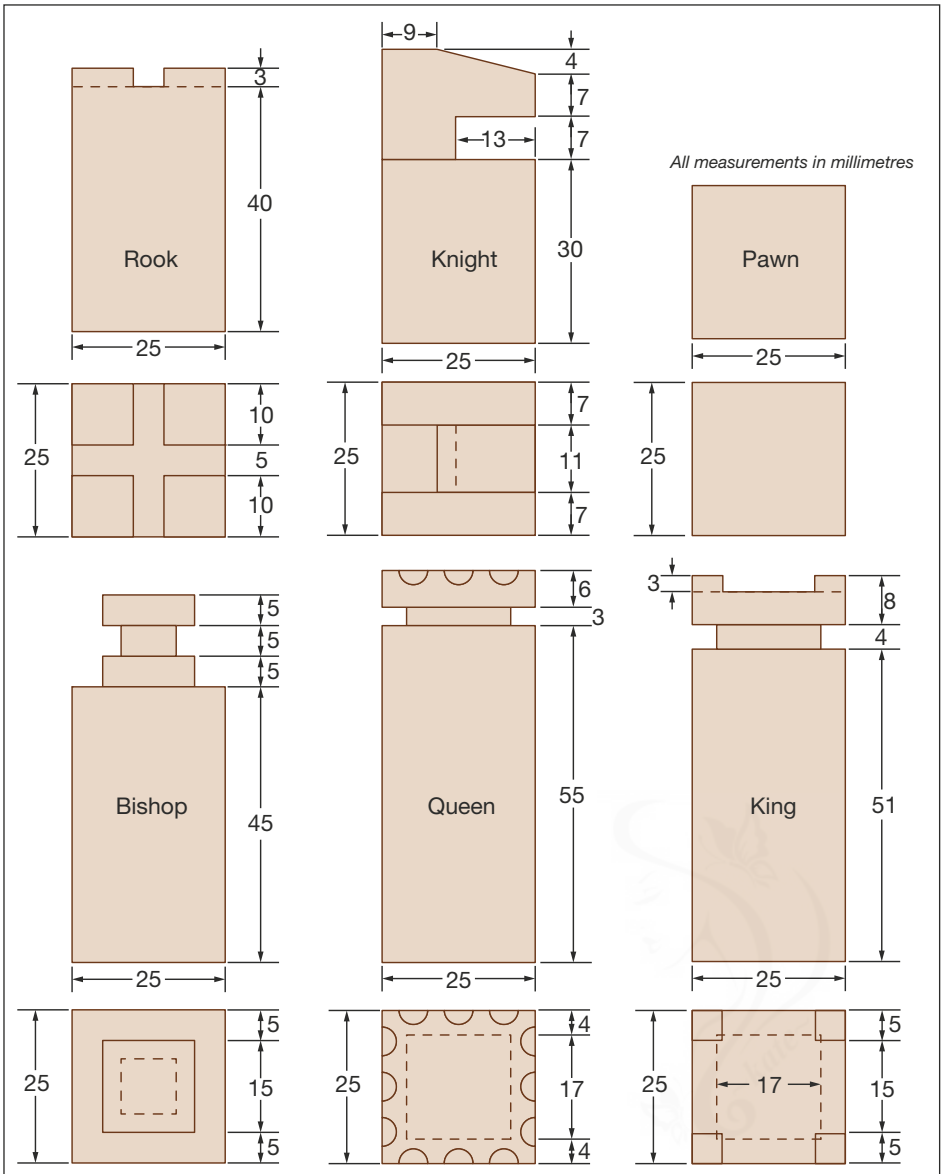


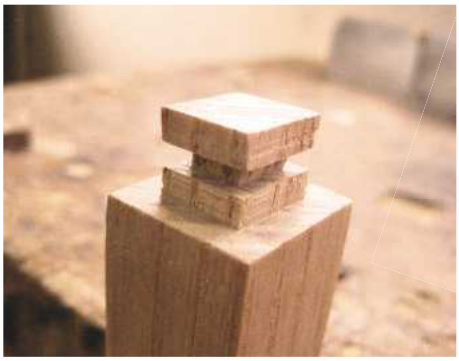
Fig.1 Dimensions for chess pieces

in position at the front of the saw table surface, and acts as a spacer to accurately establish positions of the various enclosed cuts required on the king, queen, bishop and knight.

Complete all these cuts by carefully adjusting the pin block to the correct position for each piece you're making, using the dimensions given in **Fig.1**. With the saw isolated, set the required height of the blade, then make the cut (**photo 1**). Turn the stock through 90° and repeat the operation until all four surfaces have been cut.

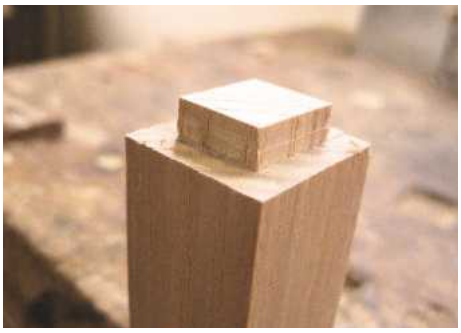
Remember to run through each and every piece that uses the same setting made with the pin block. It's always much more difficult to reproduce the settings in their original positions later on.

When all the machining is complete on the heads of the pieces, set the pin block to match the length of each one in turn and cut to size (**photo 2**).



6 Repeat the cuts made in step 4 to form the third 15mm square layer of the piece

7 Glue strips of abrasive to lolly-stick offcuts to make sanding sticks



4 Make four saw cuts to leave the top of the bishop measuring 15mm square

5 Make four more cuts beneath this top section to leave a section 9mm square

SHAPING THE MAJOR PIECES

Queens

Follow the cutting procedure outlined previously to fashion the head, then use a small round rat-tail file to form three indentations in each top edge (**photo 3**) before finally cutting the piece to length.

Rooks

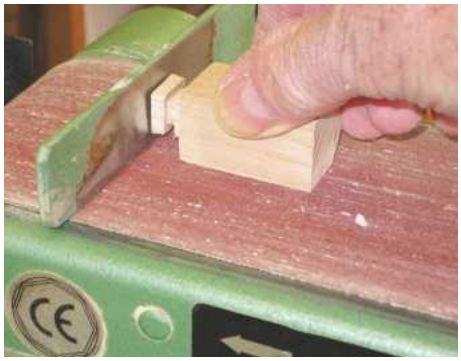
Form the castellations by making two cuts at right angles across the top using a Gents saw or a fine-toothed tenon saw. Remove the waste between the cuts with a sharp narrow chisel, then cut each piece to length.

Kings

For cutting the tops of the kings, use the same procedure as for the rooks. Again, it's easier to form the character feature before the piece is cut to length.

Bishops

The heads of these pieces can be formed in three stages on the table saw or by hand, as shown in **photos 4, 5** & **6**.



8 Use these to sand the grooves, then smooth all the outer surfaces on a belt sander

Knights

These are probably the most difficult of all the pieces to cut. While they can be created on the table saw with the aid of an angled jig, it's a challenge that should only be attempted by a skilled and experienced machinist. Instead cut the single groove by hand, and shape the head at a slight angle on a disc sander.

9 Round over all external edges and apply the finish of your choice

Finishing the pieces

With all the pieces cut to length, it's time to clean up the grooves and external surfaces. It's a good idea to make a selection of small sanding boards by gluing 120 grit abrasive to thin lolly-stick offcuts (**photo 7**). Use these like fingernail emery boards to achieve a good finish. Smooth the external faces on a flat-bed sander (**photo 8**), or rub them with the grain across a sheet of abrasive held flat on the bench. Don't forget to round over all the external edges (**photo 9**).

Either spray the pieces with cellulose lacquer, or use two coats of sanding sealer – de-nibbed with 320 grit abrasive between coats – and apply natural wax on top, buffing it to a good finish. Your chessmen are now ready for action (**photo 10**).

As a finishing touch, you may wish to glue a small baize square to the bottom of each piece. I prefer not to do this, but instead drill a small hole in the centre of each pawn's base, which helps to identify the end-grain underside of each piece.

10 Made using contrasting woods, the six different chess pieces look very striking

MAKING THE CHESS BOARD

It's a good idea to make a matching chessboard using the same timbers for the squares as you did for the chessmen. All you need are some strips of 4-5mm thick veneer, plus a couple of squares of plywood or 6mm-thick MDF, to act as baseboards.

Preparing the strips

You need four strips in each colour, each measuring 45mm wide and about 360mm long. If you have a bandsaw, you can cut your own veneers from a piece of solid wood. Otherwise you can buy them from a supplier such as Turners Retreat – **www.turners-retreat.co.uk**. Plane one edge of each strip square, place this edge against the saw fence and cut each strip down to 41mm wide. The extra 1mm gives you the opportunity to plane this edge straight and flat to a finished width of 40mm.

Making up the board

Assemble all strips as shown in **photo 1**. Tape them together and glue and cramp them onto one square of plywood or MDF. Cover this with newspaper, place the second board on top and weight it down while the glue sets.

Using your bandsaw again, cut one edge of the assembly at exact right angles to the lines made by the glued strips, then hold this edge against the saw fence and cut eight strips across the grain (see **Fig.2**) to produce eight strips, each consisting of alternate coloured squares.

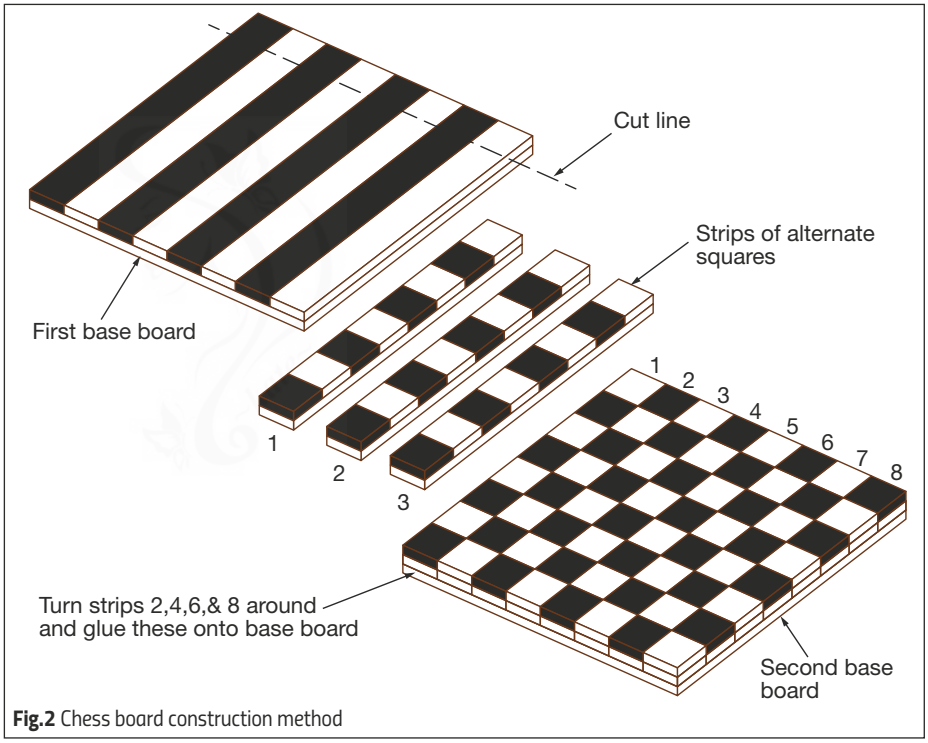


Fig.2 Chess board construction method

1 Tape the veneer strips together, stick them to the first baseboard and cut at right angles

2 Glue these strips to the second baseboard and sand the face and edges

Re-assemble these eight strips into a chequerboard pattern, tape them together and glue to the second baseboard. Smooth the surface of the board using a belt sander (**photo 2**), then by hand using 120 abrasive or finer on a sanding block.

Plane all four edges square and prepare some suitable pieces of wood to act as lipping. Carefully mitre the corners and glue and cramp these to the baseboard.

Finish the board in the same way as you did for the chessmen. Finally, add baize to the underside if you wish, set up the pieces and get ready for your first game.

By the way, the word chess derives from the Arabic word *shah*, meaning king. And checkmate comes from *shah mat*; 'the king is dead'. Not many people know that...

ROCKING HORSE SHOP
FANGFOSS, YORK, ENGLAND.

Designers, Makers &
Restorers of Beautiful
Rocking Horses
Since 1976

Why Not Make Your Own Rocking Horse?

- Woodworkers Plans
- Instructional Books & DVD's
- Timber Kits
- Accessories & Tack
- Carving Courses
- Tools

All Plans include: actual size drawings, colour pictures, step by step instructions & cutting lists. All plans supported by DVD's, books and quality timber & accessory kits (everything you need to complete your project!) All available in store or online.

www.rockinghorse.co.uk

CREATIVE PERCUSSION

Les Thorne's turned maracas not only make for a fun project, but also represent a great exercise in copy turning and airbrushing

I was all set to do a different project this month, but sometimes fate plays a hand and points me in an alternative direction. I was watching breakfast TV when a feature came on about encouraging the older generation, especially those in care homes, to take up music as a form of therapy. The instrument they were all using was a pair of maracas. I've never made maracas commercially and a quick search on Amazon will tell you why: they sell for just a few quid so it's therefore not economically viable to make them to sell. Saying that, however, they are a great project to create for yourselves or family members. Online research tells us that the instrument has its roots in South America and is often used in Caribbean and Latin music. Originally, they would have been fashioned from gourds with handles attached after a few pebbles had been put inside to generate the noise once shaken.

If you don't want to commit to making a pair of maracas that are so big, you can downsize to a smaller version, which could be used as a baby's rattle if turned from a safe timber and treated with a toy-safe/food-safe finish.

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

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

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

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

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

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

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

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

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

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

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

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

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

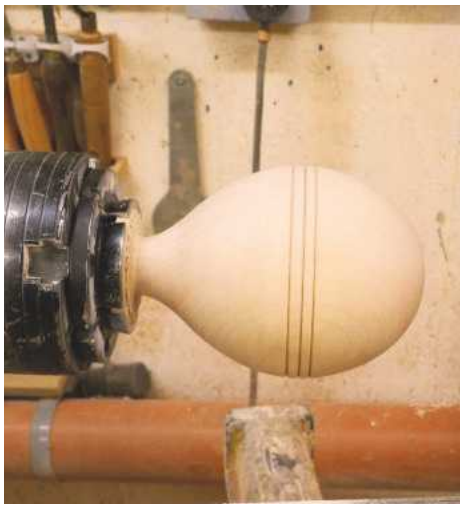
14 It's now time to fit the lid by making really small cuts using a 10mm skew chisel. It will need to be a tight fit as you're going to jam the top on; this will allow you to complete the shaping of the maracas

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

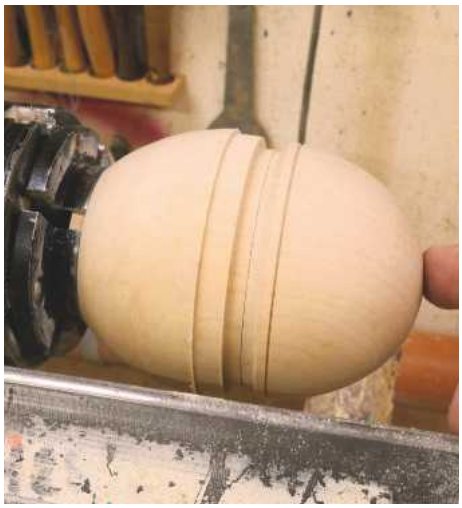
16 There are a few ways of hiding the join when turning something like this. A couple of beads work well, but in this case, three grooves made with the skew chisel is the perfect addition

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

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



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



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

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

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

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

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

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

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

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

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

29 The end of the handle just needs to be sanded when it's off the lathe. If you left enough waste on, there shouldn't be any unsightly marks on the tops of the handles

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

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

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

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

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

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

36 The completed maracas should look something like these

THOMAS FLINN
& Co Ltd

SHEFFIELD • ENGLAND

The UK's last remaining traditional saw and hand plane manufacturer

Garlick MADE IN SHEFFIELD ESTABLISHED 1858 · E.T. ROBERTS & LEE · PAX ESTABLISHED 1776 · CLIFTON

www.flinn-garlick-saws.co.uk

orderonline@flinn-garlick-saws.co.uk

Tel: 0114 2725387

A PERFECT FIT

Both functional and highly decorative, the dovetail is perhaps the most admired of all woodworking joints. It's the strongest way to join two pieces of timber at right angles, with all the strength depending on the joint itself rather than the glue, as **Andy Standing** shows

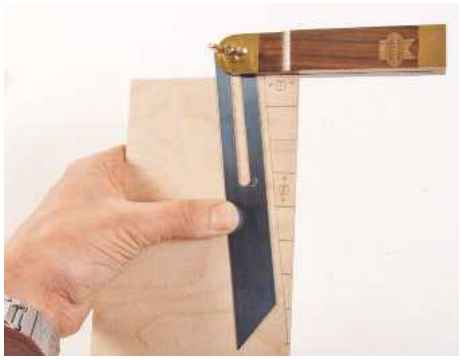
The dovetail is a challenging joint to cut accurately by hand, and there are many mechanised ways of creating dovetails that are less demanding. However, as yet no machine can equal the look of a hand-cut dovetail executed by a skilled craftsman. There are many variants of the joint, but all rely on the interlocking pins and tails for their strength.

The through dovetail is the most straightforward joint of the dovetail family. It's used in almost all high-quality carcass construction and in making decorative boxes and drawers. It's fully visible from both faces of the corner, with one showing the end-grain blocks of the tails and the other the finer ends of the pins.

For maximum strength the joint must be correctly angled, and for appearance it must be carefully set out. To achieve a successful joint, the timber must be accurately prepared. Both parts should be identical in width with parallel sides; the ends must also be precisely square.

1 Use a marking gauge to mark the thickness of each member on the other. Allow a little extra on the length for cleaning up once the joint has been assembled

2 Mark out the joint on the tail member using a try square. Set a line about 6mm in from each edge, then divide the space between these two lines by the number of tails required – in this case three, so draw another two lines. Then draw lines 3mm away on either side of these lines to mark the edges of the tails

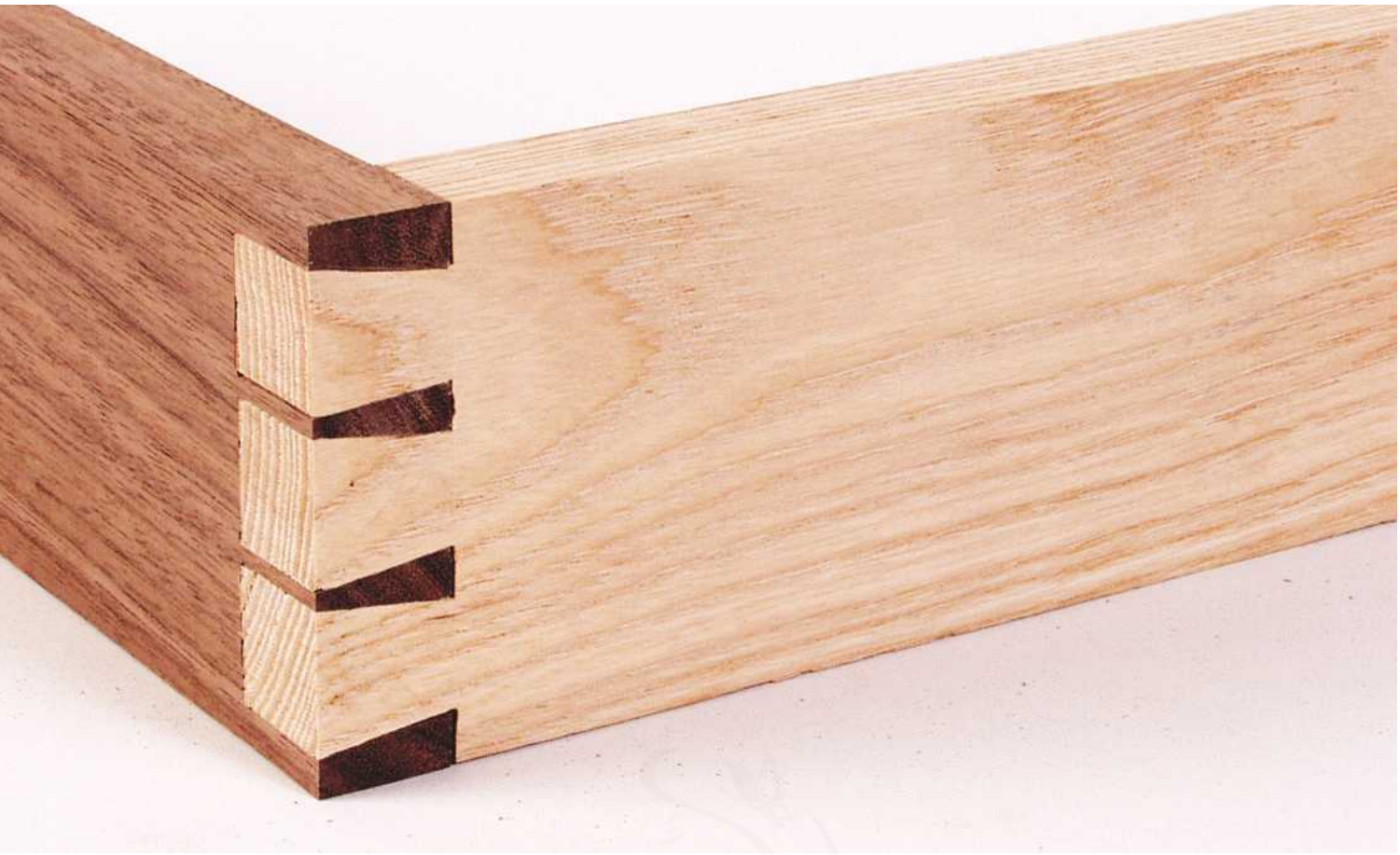


3 Set the slope of the dovetails to suit the type of timber: 1:8 for hardwoods and 1:6 for softwoods. Machine-cut dovetails tend to compromise and are cut at 1:7. Set your sliding bevel using some simple geometry as here, or buy a special dovetail marking template

4 Now mark the dovetails on both sides of the tail member, being careful to align the sloping marks with the lines on the end of the piece drawn in step 2

5 Use a dovetail saw – a fine-toothed tenon saw – to cut down the sides of the tails. Be careful to keep on the waste side of the lines. It helps to set the workpiece in the vice at an angle so you can hold the saw vertically

6 Use a coping saw with care to remove the waste between the tails. Leave a slight margin above the shoulder line and clean it up with a narrow bevel-edged chisel. Saw off the external corner waste with a dovetail saw



7 Mark the pins on the other component using the tails as the template. Hold it vertically in a vice and position the tail member accurately on top of it. Trace the shape of the tails onto the end of the pin member with a marking knife or scriber

8 Remove the pin member and use a try square to extend the marks down both its faces to the shoulder lines. You can then saw down on the waste side of the lines using a dovetail saw. Stop at the shoulder line

9 Use the coping saw as before to remove the bulk of the waste from between the pins, cutting fractionally above the shoulder line

10 Clean up the shoulder line with a sharp chisel. Work from both sides to avoid breaking out the edges. Take very fine cuts and work down to the line gradually

11 Dovetails should be a tight fit, and are fully assembled only once. Test the fit by partly assembling the joint using a hammer and protective block. If any parts bind, knock the joint apart gently and use a chisel to trim them until they allow a tight sliding fit

12 Apply a small amount of glue and assemble the joint. Once the glue has set, clean up the outside of the joint with a sharp block plane, working in from the outer corner towards the centre to avoid breaking out the end-grain

LET PLAYTIME COMMENCE!

Commissioned to make a bespoke two-storey playhouse for his grandchildren, Geoff Ryan's first port of call was to ensure it featured a more solid construction than those available off-the-shelf

CUSTOM-MADE PERFECTION

Based in a small workshop in North Yorkshire, Shane Skelton and his wife Jacqueline work tirelessly to create the finest examples of handmade English craftsmanship – bespoke saws that are designed to last a lifetime

MAKING TIME

Mechanical devices made from wood are always impressive, and few more so than a working and accurate timepiece, as demonstrated here by Christopher Blasius

Coming up in the next issue...

The Woodworker & Good Woodworking
October issue –
on sale 20 September

AXMINSTER TOOLS

SEND IN YOUR TOP WORKSHOP HINT/TIP/POINTER OR PIECE OF ADVICE & YOU COULD BE IN WITH A CHANCE OF WINNING AN **AXMINSTER RIDER NO.5½IN JACK PLANE**

WIN!

1 of 5 finishing kits from Skelton Saws – worth £60 each – containing the following:

Wick – Clear Figure
Wick – Rich Figure
Peacock Wax Tin

PLUS ▪ Cheval mirror ▪ Chuck & Debbie Spurgeon: Wild Woodworks ▪ Turned vase with reactive paint ▪ Can wood save the planet? ▪ Mitred dovetail joints ▪ Apple & rosewood box

MISSED AN ISSUE?

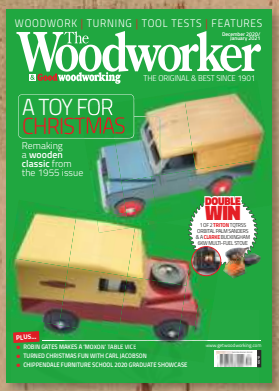
Did you miss a copy of

The Woodworker & Goodwoodworking ?

YOU CAN NOW ORDER THESE ONLINE

October 2020

November 2020



December 2020/January 2021

February 2020

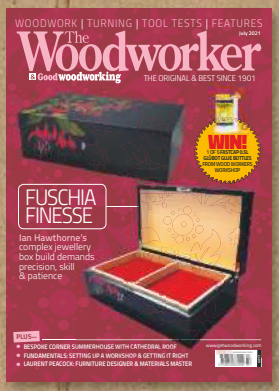
March 2021

August 2021

April 2021

May 2021

June 2021



July 2021

Order Online: www.mags-uk.com

mytimemedia
print & digital media publishers

Please note that we cannot guarantee the availablity of all issues displayed above.

FOR SALE

Record BM16 mortiser with chisel bits – ¼in, ⅜ instruction manual, hardly used; £175 – buyer collects **01626 369 914** (Devon)

Trend MINIMACH portable vacuum clamping bed – totally unused; includes hanging bracket; £30 – buyer collects 01158 406 764 **(Nottingham)**

Leigh D4R Pro jig – little used. All items shown and in very good condition; £450 – cash only transaction; buyer collects **07890 645 721** (Hertfordshire)

Hitachi U-210 universal woodworking machine – 5 functions; includes spindle moulder block; £300 – buyer collects **07960 406 481** (Torquay)

Holzman ABS 850 dust extractor – single-phase and in excellent condition; comes complete with three-way distribution box; £80 – buyer collects Kent (**020 8650 7758**)

Veneering vacuum pump (Becker) – including 4 bags, plus veneers (mainly short); also, DeWalt (DW125) x-cut and bandsaw (DW3401) – hobby use; retirement forces sale – sensible offers only **0121 705 4437** (Solihull)

Porter Cable 7539 variable-speed production plunge router with laser base; 3.25hp; £125 – collection only **0121 382 6095** (Sutton Coldfield)

Selection of planes by Stanley & Record – including apron, block, low angle, shoulder, ⅜ All in good condition; £150 for the lot or can negotiate individual sales **07803 818 957** (Carmarthen)

Hammer C3 31 Comfort combination machine with outrigger; purchased in August 2008 from Felder UK. Extras include rolling carriage and lifting bar; factory-fitted scoring blade; trimming shoe; digital wheel for planer; eccentric clamp; dado cutting set; sanding attachment; sanding paper and top; Euro curve moulding fence and workpiece feed guide; three new sets of planing blades; extension with workpiece roller for the outrigger; Record Power universal cutter head; 10 unused sets of cutters, plus rip saw blade. All light use; spindle turner not used at all. Manual and instructions included. Retired seller downsizing; £3,300 – original pallet available for fork lift **07836 585 984** (Derbyshire)

10ft³ of sawn through & through yew timber – mixture of lengths: 9ft, 7ft and 5ft; 1in, 1⅛ 1½ Some small areas of worm damage to sapwood (treated), otherwise OK; call to make an offer and for further details **01924 902 295** (West Yorks)

Electra Beckum planer/thicknesser – comes supplied with spare blades – in good condition; £250 – buyer collects **07818 410 591** (Durham)

Heavy-duty sip mortiser – comes supplied with chisels – in reasonable condition for age; can be seen working on collection; £175 **07818 410 591** (Durham)

WANTED

Tenoning table/sledge for Axminster/Jet spindle shaper **07974 853 172** (Bristol)

Tyre for Tormek 2000/T8 drive wheel, or complete drive wheel Wiltshire (**01793 771 898**)

Kity combination machine (or similar): must feature saw, planer, mortiser, spindle moulder, etc. Carriage paid **+087 2275266** (Ireland)

Australian made Symtec woodturning lathe wanted - 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** (Doncaste

Stanley No.1 plane & Stanley No.2 plane – one of each wanted by novice collector **01572 723 976** (Rutland)

Dust extraction spout for DeWalt 1150 planer/thicknesser **023 8089 8123** (Southampton)

Woodworking tools: planes by Norris, Spiers, Mathieson, Preston, Slater, etc. brass braces, interesting rules and spirit levels; top prices paid, auction prices beaten **01647 432 841** (Devon)

Woodworking hand tools, especially old wood and metal planes, wanted by collector. Write to Mr B Jackson, 10 Ayr Close, Stamford PE9 2TS or call **01780 751 768** (Lincs)

BOOK YOUR FREE AD

Please publish this advertisement in the next available edition of *The Woodworker*. I am a private advertiser and have no trade connections

PLEASE TICK: FOR SALE ❑ WANTED ❑

- This space is available only to private individuals wishing to buy or sell woodworking machinery and tools.
- The maximum value of any item for sale must not exceed £500. A small fee is payable for items offered at over £500; please ring 01689 869 852 for details.
- Each coupon is valid for one free insertion in the next available issue.
- The publisher accepts no responsibility for errors or omissions in this section.

Name_____

Address _____

_____

Postcode_____

Daytime tel no._____

Signature _____

My advertisement (max 20 words please) reads as follows:

_____

_____

_____

_____

Please write your advertisement in **BLOCK CAPITALS** and send it to:
The Woodworker Marketplace, MyTime Media Ltd, Suite 25, Eden House, Enterprise Way, Edenbridge, Kent TN8 6HF. You can also email your free ad to: **tegan.foley@mytimemedia.com**. Send/email a photograph of your item and we'll include it with your ad for **FREE**

TAKE 5

This month's **#woodworkerfriday5** selection includes an amazing sofa table with the most wonderful grain figuring, an eye-catching selection of traditional Breton carved spoons, and a turned mahogany bowl with stunning turquoise insert

1 'Ives Sofa Table' made using the wildest Norway maple you'll find – by Patrick Kanna – **@pk_designermaker** – sequential slabs provide colour and grain cohesion, with more than a handful of fun details

2 Dressing table in oak, designed and made for a client commission, finished with Osmo oil-wax – by Marcin Wyszecki – **@wood_effect**

3 Turned bowl in mahogany with turquoise Milliput two-part epoxy insert, by Thomas Croll – **@tc.woodwork**

4 'Brass Betty' mallet – walnut paired with brass plates – sanded to 400 grit with an oil finish applied, by **@cunningham_wood_work**

5 Various carved boxwood spoons in the Breton style by Jane Mickelborough – **@janespoons** – the handles of which are traditionally richly decorated with metal and wax inlays

Follow us on Instagram – **@woodworker_mag** for regular magazine updates and posts

AXMINSTER
Trade Vices

TRADE UP TO A TRADE VICE

Guaranteed to last you a lifetime

Whatever type of workshop you have, you'll need a vice you can rely on. We have a comprehensive range for every imaginable purpose, all with a lifetime guarantee!

Parrot Versatile Vice

Only £54.98 | code 106192

The Parrot Vice is probably the most user-friendly and versatile vice you can own and this vice has long been a favourite of luthiers and model makers alike, the functionality making it so convenient to use.

Woodworkers Vice With Table Clamp 150mm

£21.88 | code 106345

Great for the hobbyist woodworkers and professionals alike, this vice can either be bolted directly to the bench or secured with the clamping screw.

Pattern Makers Vice

£113.98 | code 107038

Also known as a Guitar repair vice, Carver's vice, Gunstock vice and many more. The very fact that this vice has so many different names is a clue to its versatility. Fits to any bench or worktable and the cast iron body rotates full 360° for all-round access to work.

Quick Release Carpenter's Vices

175mm | £73.98 | code 505549

225mm | £99.98 | code 505550

266mm | £115.58 | code 505575

These vices will make you and your bench look like true professionals, even if it is only in the evenings and at weekends. Made from cast iron in a traditional design, they utilise a quick-release trigger for speedy jaw adjustment.

LIFETIME WARRANTY

If any vice fails due to a material or manufacturing defect it will be replaced free of charge.

AXMINSTER TOOLS
We share your passion.

For the full range of Axminster Trade Vices, **visit one of our stores**, search **axminstertools.com** or call **03332 406406.**

For the complete Axminster experience and to keep up with projects, how to's, news and much more, browse knowledge.axminstertools.com and follow us on social media.

Prices may be subject to change without notice.

AXMINSTER · BASINGSTOKE · CARDIFF · HIGH WYCOMBE · NEWCASTLE · NUNEATON · SITTINGBOURNE · WARRINGTON

Rated **'Excellent'** on Trustpilot

RECORD POWER
ESTABLISHED 1909®

THE NEW STANDARD FOR WOODTURNING

We are proud to introduce our new range of turning tools, made in the UK at our in-house production facility. Designed in consultation with and tested rigorously by professional woodturners, they represent a new standard in quality and value.

When you buy a Record Power turning tool you are investing in many years of manufacturing expertise and knowledge from a brand with a rich heritage of woodturning specialisation.

"The new Record gouges have fantastic edge longevity and strong ergonomic handles. All you need in a quality woodturning gouge: stay sharp, feel good and turn well."
Andrew Hall RPT, Professional Woodturner and Tutor

ONLY
£99.99

3-Piece HSS Bowl Turning Tool Set

This set contains the three essential tools for bowl turning - 3/8" bowl gouge, 1/2" domed scraper and 3/16" parting tool.

103720 - **£99.99**

3-Piece HSS Spindle Turning Tool Set

This set contains the three essential tools for spindle turning - 1" spindle roughing gouge, 3/8" spindle gouge and 1/8" parting tool.

103710 - **£99.99**

Free online educational videos available at **recordpower.co.uk/turningtools**

5 YEAR GUARANTEE

View our full range at recordpower.co.uk Bowl Gouges | Spindle Gouges | Spindle Roughing Gouges | Skew Chisels | Scrapers | Parting Tools

All prices include VAT. E&OE.

MADE IN SHEFFIELD

MADE IN THE UK

Over 100 years
Experience • Knowledge
Support • Expertise

Incorporating some of the most famous brands in woodworking, Record Power's roots stretch back over 100 years.

RECORD POWER ESTABLISHED 1909
CORONET
STARTRITE
CamVac
BURGESS

For more details visit recordpower.co.uk or contact your local stockist

RECORD POWER ESTABLISHED 1909