WOODWORK | TURNING | TOOL TESTS | FEATURES

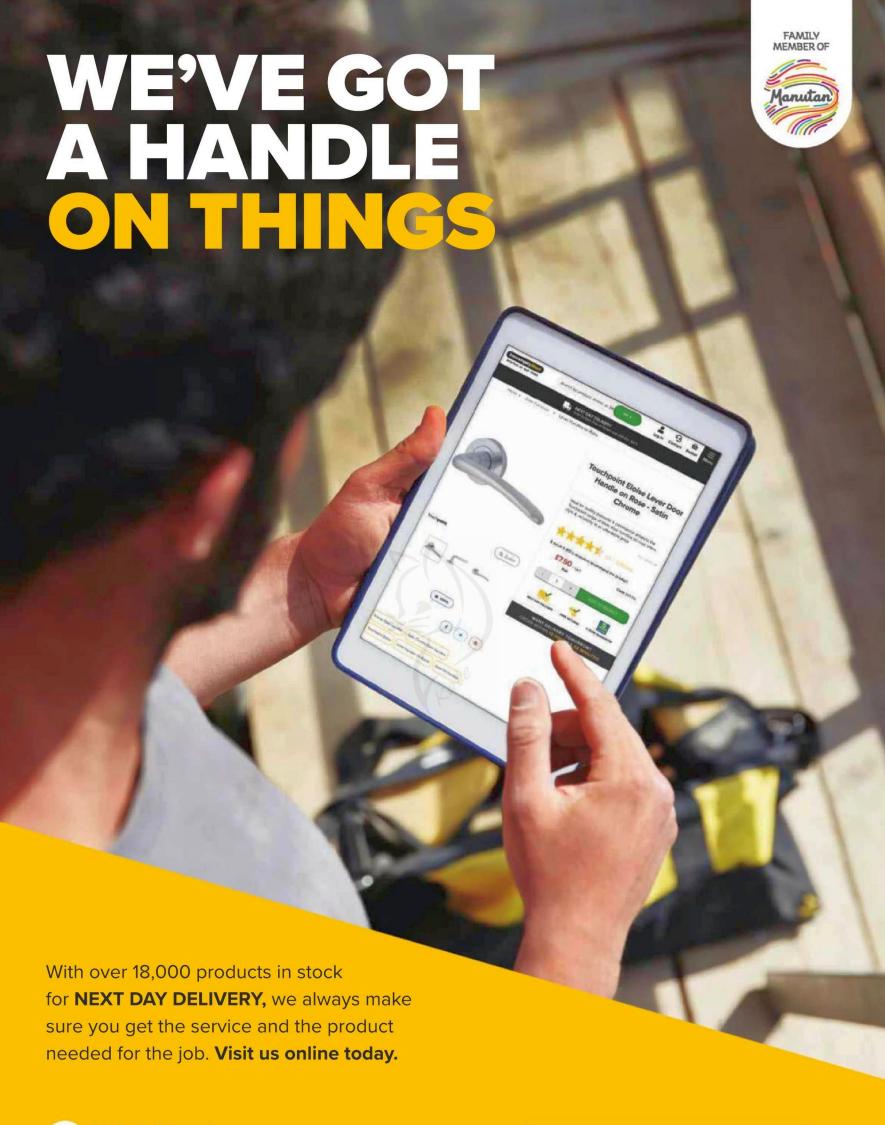
The Woodworking The ORIGINAL & BEST SINCE 1901

A TOY FOR CHRISTMAS Remaking a **wooden classic** from the 1955 issue 1 OF 2 TRITON TQTRSS ORBITAL PALM SANDERS & A **CLARKE** BUCKINGHAM BRITISH RAILW PLUS...

- ROBIN GATES MAKES A 'MOXON' TABLE VICE
- TURNED CHRISTMAS FUN WITH CARL JACOBSON
- CHIPPENDALE FURNITURE SCHOOL 2020 GRADUATE SHOWCASE

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I'm not quite sure how a whole year has passed in the blink of an eye, but what a year it has been. Yes, 2020 will certainly go down as one not to be forgotten, but perhaps not for entirely positive reasons. I'm sure all of you can agree that it has been filled with its fair share of challenges, both personal and from a business perspective, and we at the magazine have certainly had to negotiate some trials and tribulations, but the important thing is that we are still standing. I find it incredible that the original magazine (The Woodworker & Woodturner) has been going since 1901. I know I say it a lot, but it really does make me incredibly proud to work on a publication with such prestige. And let's not forget Good Woodworking, as before the titles merged, it also boasted a very loyal following, having recently celebrated its 300th issue.

So while December is typically a month of celebrations and festivities, why don't we take a moment to also salute ourselves for managing to get through 2020 (relatively) unscathed! We take our hats off to you, our wonderful readers, as well as our core of extremely talented authors, all of whom have been incredibly supportive in ensuring the magazine continues despite the tough economic pressures we've faced. We're still here and still going strong, and long may we continue to do so, well into 2021 and beyond.

Greater online reach

Last month, I talked about the Alan Peters Online Furniture Award 2021, which we've had to relaunch and rethink in order to adapt to the changes we've faced due to the pandemic. While this has meant going back to the drawing board somewhat, we can't help but see this as a positive, as it's allowed us to make the award even better. We're particularly excited about the virtual exhibition and being hosted online actually gives us greater scope, allowing us to reach those readers who perhaps we could not previously. So if you haven't done so already, leaf through to

pages 24-25 and read all about the award, or alternatively, see organiser Jeremy Broun's website – **www.woodomain. com/alanpetersaward** – where you can also watch an introductory video containing excerpts from myself, Axminster Tools' Kelly Wakeley and award judge, David Barron. The deadline is looming (28 February 2021), so do get making if you haven't done so already.



Tom Powell – 2020 'Student of the Year' winner

Exceptional pieces

Before I go, myself and the team would like to take this opportunity to congratulate the 20 Chippendale International School of Furniture students who recently graduated from the 30-week Professional Course. As you'll see on page 36 and beyond, the quality of work on show is incredibly impressive, which is testament to the School and its tutors. Tom Powell received the 'Student of the Year' accolade and deservedly so. We look forward to seeing what they go on to do, but needless to say, I'm sure all have very bright futures ahead of them. Lastly, we wish you all a very Merry Christmas and a Happy New Year!



Email tegan.foley@mytimemedia.com



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Group Editor



Phil Davy
Technical & Consultant Editor



DECEMBER 2020/JANUARY 2021

PROJECTS & TURNING

28 Making a 'Moxon' table vice

Robin Gates hones his hand skills while making a hybrid vice for bigger boards using two Record Juniors and reclaimed oak linings

ON THE COVER 48 Remaking a 'proper' Land Rover

Working from an original article in the Christmas 1955 issue of The Woodworker, Peter Dunsmore makes his very own Land Rover trio with various paint jobs and finishes



68 Festive frolics

Carl Jacobson shows you how to turn this fun snow couple using leftover pieces of timber, which will make the perfect festive addition to any home

77 Wizard candle power

A very prestige project sees Les Thorne make a candlestick that combines Victorian style with a contemporary finish

82 The 'pure' table

This table and stool set is assembled without the use of glue or any fixing devices, relying solely on precise joints for its strength and integrity. Here its maker, Jiefu Yu, tells the story

86 Flexible storage

Phil Davy's cabinet construction can be adapted to suit any type of storage

TECHNICAL

45 Woodworker's encyclopaedia – part 22

Might we start here by taking a bribe? Peter Bishop thinks not, but there's an interesting selection of definitions to come in these Ks and Ls

54 Creating an exhibition quality piece of furniture

Jeremy Broun, Organiser of the Alan Peters Online Furniture Award 2021, shares his top tips and highlights key points for creating your own exhibition quality piece ahead of the entry deadline

REGULARS

3 Welcome

8 News & courses

9 Timber directory

14 D&M editorial 22 Archive

64 Letters & readers' tips

92 Next month

97 Marketplace



ON TEST

16 Axminster Trade Ultimate Edge variable speed sharpening system

20 Mafell MT55 cordless plunge saw

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FEATURES

22 Workshop reading

Heavy rain confines Robin Gates to his shed with the November 1934 issue of The Woodworker

24 The Alan Peters Online Furniture Award 2021

Don't miss out on the opportunity to be part of this fantastic new award, which champions UK furniture making talent while celebrating the life and work of the late Alan Peters OBE

34 Looking back on our 35th Graduate Show

Chippendale School Principal Tom Fraser provides a round-up of their recent 35th annual Graduate Exhibition and Sale

59 Flights of fancy

Paul Greer looks at archery over the ages and the evolution of wood as a primary material

72 Kebony Christmas tree

The Kebony Christmas tree from Habitree is the perfect ingredient for a sustainable festive season



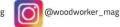
98 Take 5

As we head towards the end of 2020, we bring you another five examples of wonderful woodworking from the world of Instagram

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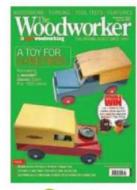
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NEWS In brief...

TRITONlaunches new surface planer

Triton Tools, leading brand of woodworking hand and power tools, has launched the TSPL152 1,100W surface planer as a partner product to the ever popular TPT125 thicknesser.

The new surface planer features a dual-bladed cutting block and powerful 1,100W motor to help woodworkers prepare their workpieces for jointing. Cups, bows, crooks and twists are eliminated, resulting in perfectly flat boards.

The TSPL152 planes timbers with a maximum width of 152mm and up to a 3.2mm depth of cut in a single pass by easily and accurately adjusting the infeed table height. Large, durable castaluminium infeed and outfeed tables provide





support for longer boards and the extruded aluminium fence guides workpieces at angles of 45-135°, pre-set increments at the most common jointing angles.

Mark Pearson, Triton Global Brand Manager, said: "We're excited to bring our new surface planer to makers' and woodworkers' workshops. Our customers love the TPT125 thicknesser, and now they can fully prepare perfectly flat and square workpieces ready for jointing projects."

With safety in mind, the surface planer includes an adjustable drum guard that not only protects the user from the exposed cutter head, but aids in reducing the chance of kickback. Supplied with two push blocks and a push stick, the benchmountable TSPL152 includes all the accessories needed for safe usage. Visit www.tritontools.com to find your nearest stockist.

IRONMONGERYDIRECT launches new catalogue with exclusive brands to suit every project

IronmongeryDirect, the UK's leading specialist ironmongery provider, has launched its 130th catalogue with a range of exclusive brands suitable for both commercial and specialist projects. Featuring over 18,000 products, the new catalogue includes IronmongeryDirect's seven own 'top rated' brands: Hampstead, Elan, Altro, Klug, Olde Forge, Touchpoint and Vida. These exclusive collections are available alongside key brands, providing customers with an even wider choice of products they can trust, ensuring there is a quality solution for every job and budget.

The Altro collection provides quality at a mid-range price point, spanning everything from door furniture to window and joinery hardware, locks, latches and more. There's no shortage of designs and styles to choose

from, including popular finishes such as Satin Stainless Steel and Antique Brass.

For those working on traditional or period projects, the Elan range is an ideal choice. Stylish and outstandingly durable, the collection includes door handles, fingerplates and other accessories that provide a timeless look with ease. Every single product features a unique, antique black finish that offers beautiful yet subtle textures. Crafted from iron, all Elan door furniture is suitable for indoor and outdoor use.

Katrina Adamczyk, Manager of Category & Merchandising at IronmongeryDirect, says: "We recognise that tradespeople work on a huge range of projects, from commercial and domestic, to specialist builds with strict specification requirements. Our latest catalogue offers a vast selection of products and brands to meet



every size, scale and price point, so that our customers can get everything they need under one roof. We constantly review our products to ensure we have the best quality products at competitive prices, while making the selection and delivery process as simple as possible."

To view the latest catalogue online or to request a copy, see **www.ironmongerydirect. co.uk/free-catalogue**.

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sales@hardwoodoffcuts.co.uk

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MAKITA portable WST07 mitre saw stand

Makita UK has launched a new, lightweight folding mitre saw stand, making it easier than ever to quickly and accurately complete a range of cutting tasks. The portable WST07 mitre saw stand has been designed with ease of use and operator productivity in mind. Unlike previous models, the WST07 includes tool-less adjustable mitre saw bracket levers, so operators can effortlessly install, adjust and remove the saw from the stand. The sliding rail design also makes it easy to position the mitre saw at the desired angle.

With a maximum extension length of 3,830mm and adjustable extension arms (both left and right), the WST07 can be easily altered for each individual task and can support up to 225kg in weight for cutting efficiency. The WST07 also includes an adjustable levelling foot, to prevent the saw stand from wobbling when working on uneven floor surfaces.

The WST07 is easy to manoeuvre around site and transport between jobs. Weighing just 18kg, the inclusion of castors allows operators to effortlessly move the saw stand, even when a mitre saw is mounted. The stand has also been designed for ease of transportation between jobs with two convenient single-handed carry handles (one pre-fixed) for maximum carrying comfort. The WST07's compact design (it has a minimum length of just 1,765mm) and folding legs means that it can be easily loaded onto the bed of a standard 1,800mm wide pickup truck.

For increased flexibility, the WST07 is compatible with a wide range of Makita products, including slide compound saws, mitre saws, cordless slide compound saws and cordless mitre saws.

Kevin Brannigan, Marketing Manager at Makita, said: "We are delighted to add the WST07 mitre saw to our ever-growing accessory portfolio. This fantastic stand provides workers with a valuable tool

for easier material cutting. The light weight and compact design of the WST07 means that users can quickly put up and take down the saw stand with minimum disruption

even with the tool still mounted."
 For more information on the WST07,
 see www.makitauk.com/weblog/mitre-saw-stand-wst07,
 and to find out more about Makita and its range of power tools
 and accessories, see www.makitauk.com.

ASH & PLUMB

In an increasingly mass-produced culture, Ash & Plumb choose to walk a different path; paying tribute to traditional craft in a modern context they realise classically sculpted pieces that allow the natural beauty of the material to shine.

The duo work with locally reclaimed, sustainably sourced woods aiming to honour the life of the tree through their work. Constantly amazed by the natural beauty of the British woods they work with, they consider themselves editors rather than creators of nature's finest work.

With a broad and unusual history of creative and practical experience, Barnaby has previously worked in the men's fashion industry as a stylist and writer, working with *Shortlist* magazine and *GQ Australia* as a Fashion Editor, the mountain biking industry as a mechanic and sustainable trail builder, as well as in the food industry as a maker of fermented foods.

This broad spectrum of life experience combined with a long-standing passion for woodworking has given him a uniquely creative perspective. From the initial design concept and sustainable sourcing of raw materials to the final product, Barnaby is there every step of the way ensuring



Modular garage storage systems

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Alternatively, build your own custom workshop simply by selecting the individual component parts to suit your space and budget. Whichever route you choose, the beauty of this system is that you can always add further units as required.

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Package prices start from around £1,000 – see the full range at www.machinemart.co.uk/c/modular-workshop-systems.

each piece is finished to the highest quality and standard.

Dru is both designer and orchestrator at Ash & Plumb. As the son of a residential builder and interior designer, he has always had a fascination with creating beautiful functional living spaces. With experience in the fashion and interiors industries working across PR, marketing and events,



combined with time working with start-ups in financial technology, and a talent for photography and graphic design, he is uniquely qualified to ensure a smooth operation at Ash & Plumb. From branding, marketing and operations to ensuring not just the product but the entire customer experience is second to none, Dru is there, scrutinising every part of the process.

All Ash & Plumb products are currently solely stocked on their website with workshop updates released periodically. Join the mailing list for exclusive early access. They also offer a bespoke service and are available for commissions and select collaborations. To find out more, see www.ashandplumb.co.uk.



World's first: the SAUTER OFL3.0 pivoting router lift



Creating limitless routing possibilities, the Sauter OFL3.0 pivoting router lift can create grooves, rebates, chamfers and mitre cuts, all of which are possible with a one slot routing cutter.

Designed and made in Germany, the Sauter OFL3.0 is the world's first pivoting router lift designed for small workshops and DIYers. Any router motor with a standard 43mm neck will fit into the OFL3.0, allowing creative routing. The motor can be pivoted to any angle between -5° and 50° and has fixed points at 0° , 15° , 22.5° , 30° and 45° .

The router lift is easily adjusted with two lockable levers making for quick and easy adjustments. Height adjustment is with an Allen screw on the top of the lift, and the lift can be raised or lowered 101mm with an accuracy of 0.1mm. The height can then be locked. The lift has laser-engraved scales to allow perfect positioning of the rip fence.

Any angle between -5° and 50° can be reached with extreme accuracy, with a Vernier scale being used for fine adjustments.

Bit changes are also made easy with everything taking place above the table, thus making it safer and quicker. Special oblong magnetic reduction plates are available in six different sizes depending on the size of cutter, and router bits up to 55mm in diameter can be used.

The OFL3.0 fits in almost every router table (306 × 229mm), and a version especially in Kreg format (298 × 235mm) is also available. The OFL saves you money by allowing a few router bits to replace many. The possibilities are only limited by your imagination.

To find out more, see https://www. sautershop.com/sauter-router-lifts-forrouter-tables/.



DIGITAL CRAFT FESTIVAL reveals key speakers

Keith Brymer Jones, Jim Parkyn and James Otter are just a few of the major names signed up to host live sessions at the Digital Craft Festival, taking place from 27–29 November at www.digitalcraftfestival. co.uk with over 120 curated, contemporary makers from across the world selling to an international audience.

Key speakers

Known as the teary-eyed judge we have all come to love on The Great Pottery Throw Down, Keith Brymer Jones will be taking part in a live Q&A with Craft Director Sarah James on Zoom, chatting about all things craft, pottery and his iconic word designs, which are partly due to his dyslexia. Keith's co-judge, Sue Pryke, will also be attending as one of the makers at this year's festival.

James Otter, master craftsman, award-winning wooden surfboard maker and newly published author, will be chatting with Sarah James in a live Q&A from his workshop in Cornwall, Otter Surfboards. They'll be talking about his custom-made wooden surfboards, his connection to wood, which fuels his inner creativity, and of course his latest book Do Make to rediscover the joy in making.



Festival highlights

As well as being a virtual festival where vou can meet and buy from 120 of the finest UK craft makers showcasing their work, across the three days there will be a hand-picked selection of makers running interactive workshops, craft demonstrations and show and tell features.

There will also be a selection of in-depth interviews 'Meet the Master Makers', which promises to be particularly engaging, focusing on a range of media from wood, ceramics, textiles and metal. This is the perfect chance to learn something new and meet some great new people.

For younger visitors and families, there will be an exciting portrait competition, judged by Jim Parkyn, where you can let your imagination run wild and experiment with textiles, recycled materials, collages anything goes – to create any type of portrait you see fit.

James Otter adds: "The Digital Craft Festival provides an incredibly important platform to champion all these small, brilliant businesses that I work with, and one of the advantages of it being hosted online is that visitors can join from anywhere in the world – so come along on Friday 27 November as we open our virtual doors – and join in the free interactive workshops, hear from the makers and finish off your day by purchasing an amazing piece of craft."

Find out more here: www.digitalcraftfestival.co.uk.

NORTH OF ENGLAND WOODWORKING & POWER TOOL SHOW

This is just a reminder that the 2020 North of England Woodworking & Power Tool show, or the 'Harrogate' show as it is otherwise known, will not take place this year as planned due to the ongoing Coronavirus pandemic. Unfortunately, the show has had to be postponed until 2021. The dates for next year's event will be 12–14 November. We look forward to seeing you all then! In the meantime, for further information, please visit www.mytimemedia.co.uk/northofenglandshow.

DICKIES celebrates inspiration in the trades



Global workwear brand Dickies is calling on tradespeople to nominate someone whose work inspires them as part of a new campaign celebrating those who love what they do and take pride in their work.

The global campaign, 'United by Inspiration, United by Dickies', features footage of 10 of Dickies' community of makers from around the world showing their skills, including British stonemason Rob Maxfield. In light of global restrictions on social contact, the footage was shot by the makers themselves and aims to highlight how those who make a living with their hands can continue to inspire each other despite the distancing imposed by the COVID-19 pandemic.

Rob's footage is juxtaposed with London-based barber Klipper Kem. Both are wearing the iconic Dickies Portland shirt – a 'lumberjack'style checked shirt, which is one of the brand's enduring best-sellers.

As part of the campaign, Dickies is calling on tradespeople to nominate someone whose work inspires them by tagging the person on social media regardless of whether they work in the same trade. Improve your chances further by telling Dickies why - in words, photos or to camera and using the hashtag #unitedbyinspiration. Both nominators and nominees will be entered into a draw to win their own Portland shirt.

"While communities have been forced apart during the pandemic, tradespeople and the 'makers' of this world continue to work hard and inspire one another with their efforts," said James Whitaker, Marketing Director.

"We're keen to find out where people in all kinds of trades draw their inspiration. Perhaps it's someone who's trained them as an apprentice or who inspired them to follow their particular career path. It could be someone who has given them the confidence to start their own business, or even someone whose work inspires them to take a more creative approach to their role."

Who inspires you? Share your nomination on social media, using the hashtag #unitedbyinspiration, tagging dickiesworkwearofficial using the following details:

Twitter: @DickiesEurope

Instagram: @dickiesworkwearofficial Facebook: @DickiesWorkwear

For more information on the campaign, see www.dickiesworkwear.com/

uk/blog/united-by-inspiration.

CLARKE turbo fan gas heaters

This range of efficient turbo fan propane gas-fired heaters from Machine Mart are perfect for heating any garage, workshop or warehouse this winter.

The Little Devil II, pictured, provides a heat output of 10.3kW, with models in the range delivering a heat output up to a massive 131kW. Some models in this range also feature variable heat output control and all models are supplied with a regulator and gas hose.

Dual voltage (110V/230V) models are also available and all models

are built within a corrosion-resistant stainless steel casing. With fuel safety cut out and a sturdy handle on top, these are perfect to heat all your cold spaces this winter. Prices in this range start from £95.98 Inc VAT; see https://

www.machinemart.co.uk/c/

gas-fired-space-heaters to view the full range.



What's new from



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

METABO KT 18 LTX 66 BL 18V BRUSHLESS PLUNGE CUT SAW

MANUFACTURER: Metabo

D&M GUIDE PRICES: From £394.95 (inc VAT)

The latest addition to the Metabo range is the long-anticipated KT 18 LTX 66 BL cordless plunge cut saw with brushless motor for powerful plunge cuts and precise cuts up to a depth of 66mm. A plunge cut saw permits the user to directly plunge into the workpiece with the saw blade. The plunge function is ideal for sawing of cutouts – i.e. for sinks or ventilation shafts. It benefits from an adjustable fit without play on the guide rails, from Metabo and other manufacturers, which ensures precise cutting results. The LIHD high-performance battery packs and the Metabo brushless motor guarantee maximum power and enduring sawing.

Thanks to variable speed for different materials and double guide for precise setting of the cutting depth with and without guide rail, the KT 18 LTX 66 BL is suitable for a variety of applications.

The undercut function allows for precise transitions from the 0° and 45° position, which are readjustable for highest cutting precision. Sawing close to the wall is also possible down to 14mm.

Dust is kept to a minimum thanks to a large volume dust bag or by connecting a vacuum cleaner (see below). Automatic starting of the connected vacuum cleaner is made possible by means of cordless control (accessory available separately).

It incorporates a sawdust ejection nozzle for any working position, which can be rotated and locked individually and the fast brake stops the saw blade quickly while improving safety. A viewing window in the guard allows for accurate cutting.

The saw is available as body only in a MetaBOX, or as a kit with 2 × 5.5Ah LiHD batteries and charger. Metabo guide rails are available separately in a variety of sizes.







METABO ASR36-18 BL 25 M SC 18V BRUSHLESSS M-CLASS CLEANER

MANUFACTURER: Metabo

D&M GUIDE PRICE: From £679.95 (inc VAT) – body only

The perfect companion to the new plunge saw is the Metabo ASR36-18 BL M-Class cordless wet/dry vacuum cleaner, which features cordless control function for intelligent extraction without cable connection. This allows the vacuum cleaner to start/stop automatically when the cordless tool, from Metabo or other brands, is connected to the hose and is either switched on or shut down. Manual starting of the vacuum cleaner is also possible with the remote button at the coupling bush of the hose.

This new extractor has a high suction power, comparable to a mainspowered vacuum cleaner, thanks to the inclusion of two 18V batteries, or alternatively, one 36V battery pack (available separately).

It also features a three-stage suction power controller for adapted power, depending on the application and maximum battery pack runtimes of more than 80 minutes. The SelfClean function allows semi-automatic filter cleaning during breaks or manually when needed and there is an automatic trailing mechanism for emptying the suction hose completely.

The uncluttered control panel features large rotary switches and battery pack capacity display; it also incorporates many features for safety and comfort, including a folding hose hook, rubberised storage surfaces and castors, as well as brakes and a dust/splash-proof battery pack compartment with lockable flap.



NEW DAB/DAB+ RADIOS & BLUETOOTH SPEAKER

FOR THE JOB SITE, WORKSHOP AND HOME





AXMINSTER TRADE ULTIMATE EDGE VARIABLE SPEED SHARPENING SYSTEM

Jonathan Salisbury has been sent the Axminster Trade Ultimate Edge to convince him that a powered system will help him to achieve ... well, 'the ultimate edge!'

n my workshop I use waterstones and a rotary grindstone, so the Ultimate Edge is quite different from what I am used to. It is a small, variable speed linisher that can be set to any angle from vertical to horizontal, with a reversible motor and a spindle that allows the addition of polishing mops and abrasive wheels. It is also extremely heavy, with rubber feet that attach to the base so that it can be levelled on any surface. Stability is excellent, with no need, or provision, to fix it to a workbench.

For me, the 'ultimate' sharpening system would be enjoyable to use: simple, quiet and allow me to spend less time sharpening and more time working. Everyone has a personal preference, but it takes experience to know what suits you best; I recommend taking your time when selecting and, if you can, visit a showroom and try them all out first. Mix powered and manual methods if it suits you!



Follow the arrows for the direction of travel!

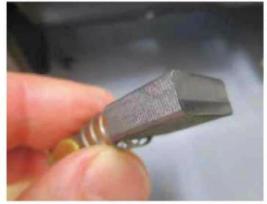


The self-adhesive graphite pad reduces friction, but wears quickly

Setting up

The Ultimate Edge system doesn't arrive ready to use and setup takes a while to complete. The control box must be attached to the baseplate, the belt installed and balanced, the platen behind the belt adjusted to the correct clearance, the fitted European electric plug has an adaptor to clip on and fasten with a screw. There is also a self-adhesive graphite pad that is fixed to the platen to reduce friction behind the belt and cushion the grind. A steel slip plate to clip over this for a more resistant surface is also available.

The pre-installed toolrest can be used for freehand grinding of scrapers and gouges, but for chisels and plane irons you really need to use the supplied compound jig, another item to bolt into position and carefully align. The standard honing guide that slides onto the bar is a separate item, and enables the swift creation of consistent, perpendicular edges.



The motor brushes will need replacing one day



The toolrest can be used for freehand grinding of scrapers and gouges



The machine is not excessively noisy, with a constant swish as the abrasive zips round, and not much more when the metal is pressed up against it, but ear protection is nevertheless required. The belt must move away from the edge being sharpened, and with the honing guide this is upwards. The direction of travel is easy to select with the toggle switch, even if the labels 'reverse' and 'forward' are confusing. The doubleheaded arrow makes more sense, with upwards being 'reverse'. For grinding the backs of tools or knife edges, the belt is placed horizontally, two screws keeping it locked in place.

Setting up for grinding is straightforward. The edge of the blade is clamped 25mm from the front of the honing guide by using one end of the included plastic gauge. The angle of grind is set by moving the compound jig's bar towards or away from the abrasive, using the side of the gauge to determine the appropriate distance. The honing guide slides onto the bar, the machine is switched on and the chisel or plane iron is rotated gently forwards to touch the abrasive. There is an impressive shower of sparks with the coarsest belt (80 grit) and successive passes over increasingly finer belts gradually create a polished surface. The speed can be set to match the tool and prevent overheating.

The first niggle with this system is that, although easy to do, changing and balancing the belt between the three to four stages from regrinding to a mirror finish takes longer than



The supplied compound jig



'Optional' honing guide is a necessity for sharpening plane irons

the time spent actually removing metal. I accept that this probably doesn't reflect typical use, but it is something to bear in mind if you regularly need to deal with chipped blades. Secondly, when sharpening a few blades to the same angle (in my case a dozen smoothing plane irons), it made sense to process them all with the first belt before changing it, constantly swapping the blade in the honing guide. I found this tedious and it would be tempting, if costly, to have several honing guides instead! Also, when resetting a ground blade in the honing guide the angle changes very slightly, so the next step doesn't abrade the whole bevel so quickly. Other jigs for different tools are available and those made by Tormek are compatible with the Ultimate Edge.

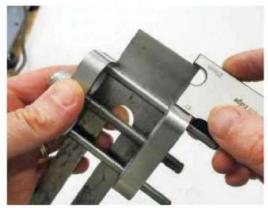
As for the material ground off, without an extraction system you definitely need a face mask, goggles and good ventilation as the system creates surprising amounts of very fine black dust. It is definitely not something you will want to breathe in and is a bit of a nuisance to clean up too, requiring a suitably filtered workshop vacuum cleaner.



The primary grind with wire edge



The 'Twist n Fix' arbor



Setting up with the honing guide

Once the finest abrasive belt has done as much as it can, a leather belt can be set up to polish even further. The polishing compound can be a bit messy and I am not sure that it improved chisels and plane iron bevels, but I did use it to finish the backs before grinding. It worked very well on my spoon-carving hook knives, which are really tricky to hone by hand: I don't think that they have ever been sharper.

Moving on from the belts, the 'Twist n Fix' carrier, a bayonet spindle that bolts to the motor shaft, turns the Ultimate Edge into a buffing wheel. A range of polishing mops and wheels, made from nylon, rubber and leather, can be attached to arbors, which then lock on to the carrier. It is a neat system, but care must be taken to check that it is running anti-clockwise when looking at it end on, which was the opposite to my grinding belt operations and could be easily overlooked. The wheel is left on the arbor and removed from the carrier when not in use, an end cap hiding the bayonet pins to remove this hazard. I'd certainly recommend having one arbor for each mop or wheel, for convenience if nothing



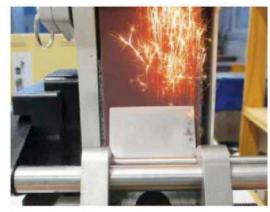
The mirror finish on a plane iron back



A selection of the mops available



Setting the angle of grind



Is it working yet?

else. The coarse nylon wheel was particularly good at cleaning up a rusty plane iron before I got started on the sharpening processes. I couldn't find a way to lock the spindle to stop it rotating when removing the arbor, so mounting and removing wheels was not always as quick and easy as I'd have liked it to be.

Another angle & more optional extras

The universal sharpening table is a platform that locks on to the compound jig with angles marked



The horizontal leather belt in use



The carrier bolts to the powered spindle (I then vacuumed the dust!)



De-rusting a plane iron using the coarse nylon wheel

on it to aid the grinding of lathe tools such as skew chisels and scrapers. It is much more of a free-hand guide as the tool is not fixed to it during grinding. It worked well with scrapers, but I found that it was a little more awkward keeping skew chisels in place with the lower angle required.

The included plastic angle gauge will be good enough for most tasks, but if you require greater accuracy, different angles than those on the gauge, or wish to measure the angles of your cutting edges before grinding them, the universal gauge set would be a good buy. As grinding and honing proceeds, the angle the tool is rotated will change and these gauges would be useful for checking that you are maintaining the correct angle at every stage. Another useful item is the micro bevel guide, which allows you to keep the tool in the honing guide and move it to a water or diamond stone to add the final cutting edge.

Conclusion

Many woodworkers do not use grindstones for sharpening chisels and plane irons because of the concave bevel they create. The contact area of the Ultimate Edge is flat and the wide variety of belts, with a grit size from 60 to 2,500, as well as a leather strop, allows this machine to do everything from grinding out chips to polishing a mirror finish. Since the speed can be altered, it can cope with anything from the most delicate blades right up to chunky lathe tools.

The one issue that can never be escaped is the fine black dust created as tools are being sharpened. Much of it remains inside the machine, but enough escapes into the air and standard workshop extractors



An extractor can be connected to one of the two ports

must not be used – dust and sparks should not be mixed, unless you intend to set the workshop on fire. The easiest solution is to connect a Numatic NQS 350 Extractor, with Protectaglass filter (£299.96) via the flame retardant hose (£32.96).

A few details could be improved: the handle to release tension is a bit hard on the hands, the stop switch should be more proud to make it easier to push, the motor is not brushless and will need maintaining, and the graphite pad wears surprisingly quickly. The Ultimate Edge is only supplied with a coarse belt, so you need to buy others to sharpen, hone and polish.

If your sharpening needs are few you will not need the full range of features provided on the Ultimate Edge, but it can certainly provide you with a comprehensive system if this is what you're after. However, by the time you have added basic jigs, tables, a few mops and arbors, and an extractor, the total price will be over £1,000, but half that for the machine, honing guide and a few belts. Extras could naturally be bought as and when they are required, and as a machine for a professional this outlay would be more easily justified.

There is no question that the Ultimate Edge system is exceptionally good at what it does: I have the wood shavings to prove it, and the system is so easy to use that even someone with no experience would probably be able to learn how to sharpen tools in an hour or two. That's significantly less than the time it took me to learn how to use waterstones properly, so if a steep learning curve is important to

you, and you want great results, take a closer look at the Ultimate Edge. 💸

SPECIFICATION

- Robust, well-built sharpening, linishing, polishing system
- Compound jig and angle gauge included with the machine
- Variable speed 560W brush motor produces plenty of power
- 200-600m/min belt speed
- Forward or reverse, effective extraction in either direction
- Easy belt changing and tracking adjustment
- Comprehensive range of 50mm wide abrasive belts available
- Wide range of accessories allows customisation

Accessories: Honing guide assembly – £39.95; 'Twist n Fix' Arbor – £26.95; Micro Bevel Guide – £59.95; Universal Sharpening Table – £34.96; belts – from £3.20; mops – from £9; gauges – £17.95

Recommended extraction: Numatic NQS 350 extractor with Protectaglass filter – £299.96; Axminster flame-retardant extraction hose (32mm × 2m) – £32.96

Typical price: £449.95 Web: www.axminster.co.uk

THE VERDICT

PROS

 Very solid and stable; easy for anyone to get razor-sharp cutting edges; micro adjustment of all settings to achieve a perfect angle; very large range of belts, jigs, mops and polishing compounds for every sharpening task; compatible with Tormek jigs; can also be used for polishing; excellent instruction manual

CONS

 Motor is not brushless so will require maintenance; needs dedicated extraction for dust removal; high cost if you want the complete system

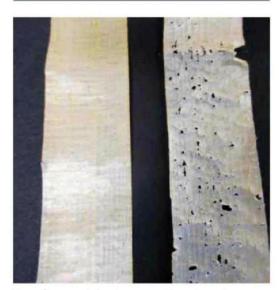
RATING: 4.5 out of 5



The universal sharpening table is not so good with skew chisels



The universal gauge set is a good buy and helps you to check the bevel angles of tools



Super fine wood shavings prove the universal gauge works!



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Offer valid 20th November - 31st December 2020



MAFELL MT55 CORDLESS PLUNGE SAW

Jamie Smith of Atelier Cabinet Makers thinks that this cordless plunge saw from Mafell is one of the best on the market – so much so that he would highly recommend it to professionals due to its unique features and versatility



he Mafell MT55 18M BL plunge saw has so many brilliant features including some that are yet to be seen on other competitor models. It makes this saw not only one of the best on the market, but shows the thought and process that has gone into designing this product, which really is a cut above the rest.

Scribe setting

For me, the best feature on this saw is the scribe setting. This is common to others on the market but Mafell have taken this to another level. When switching the saw into scribe cut mode, the MT55 moves the position of the blade by ‰th of a millimetre to the left. This means that when using the guide rail, it brings your scribe cut closer to the splinter guard, then on switching back to make your full depth cut, the saw moves back to its original position. This process allows the cleanest cut possible on the top surface as well as underneath, where other plunge saws will rely solely on the track's splinter guard, thus wearing it down and decreasing its ability to protect the top surface being cut. The scribe feature means you



Adjustable square fence

won't have to spend out on track splinter guard replacements over the years.

Splinter guard

Speaking of splinter guards, the one on the Mafell saw not only sticks on but pops into the guide rail to ensure it's held in place. Guide rails with stuck on splinter guards can be affected by heat and the strip can peel itself off. The guide rail is very low profile and the saw kit comes with two 1,600mm long tracks or an option of one 1,600mm guide rail, a 800mm guide rail and an adjustable mitre fence. This gives great versatility from the get-go, giving the user the ability to tailor to their needs. The guide rails are simply fixed in place by one connector, which stays on the guide rail when not in use.

High quality cut

Personally, I do a lot of cutting of veneered boards including some that are melamine-faced, which is well known for chipping. I found the Mafell saw achieved a very high quality cut on both faces of the melamine board when using the scribe setting. I switched to the supplied 48-teeth kit blade and was highly satisfied with the cut quality.

There is a range of additional blades to suit various cutting needs from rip cuts and fine cuts in timber and man-made sheet material, to cement-bonded materials, plexiglas and even aluminium.

Corded vs cordless

If this is your first plunge saw purchase, should you buy corded or cordless? On this cordless saw, there is a no-load speed of 4,850rpm, compared



Bevel angle

FURTHER INFORMATION

To find out more about Atelier Cabinet Makers, see their website:

www.ateliercabinetmakers.com



to Mafell's corded version with a no-load speed of 3,600-6,250rpm, but you may want to take into consideration your working environment and the types of cuts you would expect to be making. If your work is mostly outside or away from a power supply, this is where the cordless comes into its own. I found that this version has plenty of power when cutting your standard thickness boards, such as ply, MDF and veneered boards. I made a few cuts into solid beech block 40mm-thick kitchen worktop and the Mafell MT55 managed this comfortably, but just remember to go slower and allow the saw to do the work for you. This sort of work is more costly on the battery, but the 5.5Ah versions supplied in the optional kits have Li-HD technology to ensure maximum power at all times by processor controlled monitoring of charge and temperature, which is another excellent and notable feature.

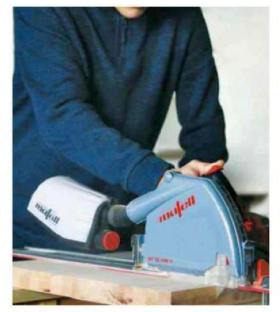
Angled/bevel cuts

If you are looking to undertake angled/bevel cuts, this saw has blade settings from -1 up to +48° with a pre-set at 0° for ease and accuracy. When setting the saw for a bevel cut while using the guide rail, the blade always cuts to the edge of the splinter strip.

When using without the guide rail, the rubber



Scribe cut setting



Using the guide rail



Guide rail connector

guide at the front of the saw auto-corrects and adjusts itself accordingly to always show you the alignment of the cut to your marked cut lines. To lock the angle of the saw, there is a knob on the front of the angle dial, but this also locks at the back to ensure a solid setting with greater efficiency when making regular angled cuts.

Fast blade change

Another unique feature is Mafell's fast blade change. This requires pulling the fast change lever, which releases the fully cast blade cover and reveals the blade with its hex key screw fixing. The quick-change lever also engages the saw's auto spindle lock, making the blade change fast and hassle-free. While the cover is open you can see Mafell's unique dust channelling in the solid casting that ensures excellent dust extraction by guiding the particles in the direction of the dust collection bag. Of course, you can use



Cutting beech block worktop



Fast blade change



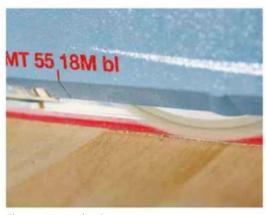
Switch for scribe cut

an extractor but being fully cordless is just so satisfying when using long guide rails and cutting down 8ft long sheets of timber – no snagging hoses or cables! Mafell's supplied dust collection bag is as efficient as any others I have seen, but always be sure to use the additional appropriate breathing apparatus.

The saw can be used both on and off the guide rail. When switching between them, you simply change the plunge depth switch to the marked position for rail or no-rail use; this keeps the plunge depth working exactly to the depth gauge, and for those no guide rail cuts, Mafell has a parallel guide fence.

Conclusion

This premium quality plunge saw may be a bit of a luxury item for occasional users or hobbyists as it's in the higher price bracket; however, it is a joy to use and I could definitely see it having



Clean cut on melamine



Cutting depth: 0-57mm

a place in our workshop, especially when working on job sites. The Mafell plunge saw is one of the best you can buy and I would highly recommend it to professionals especially, due to its unique features and versatility.

SPECIFICATION

No load speed: 4,850rpm Cutting depth: 0-57mm Cutting depth at 45°: 0-40.5mm Tilting range: -1° - +48°

Voltage: 18V Weight: 4.5kg

Battery capacity: 5.5Ah Battery type: Li-HD Blade diameter: 162mm

Typical price: £639.95-£1,069.95 (depending on kit specifics)
Web: www.nmatools.co.uk

THE VERDICT

DDNS

 Fast blade change; use with or without guide rail; exceptional cut quality even on melamine; works on other brand's guide rails

CONS

Expensive; no riving knife

RATING: 4.5 out of 5

Workshop reading

Heavy rain confines **Robin Gates** to his shed with the November 1934 issue of *The Woodworker*

his wet autumn day finds me sitting in the shed, not so much wondering what to make as simply wondering, about everything and nothing in particular.

Marvelling at the world, you might say, or in a kind of reverie. The heavy rain forecast to arrive around lunch time is here, beating upon the roof like pin hammers working nineteen to the dozen, and it'll be some time before I can venture back indoors without getting soaked, so I'm staying put.

Anyway I haven't been completely idle. Earlier, when the sun shone briefly and a blackbird sang from the garden fence, I scraped the flaking varnish from a piece of old pine and planed it back to timber that'd never seen the light of day. Now the air is heavy with the resin of pine woods, shavings lie like early snow around the bench, and that alone seems reason enough to be here.

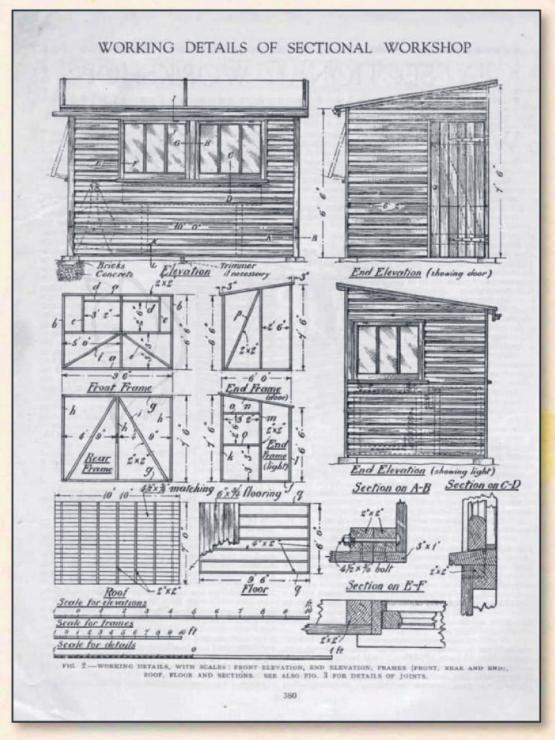
If you don't already have a garden workshop, this example of around 10 × 6 × 7ft 6in taken from an article in *The Woodworker* of November 1934 strikes me as an excellent choice, although I might be biased since it's not unlike my own.

A shed in sections

Very sensibly this one is built in sections pulled together by bolts, so it can be dismantled and moved if necessary. The framing for walls and rafters uses 2 × 2in timber, with 4 × 2in for the floor, and the cladding is 1in ship-lap. The author reckons ship-lap to be a better choice than tongued-&-grooved matching, which, if used, should be fixed vertically, perhaps so that rainwater doesn't sit in the joints. In my off-theshelf garden shed the matching runs horizontally, and it's probably no coincidence that under the current downpour a rivulet has sprung from somewhere in the west-facing wall and is flowing mockingly around my feet. As with a wooden boat so also with a shed, it's almost impossible to trace the course of a water leak back to its origin, and the best you can do is mop up.

In using materials economically we're advised to settle our final dimensions in units of the actual widths of timber – for example, by making the height of the front wall 14 widths of ship-lap. We're also reminded to measure across diagonals frequently to check that we're building square, and for general use it's suggested we knock up a try-square of three pieces of matching with sides in the ratio of 3:4:5.

Uprights and horizontals of front and rear frames are joined by mortise & tenon, with joints further secured by 2in cut nails, although I suspect those with a timber-framing mind will prefer to use wooden pegs.



A nice detail

Having framed the floor, its ¾in boards can be nailed down, tightening the joints by levering on joists, then punching the nail heads below the surface. It's recommended we stand the floor on bricks and a concrete foundation so as to allow free circulation of air, and use pieces of slate for levelling.

Now the side frames can be raised and bolted, window and door linings made, and the ship-lap fitted all around, not forgetting to add battens at the corners to protect vulnerable

end-grain. The roof is boarded over with %in matching and covered with tarred felt secured by clout nails and wooden strips, the door fitted, window lights hinged from their tops so as to deflect the rain, and our new workshop finished with creosote or paint.

It's a nice detail – you might just see it – that the end elevation of the drawings shows the dotted outline of a treadle woodturning lathe below the window. Note also the gutter dipping gently towards a water butt with a view to irrigating next summer's garden.





Don't miss out on the opportunity to be part of this prestigious annual award, which champions UK furniture designing and making talent while celebrating the life and work of the late Alan Peters OBE



his annual award celebrates the legacy of one of Britain's most prominent furniture designer-makers of the late 20th century while aiming to encourage emerging talent in the craft of furniture design and making.

Any woodworker who is a resident UK citizen over the age of 18 and who has a passion and talent for designing and making contemporary furniture is invited to submit up to two items of furniture made primarily of wood. These pieces, if applicants so wish, can also include other complementary materials that echo the philosophy of Alan Peters. Judging is based on the appropriate use of wood, the quality of workmanship, functionality and originality of design.

Both one-off designs and potential batchproduced designs are encouraged and the piece(s) does not have to be large. Applicants should be familiar with the work of Alan Peters prior to applying and are encouraged to read organiser Jeremy Broun's 64-page online video-integrated ebook, which is offered free-of-charge (via the website link opposite).

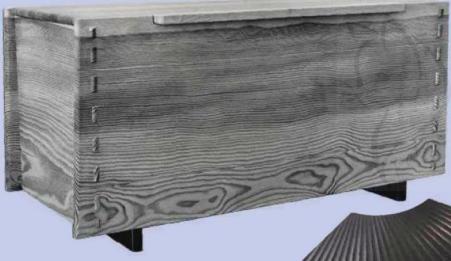
The man behind the award

Alan Peters OBE (1933–2009) was one of Britain's most prominent furniture designer-makers of the latter part of the 20th century. He was apprenticed to Edward Barnsley and had a direct link to the English Arts and Crafts Movement. He was hugely influential internationally in his practice, teaching and publications. Above all, his respect and understanding of how wood behaves and the value of hand skill, yet moving tradition forward,



Alan Peters and Jeremy Broun in 2005

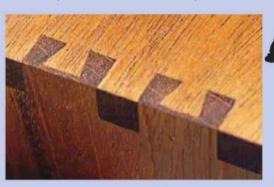




resulted in the creation of many timeless pieces. He created affordable, functional furniture which was made to last, making an art of his craft in some of his subtle innovations.

History of the award

The original award was called 'The Alan Peters Award For Excellence' and was initiated by Jason Heap in 2010. The prize was offered to three winners, each of whom were given free exhibition space alongside the professionals at his annual furniture exhibition in Cheltenham. The award ran for eight years. The judges were Jason Heap, Keith Newton and Jeremy Broun.



Award judges

Jeremy Broun (organiser) – designer-maker and co-exhibitor with Alan Peters 1978–2002 **Andrew Lawton** – designer-maker who worked with Alan Peters and on his last commission David Barron – professional furniture maker who also produces his own range of hand tools.

Fan Table detail

To see a video giving details of the award, visit https://www.youtube.com/ watch?v=0y308TcMeBs.

PLEASE NOTE

Due to COVID-19 restrictions, The Alan Peters Furniture Award 2021 will now be an online event with a virtual exhibition

PRIZES OFFERED

1st prize

£1,000 Axminster Tools voucher

2nd prize

£500 Triton Tools voucher

3rd prize

£300 Judges' prize

Winning pieces will be exhibited in a virtual exhibition on Jeremy Broun's website – www.woodomain. com/alanpetersaward - and other platforms to be announced.

Entry deadline: 28 February 2021 A £20 entry fee applies and a maximum of two entries can be made (£20 per entry).

This award is open to any resident citizen in the British Isles aged over 18 who has an enthusiasm and flair for woodworking. A piece of furniture (indoor or outdoor) is to be made and six high resolution JPEG images submitted, together with a Word document description. Shortlisted applicants will be asked to engage in a Zoom video call or submit a one-minute mobile phone video introducing themselves and describing the piece(s).

The judging of furniture pieces will take place in March 2021 with the online award ceremony broadcast in the second week of March. Winning entries will be announced in the April issue of the magazine.

If you already have items made for the 2020 award, or are ready to get started for the 2021 award, please do not hesitate in submitting your application any time before the entry deadline (28 February 2021).

To download an application form and view the 64-page e-book, please visit www.woodomain.com/ alanpetersaward. The form can be found at the right of the page. Payment for entry can also be made securely via the website. For further information, please contact either Group Editor, Tegan Foley (tegan.foley@ mytimemedia.com), or organiser, Jeremy Broun (jb@woodomain.com)





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MAKING A 'MOXON' TABLE VICE



Robin Gates hones his hand skills while making a hybrid vice for bigger boards using two Record Juniors and reclaimed oak linings

1	Wo	od	I	Beno	ch	Vic	e	Fig. 8	160	-	-
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Fig. 1 'Wood bench vice' from the 1964 Buck & Hickman catalogue

his idea for a 'Moxon' table vice (photo 1) may have been sown when I tried pressing flowers in the 1960s. Mum had turned the bare earth behind our village semi into a garden of dreams, nurturing seedlings and cuttings until by mid-summer the borders were a riot of reds, blues, and yellows, dancing with butterflies and bees.

But now I come to think of it, the flower press I used back then wasn't actually a flower press; it was a wooden vice of the sort with jaws closed by two wooden screws, one of countless curiosities floating around the home, filling idle moments with interest and wonder. Its wooden screws were threaded into the rear jaw, which was intended to be fastened to the front edge of a bench by a couple of wood screws, while the moving jaw had clearance holes for the adjustment screws so it flopped about until tightened. In my childish hands it was a clunky device even as a flower press, making a mess of some of Mum's best blooms squashed between sheets of blotting paper, but I nonetheless liked turning its old-fashioned wooden screws, mercilessly flattening the lupins,

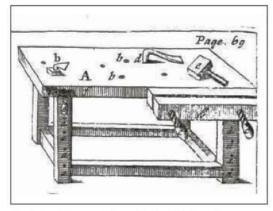


Fig.2 'Double screw' from Mechanick Exercises by Joseph Moxon

dahlias and chrysanthemums. You can find what I'm talking about in old tool tomes of the time, such as the Toga version shown here (Fig.1) in Buck & Hickman's 1964 General Catalogue of Tools & Supplies For All Mechanical Trades, when the tool was known simply as a 'wood bench vice'.

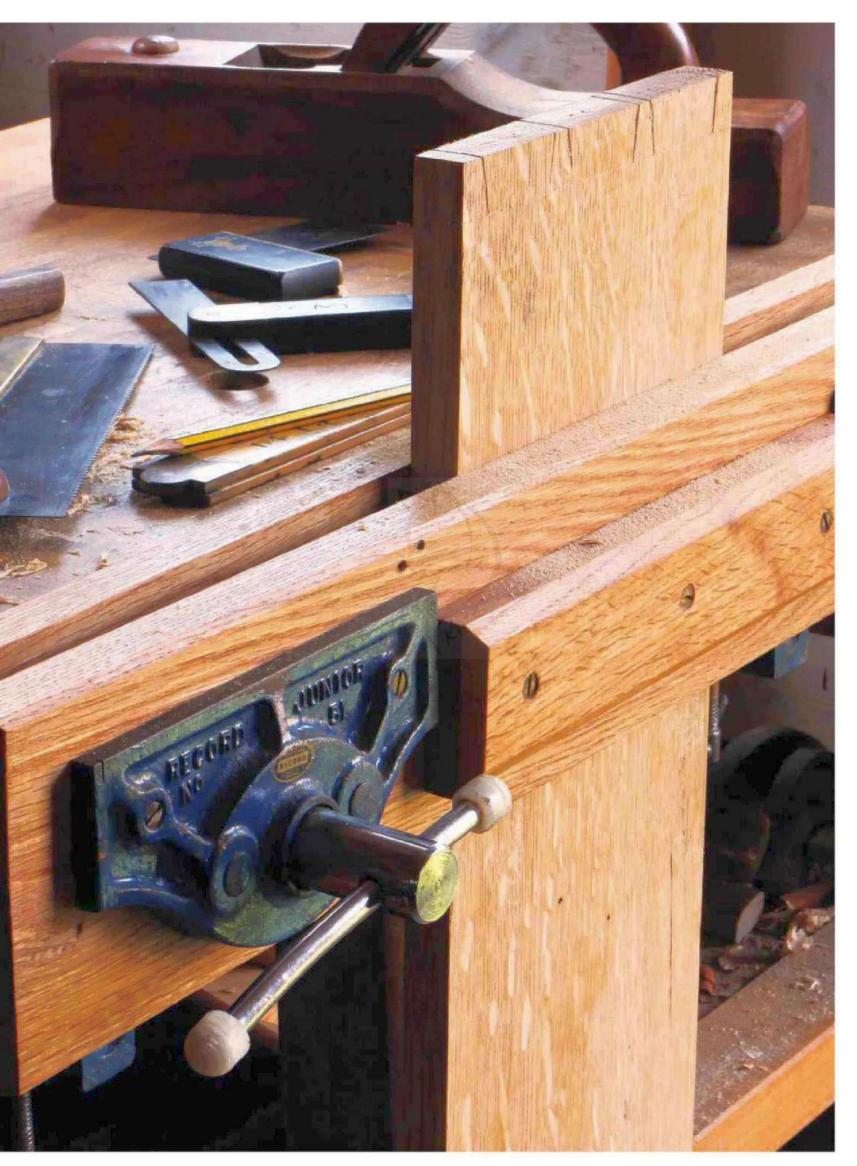
What's in a name?

Latterly, through the benefit of shared research, the 'wood bench vice' has been rediscovered and renamed a 'Moxon' because the 17th century printer and publisher Joseph Moxon included one in his illustration of a workbench in Mechanick Exercises: Or The Doctrine Of Handy-Works (Fig.2), a book describing tools and their uses for the major trades of Moxon's day. You can obtain the third edition (1703) of this book as a free download from www.hathitrust.org (a not-forprofit digital library). Moxon himself called this vice simply a 'double screw' but then, what's in a name? As the Bard of Avon might have observed, it'd grip wood just as well if we called it 'Bob'.

In the 1960s, blissfully free of television let alone a smart phone, and with so much time to do things, when I felt the urge to saw a piece of wood or push my little Record 102 plane across its surface, I'd grip the work in a Record Junior table vice. This very capable and child-friendly vice could be clamped just about anywhere, and was as quickly unclamped when I'd moved on from woodwork to driving Dinky toys and abandoned it in Dad's way. I still have that small tenon saw and plane, although the flower press – I mean 'wooden bench vice' and Record Junior disappeared down the cracks of my several house moves since then.

Still, with 'vintage' and 'retro' being so popular now it's much easier to replace those things let go in less nostalgic years, and now missed







2 Using the coping saw with the Parry & Bott table vice



Speaking more generally, two alternatives to the outward-facing table vice I've found useful include the corner vice (photo 5) with L-shaped jaws enabling longer wood to be supported by the bench, and a large hand screw secured to the bench by a G-clamp, which allows quick and easy adjustments when shaping with the bow saw, for example (photo 6).



5 A corner vice clamps perpendicular to the bench



6 Work held by a hand screw while using the bow saw



3 A table vice is a boon to a crowded bench

While making the linings for the table vice it struck me that I only need make them longer and two such vices could be joined at the jaws, making a pretty substantial 'Moxon table vice'. Moxon described the 'double screw' as being 'fixed to the side of the Bench... or sometimes its farther Cheek is laid an edge upon the flat of the Bench, and fastened with an hold-fast, or, sometimes, two on the Bench.' And although today's commercial makers substitute lathelike hand wheels for the wooden screws, they persevere with holdfasts for clamping the unit to the bench. This is no doubt a solid arrangement but it does engender the additional cost of a pair of decent holdfasts, not to mention restricting use to a bench that's thick enough to grip their shanks. A pair of G-clamps would work equally, but why bother when table vices supply both the screw gear and the clamps, and at a fraction of the cost?

Sturdy little vices

So much for the theory, but I searched in vain for a matching Parry & Bott table vice, and had almost given up on the idea when a dark



4 Marks of the scrub plane on an oak lining

blue Record Junior No.51 all but leapt from the shadows of a charity shop and into my hands. Somewhat impatiently I bought another on eBay, and their combined cost was £35. These are sturdy little vices (photo 7) and well proven, having been launched by C&J Hampton under the Record brand in the 1930s and manufactured in their thousands for half a century.

With the Junior having been in production for so long it's unsurprising that minor differences exist between vices of different ages, and on one of this pair I found the free ends of the guide bars had been mushroomed, presumably to prevent the moving jaw dropping on your foot if extended too far. But this would also prevent fitting my preferred style of lining, bored to fit neatly around the screw and bars, so I filed the ends to a taper matching the second vice (photo 8) enabling both vices to be dismantled. A modicum of cleaning included scraping the faces of the jaws flat, and ensuring parts moved freely (photo 9).

For the linings I used some well seasoned ¾in (19mm) oak reclaimed from an old table top several years ago. The top had been assembled



7 The sturdy little Record Junior No.51 table vice



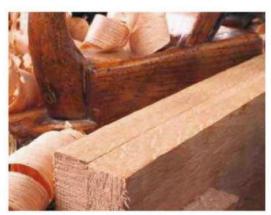
8 Mushroomed ends of guide bars were filed with a taper

with tongue & groove joints, now splitting at the ends to provide useful guide lines for the rip saw (photo 10). That had been a vigorous workout for a warm June day, followed by another with the scrub plane getting rid of the patchy dark stain (photo 11). With its heavily cambered iron the scrub plane is a voracious tool, very efficient but leaving a surface like a ploughed field and liable to splinter the far edge of the work if it isn't well chamfered beforehand.

It was a raw day in January at the beginning of the year when I got around to marking out a piece of the oak into 24 × 4in (61 × 10cm) lengths for the linings. I allowed a 13in (33cm) gap between the guide bars of the two vices, which I reckoned more than adequate clearance for boards I'd be likely to use, while a ¾in (16mm) margin above the metal jaws, 1in (25mm) margin at the ends, would guard against blunting sharp edges while increasing the clamping area. Having cross-cut the linings to length I came up against a problem for which the long jaws of the vice I was making would eventually provide the solution: clamping the two pieces together for planing their edges



11 Getting down to bare oak with a scrub plane



14 Straight and level edges



9 Vices dismantled for cleaning

simultaneously. Eventually I cobbled together an arrangement, nipping their ends in a small face vice while supporting them lengthways on a block clamped to the bench (**photo 12**). The awkwardness of setting this up was quickly forgotten as the shed filled with the scent of fresh-planed oak.

Two boards clamped together planed well enough, with their combined thickness helping stabilise the plane, but had there been a third the effort required in overcoming greater resistance might have outweighed the advantage of planing them en masse. Besides, this was as much width as my elderly Swedish jack could accommodate with its 1¾in (44mm) blade, here making its first outing after renovation. It took a good few passes to clear the remnants of the tongue & groove joints (photo 13) but when the new edges emerged they were straight and level (photo 14). Planing in pairs worked for end-grain too (photo 15), especially as clamping pieces face-to-face eliminated two long edges from the possibility of splintering – always a danger when working at right angles to unsupported fibres.



12 Linings paired for planing edges



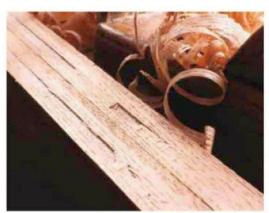
15 Planing ends together reduced the risk of splintering



10 Ripping the oak table top into its component boards

Faced with a challenge

Setting up the linings for planing faces was as simple as laying them flat on the bench with ends pushed against rudimentary bench stops made by a couple of wood screws, their heads standing proud to bite into the end-grain. The planing, however, was more of a challenge, and I had to remind myself that this oak grew and developed a character suited to its own purpose, not mine, as I swung the wooden smoother through every sector of the compass in trying to avoid tear-out. Oak is coarse-grained timber at the best of times, and when flat-sawn, as this was, there's a price to pay in convenience for the shapely figure of cathedral arches no doubt chosen to embellish the table from which I'd sourced it. But as often seems to happen, when I was at the point of giving up on smoothing and reverting to a more rustic scrub plane finish, the timber seemed to sense my despair, decided it'd made its point and obliged by laying its fibres flat (photo 16). Or it might have been that, with rusty hands having put in much-needed practice, the skill to use the plane properly finally took hold. A bit of both, perhaps.



13 Remnants of tongued & grooved joints



16 Face planing flat-sawn oak was a battle against tear-out



17 Making pilot holes for wood screws with the auger gimlet

Moving to boring clearance holes for the vice screws and guide bars, I fastened the rear jaws to their lining, first having made pilot holes for the attachment screws using an auger gimlet from a handy little set made by Lee Valley (photo 17). These tools are fine working up to about 25mm depth, but if going much deeper I find their wire frames dig uncomfortably into the fingers. They can be turned using a screwdriver through the frame as a lever, but that's rarely convenient and I prefer the old-fashioned gimlet with generous wooden handles.

Working through the rear jaw's apertures I drilled pilot holes (photo 18) with the idea of following up with the brace and bit. The hand drill is a Footprint model 160A which has survived the years in fine fettle, and what I particularly like about it is the key-operated Jacobs chuck (photo 19). Using my Stanley 803 hand drill I occasionally struggle to tighten the chuck sufficiently, causing the bit to slip under load. With the Jacobs chuck tightening is far more positive, and it's also easier to remove the bit when finished. Hand tools provide valuable exercise but they may also



22 Keeping the bit vertical



18 Drilling for guide bars with the Footprint 160A hand drill

defeat arms, hands and fingers unaccustomed to using them every day. I suspect our forebears working with hand tools for a living were better physically adapted to their ways.

And mentally, because while searching for a centre bit for boring to final size I realised I'd made things difficult for myself – its point would fall into the over-large pilot holes like a pebble down a well. But then the Clark expansive bit came to my rescue. Although this example made



20 ConValCo expansive bit with cutter removed



23 Clearance holes for the screw and guide bars



19 The hand drill's key-operated Jacobs chuck

by ConValco (Connecticut Valley Manufacturing Co, USA) is capable of boring holes up to 3in (76mm) diameter, with the adjustable cutter removed (photo 20) it not only bores a clean %in (22mm) hole but the lead screw locates very securely in a hole up to ¼in (6mm), meanwhile pulling the bit deeper (photo 21). Keeping an eye on the long shank of this bit helped in maintaining the brace vertical (photo 22) and results were as tidy as needed (photo 23). To avoid splintering I turned the work over as soon as the lead screw emerged and finished each hole from side two. It's significant that the ConValCo bit has spurs on both the adjustable cutter and the main body of the tool, so that when the cutter is removed there's a second one to sever surface fibres before the cutting lip enters the wood. I have a smaller Ridgway expansive bit, which lacks this useful second spur.

Chamfers & cleats

With 12 holes bored the linings were ready for fastening to their respective jaws. To position the front lining accurately I drove the screws



21 The bit's second spur leaves a tidy edge



24 The vice grips the front lining while screws are fitted



25 The beech and boxwood chamfer plane

26 Chamfering end-grain with a low-angle block plane



27 Cleats beef up the linings between the vices

home while the vice itself leant a helping hand (photo 24). And with a view to preventing scrazes from sharp oak corners, I planed a chamfer around the outside edges. On the long edges a delightful user-made beech and boxwood chamfer plane did the honours (photo 25) but on the shorter ends a low-angle block plane felt more stable and precise (photo 26). A test run with the vice before finishing the details proved its worth in all respects for working on a board, but when a stick was gripped at the mid-point I reckoned the linings would benefit from beefing up where they were not backed by metal jaws. This was easily arranged with cleats screwed to their outside faces (photo 27), effectively doubling the thickness.

After wiping on a coat of linseed oil (photo 28) and allowing it to dry the 'Moxon' table vice was ready for work and – unsurprisingly in view of its simplicity – there's nothing startling to report. As a self-contained unit it's quick to set up on any surface and similarly straightforward to operate, the only practical difference from a commercial 'Moxon' being that it doesn't have a loose front

jaw with the amount of racking needed to accommodate tapered parts like table legs, although I suspect the traditional V-notched joiner's cradles would hold those. There is nonetheless sufficient racking for loosening or tightening the grip on a board using a single vice screw. For shaping with the spokeshave (photo 29), sawing dovetails (photo 30) or planing edges (photo 31), this hybrid vice holds the work at a convenient height while gripping wider boards solidly, meanwhile allowing their length to pass unobstructed to the floor. As a bonus, when lifting the vice from the bench, I discovered a secondary purpose for the cleats – acting as secure finger grips when holding the vice single-handed, balanced at the midpoint (photo 32).

If second-hand table vices prove elusive, or you prefer new, the Record Irwin V150B Woodcraft vice is today's equivalent of the old Record Junior, available at £36.96 from Axminster Tools - www.axminstertools.com. Two of these and reclaimed timber would amount to less than half the cost of a commercial 'Moxon' and its attendant holdfasts. 💸



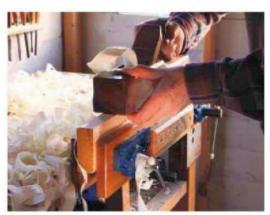
28 Applying linseed oil with a rag



29 Shaping a shelf with the spokeshave



30 Sawing dovetails at a convenient height



31 Planing wood gripped lengthways



32 The cleats assist when moving the vice



Chippendale School Principal Tom Fraser provides a roundup of their recent 35th annual Graduate Exhibition and Sale

espite a turbulent year, the Chippendale International School of Furniture's class of 2020 put on a stellar display of their work at our Graduate Exhibition & Sale back in October. Our yearly show is the opportunity for our graduating students to exhibit the fruits of their labour following nine intensive months on the Professional Course. This year's event was especially significant, highlighting both our 35th year and the resilience of our students in the face of COVID-19 challenges.

We knew that, because of COVID restrictions, fewer visitors than usual would be allowed to attend the event. That's why, for the first time ever, we launched the show virtually as well as in person. This proved a hit, with people admiring the graduate designs from far and wide across our Facebook, Instagram and LinkedIn channels, as well as on our website. On display were the



Student of the Year, Tom Powell

designs from our 20 graduates, with visitors also having the opportunity to purchase the final pieces. It was a testament to the excellence of our graduates that so many sold a number of their pieces across the show's four days.

2020 Student of the Year

If you turn overleaf, you can see a full feature on our graduates, highlighting their designs, what they enjoyed most about the Professional Course, and what their plans are for the future. After the exhibition was wrapped up, we then held a graduation ceremony for the students with friends and family joining on a zoom call. Special awards were also given out to highlight those students who really shone throughout the last year.

Our Student of the Year for 2020 is Tom Powell, who designed and made some exceptional furniture pieces while studying on the Professional course this year. It was a difficult decision with Fran Bullinger, Stewart Musk, Richard England and Jason Hicks all making strong claims.

The furniture that Tom designed and made demonstrated such a high level of technical ability, being beautifully simple as well as utterly functional. He had a clear idea of what his signature style was from very early on in the course and that was apparent when admiring his exhibition stand back in October.

The branding of his new business, Moidart Woodwork, is clean, contemporary and strikes the right chord with the buying public. That was clear to see from the success he had in selling the furniture he made while on the course. We are also delighted that he will be staying on with us to launch his business from our graduate workshops, Myreside Studios.



Winner of the 'Best Design' award, Fran Bullinger

More awards

There were also more awards announced, with James Bullen winning 'Student's Choice', which was chosen among the students themselves. 'Best Design' went to Fran Bullinger for her outstanding 'Forest Cabinet', while the 'Marketing' award went to Richard England. Finally, visitors to the exhibition voted for Stewart Musk as this year's 'Public's Choice' winner.

Although we are sad to see our 2020 graduates leave the workshop, we are excited to welcome a new group of students for our 2020/21 Professional Course, which kicked off in November. We look forward to seeing their skills sharpen and creativity thrive over the coming months, so watch this space for updates on their progress!

FURTHER INFORMATION

If you'd love to make a career out of woodworking, have a look at the Chippendale School's intensive 30-week Professional Course: www.chippendaleschool.com/cabinet-making-courses/professional-course



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CHIPPENDALE SCHOOL 2020 Graduate showcase

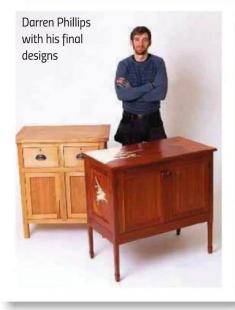
The Chippendale International School of Furniture's annual exhibition gives graduating students the opportunity to show the fruits of their labour following nine intensive months on the Professional Course. Here, we look at the work of 2020's graduates

ollowing 30 weeks studying on the Professional Course, Chippendale International School of Furniture's annual exhibition gives graduating students the opportunity to show and sell the pieces they've made during that time.

Despite a challenging year, each student persevered and produced some incredibly creative and unique designs. Read on for a round-up of furniture highlights and find out what they have planned for life beyond the school doors.

.

Darren Phillips - UK





Final designs

- 'Market Garden' cabinet made from solid sapele, this commemorative cabinet remembers the Allied Forces' courageous effort to end World War II. The cabinet features hand-cut marquetry displaying Pegasus (British Airborne insignia) & a map detailing the route to Arnhem
- 'The Tiger and the Dove' a kitchen dresser made from solid Scottish oak

Favourite part of the Professional Course

Sharing the workshop with dedicated staff and inspirational students, the group lessons were particularly fun. I also really enjoyed the design meetings where you have the challenge of presenting your idea to a group and seeing everyone else's exciting designs and creativity

Plans after graduation

I will be setting up my business in Surrey focusing on freestanding furniture. Offering a unique and exciting product range and providing bespoke commissions tailor-made for our clients, all will be designed and made in the UK

Alice Caundle - UK



Final designs

- 'Wedge Tables' coffee tables made from sycamore with a tambour slide
- 'Mantis Chair' a chair partly inspired by the praying mantis, & the desire to create a 'true' Z-shaped chair. It features a bent plywood seat, with north American cherry veneer, bent lamination legs & arms – all made from Scottish cherry

Favourite part of the Professional Course

Meeting really cool people and learning how to design furniture in CAD, using Fusion 360

Plans after graduation

I want to be a furniture designer, and I want to enter my 'Mantis Chair' into the A' Design Award competition, with the hopes of putting it into production. I will start out by renting bench space in the school's incubation workshops at Myreside Studios



James Bullen - UK



Final designs

- 'The Surfer' console table contemporary, walnut-veneered console table with solid walnut accents
- 'Poplar in Hackney' bedside cabinets in poplar & elm
- 'Compass Rosé' wine cabinet in oak

Favourite part of the Professional Course

I have loved every minute – I couldn't say a favourite thing as there are just too many!

Plans after graduation

I plan to work on a few commissions I have managed to get, then work on our visa application so that we may return to Canada and start a smaller version of the School concept

James Bullen and his award-winning pieces

Students' Choice by fellow students



James' 'The Surfer' console table

Alastair Smith - UK





Final designs

- 'Superlifter' coffee table in solid ash a coffee table in the form of a 'super ellipse' (as popularised by the Danish polymath Piet Hein), with a top that lifts to a full table height – ideal for elegant TV dinners
- 'North Star' revolving library table solid oak, oak veneer & inlaid star design – revolving bookcases were first documented in 6th century China, but this version is inspired by the classic 19th century form
- 'Untitled' card table solid cherry & mahogany veneer

Favourite part of the Professional Course

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Making things! And the company of fellow students and tutors. What a fine bunch of people!

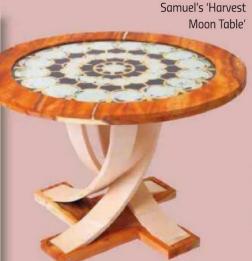
Plans after graduation

Self-employment as a maker of custom furniture, under the banner of Smith and Lawless. (Why the name? I'm Smith; I used to be a lawyer; I can be excessively literal.) To begin with, I will rent a bench at Myreside Studios

coffee table

Samuel R Brilz - USA





Samuel and his final two designs

Final designs

- 'Vaulted Wing Desk' sycamore & elm
- 'Harvest Moon Table' sycamore & yew
- 'Gothic Sunset Chair' sycamore & yew

Favourite part of the Professional Course

Visiting historical collections (pre-lockdown) and collaborating with students from all walks of life

Plans after graduation

The plan is to return to Idaho and start setting up shop. My goal is to be up and running by early 2021. As for projects, my focus will be on building pieces to enter into local shows and events while waiting for commissions. This should allow me to keep refining and experimenting with my designs in a productive way

Rob Goodburn - UK



Final designs

- 'Les Jumelles' console table pai, sycamore & elm not identical but twins like sycamore seeds spinning to the forest floor. This is a duet of light & solid wood with the ability to interact or stand as individual elements, while providing a background of warm light
- 'Fonction Habitude' Ladder X sycamore & olive ash modular work and storage place for a home office. This is a flexible modular crafted system that you can take with you & adapt throughout your life. The supports are also uplighters
- 'The Kneeling Maiden' laminated elm
- 'Locking up Carbon' storage boxes made using reclaimed timber

Favourite part of the Professional Course

Working alongside everyone else on the course and with the tutors; the satisfaction of getting a good finish on a beautiful piece of timber, and very early morning dog walks around East Lothian

Plans after graduation

Lockdown workshop will be home. During the period the school was closed for COVID, our double garage was transformed and will become home for the next few months. I'd like to, and have started investigating, setting up a shared workshop in Edinburgh

Sam Alton - UK



Sam and his final pieces

Final designs

- 'Planetary Desk' oak planetary gear writing desk with brass stretcher
- 'Learning Curve' jewellery box in ash
- 'Just in Time' ash hourglass-shaped bedside table with recycled & recyclable plastic
- 'Nox Reclaimed' oak-based lamp

Favourite part of the Professional Course Meeting fellow students and learning new skills together

Plans after graduation

To start a bespoke woodworking business in Harrogate, North Yorkshire

Hugh Ainsworth - UK



Final designs

- Drinks cabinet wych elm
- Cheval mirror oak
- Piano console & seat sapele
- Coffee/games table cherry wood with a checkerboard glass inlay gilded with 24 carat gold
- Occasional table glass inlay with white gold

Favourite part of the Professional Course

The most enjoyable part of the course has been designing and making furniture

Plans after graduation

I'm looking for a workshop to rent in order to make furniture to commission



Hugh's coffee/games table

Stewart Musk - UK



Stewart and his final pieces of furniture

Desk – olive ash

Final designs

Music stand – wych elm

Piano stool – oak & burr elm

Winner of the 2020 **'Public's** Choice' award, as voted for by exhibition visitors

In all three pieces I set out to display the natural beauty of these native hardwoods and aimed to produce furniture with organic curves and a tactile as well as visual appeal

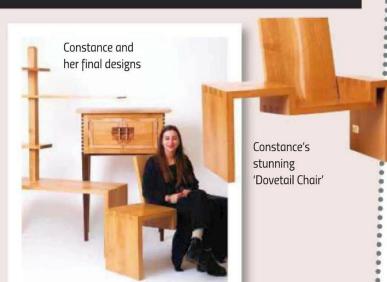
Favourite part of the Professional Course

Having the opportunity to focus on learning new skills in an inspiring and supportive environment – and having the chance to work with some truly gorgeous native hardwoods

Plans after graduation

I'll continue to work at the school in one of the 'incubation' areas, working on expanding the range of furniture I make, as well as developing my existing designs. I am happy to accept commissions

Constance Graesslin de Mare - France



Final designs

Stewart's wych elm music stand

- 'Dovetail Chair' handmade in oak and inspired by conceptual art, the Bauhaus and Gerrit Rietveld. A very simple shape that displays the features of the wood & joinery. The strength of the dovetail joints combined with the mitres allows this piece to 'float', as if defying gravity
- Shelves mounted on a table oak: the asymmetrical displaying of the shelves gives the piece a sculptural aspect. The choice of combining two different pieces of furniture is inspired by the current movement of the tiny houses, & the idea of having less living space, less possessions, but perhaps more practicality
- Cabinet on legs for a city apartment oak, fumed oak & elm
- Tool chest for a 1950s Chevrolet truck

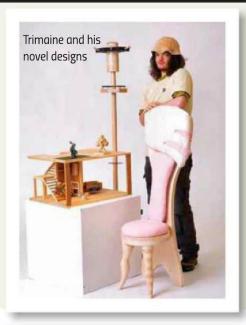
Favourite part of the Professional Course

The small number of students combined with the dedication and availability of the tutors allowed us to always be able to work on what we chose to, with support when needed. It was great to be able to have access to the beautiful timber that grows in Scotland, too

Plans after graduation

Working with somebody else to keep learning and earning money and to open my own shop as soon as possible

Trimaine Bothma - South Africa



Final designs

- 'Vaggie' high back upholstered chair in sycamore
- 'Crow's Nest Coat Rack' sycamore
- 'Doll's House Playset' lime

Favourite part of the Professional Course

Woodcarving and gilding, getting to know everyone on the course so well and the tutor support

Plans after graduation

To try to find someone to work for in order to skill up in another workshop



Richard England - UK



Richard and his final pieces



Final designs

- 'Pointe' console table in olive ash
- 'Winzer' low-back chair in solid oak, upholstered in Harris tweed
- 'The Glencairn' whisky cabinet in American burr walnut veneer & gilded in 24 carat gold
- 'Selette' pedestal table in olive ash

Favourite part of the Professional Course

If I had to choose only one, it would be the Windsor chairmaking week, closely followed by the gilding fortnight

Plans after graduation

I will launch and grow Glencairn Furniture, my own business designing and making exquisite handcrafted furniture: www.glencairnfurniture.co.uk

> Winner of the 2020 **'Marketing** award, which recognised the excellence of his marketing plan & materials

Rebecca Elliot - UK



Final designs

- 'Bottle Box' wych elm
- 'Rowan Leaf Triptych' water gilded in white gold on glass
- Dressing Table' walnut
- 'Eider's Bench' oak

Favourite part of the Professional Course

Wood-forming techniques with Michael Fortune, gilding and Graham's support

Plans after graduation

I will be renting a bench in Myreside Studios where I will set up a bed making business called Studio Eider

Rebecca's dressing

Manuel Kalo - Germany



Final designs

- Table tabletop with two different 3D illusions, depending on the point of view
- Extension table beech
- Two-legged stool
- Twisted box walnut

Favourite part of the Professional Course Woodturning

Plans after graduation

Take orders from customers I like, building objects I love



Jason Hicks - Australia



Jason and his final pieces of furniture

Jason's 'Ripple' cabinet

Final designs

I have three major pieces on display that show a wide variety of creativity, design and skills, with special emphasis on how texture and shape interact with the natural beauty of wood:

- 'Ripple' cabinet solid ash & copper accents, inspired by the patterns in sand at low tide & designed to entice people to want to reach out and touch the surface
- 'Kirra' coffee table rippled walnut veneer with an ebonised sycamore base
- 'Ori' bench solid oak & Australian red gum accents, influenced by the simple elegant lines found in Japanese furniture. The 'Ori' bench is given a modern twist by substituting traditional seating materials for a complementary orange Paracord

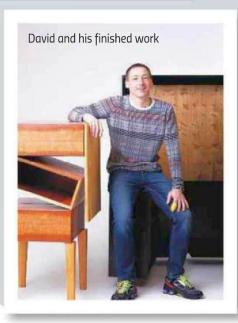
Favourite part of the Professional Course

One of the most rewarding aspects has been gaining a broad skill level in the different aspects of furniture building. More importantly, however, is the fact that I now have the confidence and belief that I can design and build almost any piece of furniture I can think of. Also, it has been a privilege to experience this amazing adventure with a great group of like-minded people from such diverse backgrounds and nationalities

Plans after graduation

After falling for the beauty and diversity of Scotland, I've decided to relocate here permanently. The plan is to open my company – Yarrawood Furniture – which will be dedicated to creating bespoke furniture of exceptional quality for discerning clients

David Marshall - UK



Final designs

- Isolation Station (Crafting Box) oak
- Metamorphic cabinet transforms into a table

Favourite part of the Professional Course

I can't pick only one thing; the whole course has been great. I've enjoyed every day

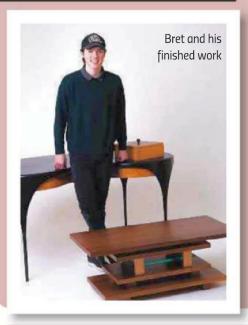
Plans after graduation

Continuing with a year at Myreside Studios



David's metamorphic cabinet

Bret Johnston - America



Final designs

- 'Stacked Coffee Table' fumed oak
- 'The Melting Desk' a contemporary executive desk made to look like the veneer is melting down the apron and legs, inspired by Salvador Dali paintings

Favourite part of the Professional Course

My favourite part of the course has been learning CAD and being able to confidently design my own furniture. Before starting the course, I was worried I wouldn't be able to come up with my own ideas, but after learning the basics of Fusion 360, I was able to try out new ideas, which end up in a decent rendering

Plans after graduation

After graduation, I am going to start my own business called Johnston Furniture. We will be making custom furniture as well as teaching bowl turning classes. Johnston Furniture will be located in Washington, USA:

Email: johnstonfurniture20@gmail.com Website: www.johnstonfurniture.com

Instagram: @johnstonfurniture

Facebook: www.facebook.com/johnstonfurniture



Francisca Bullinger - Germany/UK



Fran and her

Fran's modern

coffee table

award-winning pieces

Final designs

- Modern coffee table with carved water ripples on the surface, which symbolise rain drops
- 'Forest Cabinet' featuring a big mural that acts like a window into nature, wherever you live
- Mirror made out of clouds

Favourite part of the Professional Course

The gilding weeks with Richard Walker, as well as steam-bending and other ways of manipulating timbers with Michael Fortune



Plans after graduation Setting up my own business at Myreside Studios

'Best Design' award

Fraser Harley - UK



Final designs

- 'Full Circle' coffee table made from olive ash
- 'Day Bed' oak

Favourite part of the Professional Course

Steam-bending with Michael Fortune

Plans after graduation

Moving into Myreside Studios to set up a furniture design and making business



Fraser's 'Full Circle' coffee table

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



WIN A CLARKE BUCKINGHAM 6KW MULTI-FUEL STOVE - WORTH £238.80!

With the colder months upon us, what better way to warm up your working environment than with one of Clarke's best selling multi-fuel stoves?

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

The particular model up for grabs is the best-selling Buckingham, a classically designed multi-fuel stove that will add a sense of timeless style to any modern or period room this winter. Suitable for burning wood and coal, this stove is as efficient as it is stylish.

The Buckingham has a maximum heat output of 6kW, featuring an air wash system, which helps keep the glass clean, and air control to alter burn rate and heat output.

Company profile

Machine Mart is Britain's biggest specialist supplier of tools and machinery. Established in 1981, they have a growing network of 65 superstores nationwide with thousands of tools and machinery on display. Products can be purchased in-store, online or via mail order (0115 956 5555). Experienced store and telesales teams are on



hand to provide helpful, friendly advice, ensuring you purchase the right tool for the job — every time. In addition to over 6,000 catalogue lines, the XTRA section of the Machine Mart website includes a further 15,000 specialist hard-to-find

HOW TO ENTER

To be in with a chance of winning a Clarke Buckingham multi-fuel stove, just visit www.getwoodworking.com/competitions and answer this simple question:

QUESTION: What is the maximum heat output of the Buckingham stove?

The winner will be randomly drawn from all correct entries. The closing date for the competition is **8 January 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

tools for just about every application.

As well as this model, Machine Mart offers an extensive range of other woodburning stoves; just see the website – **www.machinemart.co.uk** – for further details



PREPARE YOURSELVES...



...and your timber



Perfectly Prepared

Featuring a dual-bladed cutting head and solid, 152mm wide heavy duty metal table, Triton's new TSPL152 1100W Surface Planer will prepare your timber by removing any cups, bows, crooks and twists, planing flat and square edges, ready for your next project.

Perfectly partnered to Triton's ever popular TPT125 1100W Thicknesser, the TSPL152 is a must-have for any woodworker's workshop.



Push Blocks & Push Stick included

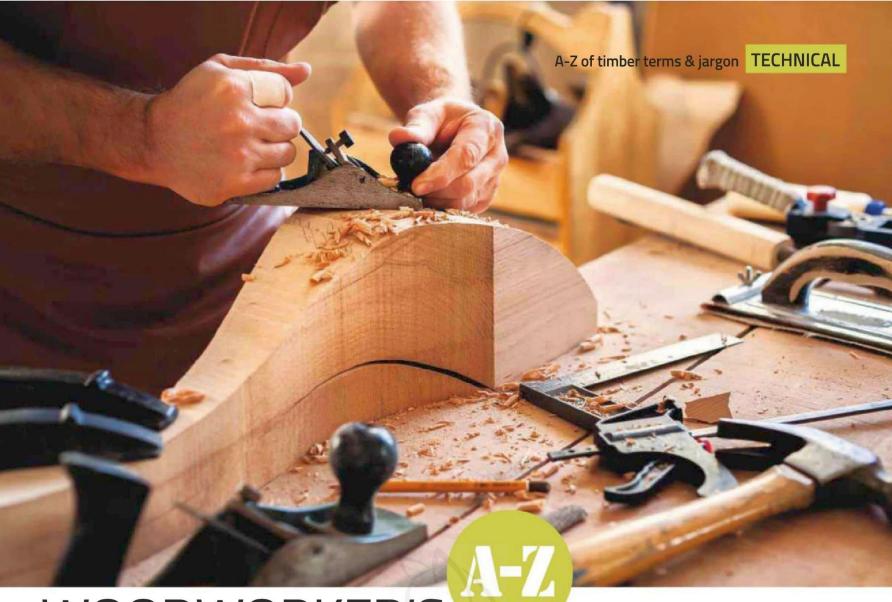


Adjustable Drum Guard & Guide Fence included



The perfect partner to the TPT125 Thicknesser





WOODWORKER'S ENCYCLOPAEDIAPART 22

Might we start here by taking a bribe? **Peter Bishop** thinks not, but there's an interesting selection of definitions to come in these Ks and Ls

Kickback

Kickback can be fatal! Unfortunately this is not a joke. Kickback is so called because a piece of wood passing through a circular saw can sometimes be thrown violently back towards the operator. Fatalities have been known when this projectile has damaged the internal organs of the person operating the machine. So, like all woodworking machines, you need to take care and precautions to avoid this. We need to understand the reasons why it might happen. When cutting wood that may have been dried unevenly it will possibly have a tendency to bind on the saw blade when it exits the back of the cut. On circular saw benches we'll have a 'riving knife' positioned immediately behind the blade to help hold the cut pieces apart. This helps to stop the possibility of binding and you should NEVER take your riving knife off. Some saw bench manufacturers will incorporate what is called a 'pawl' into the riving knife set up. This is a toothed attachment that, in normal conditions, will simply swivel out of the way. However, if the workpiece jumps up, then the teeth dig in, preventing it being ejected the wrong way. On larger edgers, multi rip saws and thicknesser planes, anti-kickback

devices should be in-built. Even with all these safety features in place, there is one very simple piece of common sense you can apply: NEVER stand in line with the direction of feed, then you should not be in line to get hit!

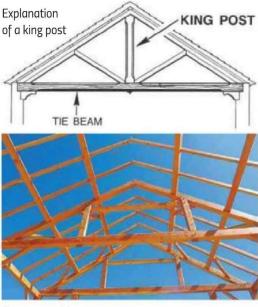
Kilns

We recently covered kiln-drying and a kiln is the chamber in which this is carried out. Most are sealed compartments into which can be loaded stacks of timber. These stacks will have regular thickness and stickers positioned in between each layer so that all air can circulate. The kilns



Logosol Sauno wood-drying kiln

will be powered and able to produce both steam and heat along with fans to circulate the mix. The fans will be reversible to change the air flow directions on a regular basis. The objective, within the kiln chamber, is to set the relative humidity at such a point that it draws out moisture from the wood. This is adjusted regularly as the wood goes through the drying cycle. At the end of the process the stacks of wood should have been dried down to the moisture content required for its end use. There are other ways in which to dry wood and we'll discuss those later on in the directory.



A queen post truss

King & queen posts

Within a roof structure there may be one central, vertical timber running up to the apex – this is called a 'king' post. When this central area is left

open and two shorter, vertical timbers are to be used, fixed at the sides, these are the 'queen' posts. We'll find king posts in most traditionally designed roofs, built up from scratch or as an assembled truss. Queen post structures will be used when we want a space in the roof for extra rooms or storage. We can also see both king and queen posts used in old buildings such as barns. When these are exposed in a conversion they can be a great feature.

Kinked

If a board is kinked it will be buckled and bent; in other words, pretty useless!



A kissing gate above Colvithick Wood, Cornwall

Kissing gate

Are these so called because if two people try to pass they are within kissing distance? Or might it be that the gate kisses each side of the opening against which it closes? I'll let you decide. Anyway, these are pedestrian gateways where the gate itself has restricted sideways movement. In theory, these gates should not need catches and will prevent farm animals, such as cows and sheep, passing.



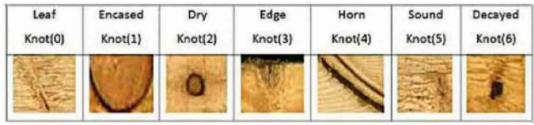
A snarl formation on a beech tree

Knar, knarl or knarled

A twisted or twisted knot in wood or the wood twisting around one or more knots. Sometimes spelt with a G, knarly wood will be difficult to work because of the way in which the fibres curve and swirl around the knot or knots. A knarled growth can be a cluster of mis-formed knots or lump on a tree trunk, similar if not the same as a burl.

Knocked down

This will be a frame or structure that can be 'knocked down', taken apart, for re-assembly elsewhere or at a later date.



Various knot formations in wood

Knot & knots

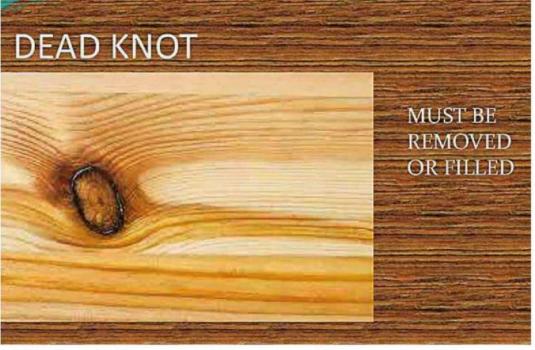
A knot is the result of a branch growing out of a tree trunk and being cut through during conversion lumber. They will be dead or alive and hardly ever round; the branches don't often grow at right angles to the trunk. When timber is being graded for appearance or structural use, each type of knot can be classified. Here follows a fairly comprehensive listing:



A knot cluster

- Branched two or more knots branching from a common centre
- Cluster a group of knots together with fibres of the tree deflected around the whole
- Dead created from a branch that has died and is not attached to the surrounding wood
- **Decayed** this one is softer than the surrounding wood and containing signs of decay
- Encased a sound knot whose growth rings are not inter-grown with the surrounding wood

- Enclosed one buried within the timber and not visible from the surface
- Hollow an apparently sound knot with a relatively large hole in it
- Insecure this knot will normally hold its place in a dry board but, when under pressure, can be started but not easily pushed out
- Inter-grown one whose growth rings are completely inter-grown with the surrounding wood
- Loose a knot that is not held firmly in place by growth or position and can't be relied upon to stay in place
- Pin a small knot that is less than 12mm in diameter
- Pith one which is sound with a central pith hole no more than 25mm in diameter
- Round round or slightly elliptical knots with a ratio of surface length to breadth of no more than 3:1
- Single an individual knot with the fibres of the wood within which it is contained deflecting around it
- Sound a knot that's solid across its face, as hard as the surrounding wood and free from decay
- Spike an elongated, elliptical shaped knot that has a length to breadth ratio of over 3:1
- Tight this knot is so firmly fixed in place that it cannot be displaced
- Unsound a solid knot but containing signs of incipient decay
- Watertight one whose growth rings are completely inter-grown with those of the surrounding wood and is sound on that particular surface.



A dead knot in wood

Knot hole

A hole in a plank where there was once a knot.





Various wood knotting solutions from a few different manufacturers



Knotting

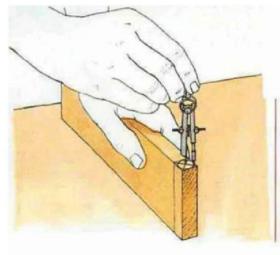
This is a type of sealer that we might apply to any knots found in unfinished timber prior to painting. It's mostly used on softwoods. The knotting should help to stop any resinous stuff exuding out onto the finished, painted surface.



Knuckle joint used on a Ruobo bookstand

Knuckle joints

Similar to a finger joint but not so simple! Of interlocking form it is rounded so that the joint can easily move back and forth. Can often be seen underneath tables where it might be used in tandem to support a leaf.



A knuckle joint explained



Pine lambs tongue moulding

Lambs tongue

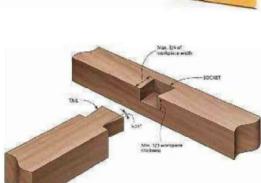
This is a particular style of moulding and carving used in joinery and cabinet work. You might find this shape moulded to one edge of a skirting board, a window frame or both sides of a glazing bar. Can also be produced as a decorative carving.



An example of glued and laminated timber beams

Laminated

If you build up a thickness, width or shape from more than one wooden component, you are laminating. The most obvious is plywood, which is laminated from thin stuff laid in alternating grain directions. You might laminate pieces together to make a round opening. Different sections of wood can be laminated together to make structural beams, especially where there is a need to span distances that most solid timbers would not reach. We also see solid wood laminates in furniture and joinery where smaller pieces are joined in length or width. This is as a result of our desire to make better use of raw materials. Rather than waste what some might consider uneconomical sizes, they are joined up to make bigger pieces. Most commonly seen with softwood mouldings and in more expensive hardwoods, such as oak.



Lap dovetail explained

Lap dovetail

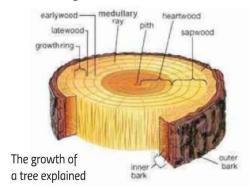
This is one of the most common types of dovetail joint and is often seen in drawer fronts. Drawer sides are lap dovetailed into the fronts. Sometimes these joints are referred to as a 'half blind' dovetail.

Lap sidings

Another phrase used to describe weather boarding on the outside of buildings.

Larvae or larva

These are the woodboring beetle grubs we have discussed earlier – the little blighters that do most of the damage when there's a beetle infestation.



Late wood

In the growing cycle of a tree the 'late' wood is that grown towards the end. It can be seen in a tree trunk cross-section as the smaller, tighter part of the growth ring.

NEXT MONTH

In the next part of this series, Peter looks at more terms, including latex, leaching out, lignin, lipping and maiden wood

REMAKING A 'PROPER' LAND ROVER





Working from an original article in the Christmas 1955 issue of *The Woodworker*, **Peter Dunsmore** makes his very own Land Rover trio with various paint jobs and finishes

ince the demise of what I call a 'proper'
Land Rover in 2016, there has been
an influx of model Defenders in various
forms for children to play with. This
model, however, differs in that it is based on
a Series 1 model, which started production in
1948, and is from the Christmas 1955, 65th
Anniversary issue, of *The Woodworker* (photo 1).
It would have given children hours of fun as I hope
this one will do. I have kept to the original design
apart from one or two deviations, which would
avoid nails in its construction, but other than that

it's made in much the same way as the original model. However, as construction progressed, I couldn't help but think it'd be a terrible shame to paint over the wood, even if it was with 'proper' Land Rover Bronze Green and Limestone. It proved to be such fun to make that I ended up with three. One was simply oiled and another painted. The third was a combination of both in that the body was painted but the hood was polished. I had used some tulipwood for the hood and when this had been sealed with button polish the colour was of a canvas hood often seen on

these vehicles and I couldn't bring myself to paint this part. Have a look at all three and then you can decide which one you prefer.

Making a start

As can be seen from the article, all the measurements given are imperial. For readers of a certain age this won't be a problem, but for anyone not used to this unit, give it a try. It's much easier than you might think and in this case particularly as most of the Land Rover is made from either ¾in or ¾in thick timbers, if you follow the instructions carefully it does go together superbly. I don't know who drew the original plan but it is a very well thought out project.

Begin by preparing the two sides (A) and lay them side by side with their ends level. By putting the point of a compass in one piece you can draw the 3in diameter wheel arches on the other. The



1 The original inspiration for both the article and the future of the Landy

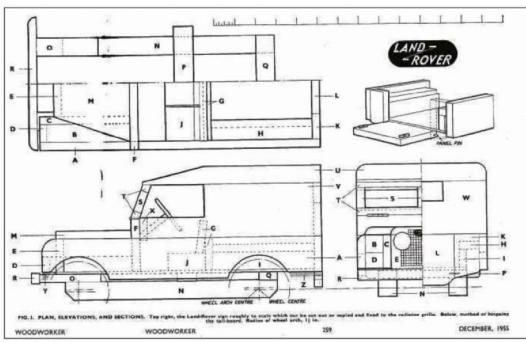


Fig.1 Original drawings for the Land Rover model



centre of these arcs are ½in from the touching edges, 1¾in from one end for the front wheels and 3in from the other end for the rear wheels. The wheel arches can then be cut out. To make a really neat job, use the router fitted to a jig to make a circle with an outside radius of 3in (**photo 2**) and accurately cut off a segment ½in away from the centre of the circle. This can then be secured to piece (A) with double-sided tape and a bearing-guided trimmer used to make very neat wheel arches (**photo 3**). Trim away the ¾in strip (Z) from the rear but leave piece (Y) at this stage.

I deviated slightly from the plan for this next stage by cutting piece (E), the front radiator, ¼in longer than needed and cutting stopped rebates ¼in deep on the inside of the inner wings (C). This is easily cut using a suitable straight cutter in a router table (**photo 4**). The four pieces (A, B, C and D) that make up each front wing can be seen in **photo 5**. Clamp these components together (**photo 6**) ensuring they are level at the front and put aside to dry, remembering to make a handed pair. When this has dried, round over the solid front corner and the top inner and outer top edges stopping where the dashboard will fit. A disc sander (**photo 7**) used carefully makes light work of the large curve at the front although abrasive paper wrapped around a block will be just as effective.

Next, prepare the dashboard (F). The ends must be stepped (**photo 8**) to allow it to lap over the sides (A). Drill a ¼in hole 1¾in from the

right-hand end and 1in from the top at an angle to suit the steering column. I find drilling holes much easier using a mortising machine (**photo 9**) as the wood can be securely held and its position easily adjusted. The use of some scrap wood can be used to tilt the wood to form the angle.

After a dry run, use PVA sparingly to join the two front wings, radiator and dashboard together and check that all is square. Trim 'Y' level with the front wings (D). Assemble this on a piece of MDF so that all is level (**photo 10**) and use softeners to prevent any damage to the wood. The result (**photo 11**) really does look like the front end of a series Landy in the making. Next, cut the bonnet to shape and round over the two long side edges before gluing in place



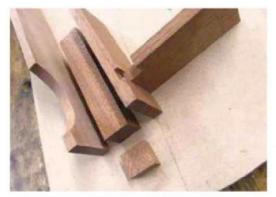
2 Make an MDF template using a circle cutting jig



3 Note how the template is level with the lower edge of piece (A)



4 Note the use of an MDF push block to reduce any breakout



5 The pieces used in the construction of one wing

on the front of the car. Again, use adhesive sparingly if making the polished version. Any glue not wiped away properly will stick out when the polish is later applied.

Making the seats

The seats are straightforward to make. For the unpainted version, I used a small piece of walnut that I had with the aim of the dark figuring contrasting with the wooden body. Next, prepare the pieces (G, H, I and J) and glue each rear bench seat support (I) to each seat (H), ensuring the ends are level and the edge of (H) flush with the face of (I). You need to work two shallow grooves into the top and front edge of the main seat (J), using a sharp chisel (photo 12) to give the appearance of three seats. The seat (J) is glued to the main vertical rear seat back (G). The seat back (G) is glued in place after planing the lower edge at an angle so that it makes a snug fit with the seat when sloped backwards (photo 13). Groove the upper edge and front face so they correspond with seat (J). Only glue the rear bench seats to the rear of the front seat at this stage, but clamp them in place while in the body of the



8 The dashboard is made to fit between the sides



10 Use softeners when clamping and check all is square



6 Keep everything square when clamping together

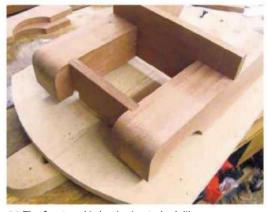
car to ensure everything lines up correctly (**photo 14**). I used a slow setting epoxy and left this to dry overnight before undoing the clamps.

Making the chassis

Next, the main members (N) need to be drilled to receive the axles. I differed here from the original in that I used a 1/4 in steel rod as an axle that passed right through both sides as opposed to the original where the wheels were bolted individually to the axle. The axle centres are ½in from the top edges, ¾in from the rear ends and %in from the front ends. Mark these on one axle, clamp the two axles together and drill right through ensuring all is vertical. I find a drill fitted to the mortising machine enables me to position the wood accurately and drill through both pieces in one go (photo 15). Remember to place a piece of scrap on the other side of the timber to prevent the drill damaging the machine as it exits. Remove any sharp edges on the main chassis rails (N) and chamfer the ends. Glue in place the extension pieces (O) to overhang the front end (N) by 11/4 in. Glue the bearer (Q) across the top and level with the other ends. The centre bearer (P) needs to



9 Drilling the hole for the steering column



11 The front end is beginning to look like a proper Landy



7 A disc sander made light work of this stage

be fixed in a similar way allowing a %in overhang on each side and positioning such that it will sit underneath the main seat base (photo 16). Prepare the bumper (R) and round off each end before fixing to the ends of the chassis. Again, I differed a little from the original, which suggested nailing the bumper in place. A much more secure method would be to use the router to cut a groove along the rear inside face of the bumper to suit the thickness of the chassis extension piece. Before the glue sets fully, check that everything is square. A better method would be to fit the axles in place as the glue dries but mine were still to be ordered! For the painted version, now would be a good time to apply a good primer and black paint. Halfords spray acrylics are very good and easy to apply as are the paints made by Rustoleum. I avoided the rust-killing Waxoyl loved by my own car!

Making the hood

Using a fret saw, cut out the window in the two sides (V) and the back (W). Cut the front (X) so that it fits over the steering wheel column. For a neat finish, use double-sided tape to secure a straightedge of scrap in place and use a bearing-guided trimmer to produce a clean cut finish (photo 17). For the painted version, I used some tulipwood that I had to hand as this takes an excellent paint, but for the wood version, I used Canadian Maple as its white close-grained colour contrasted well with the mahogany body. In addition, for this version, I fitted two mahogany pieces that would represent the door tops on the original and these were rebated into the maple sides (V). On the painted version this was simply painted in place. In a similar method to the front radiator, cut a rebate along the front and lengthen the rear inside faces of the hood sides (V) and the front (X) and back (W) pieces accordingly. Note that the front is stepped down to provide a positioning flange for the hood when fitted on the body. The back of the main seat acts as another. Round over the top (U) side edges using a rounding-over bit in the router table, or alternatively, use a spokeshave to form the round and then plane the slope to obtain the correct angle after referring to the side view of the plan. Round over the sloping front pieces to match the sides. When the roof has been shaped, glue in place on top of the side pieces (photo 18).

Making the tailboard

Cut the three pieces (two sides K and flap L) to the dimensions shown on the cutting list.



12 A sharp chisel creates the seat divisions

The original plan suggested a couple of nails to act as the pivots for the tailboard but a much better method is to use some brass tubing, which is readily available from a good hobby store. By coincidence these are supplied from America and are still made in imperial measurements. To work efficiently, the holes must all be drilled accurately, both vertically and be set back from the face of the wood. This can be achieved using a pillar drill and a fence clamped in place but rotating the wood and keeping the same face forward. This would ensure that even if the hole was slightly offcentre, at least they will all be offset by the same amount. The tricky part is the flap as the holes must line up through the length of the timber. I achieved this by drawing a line 1 15/6 in from the top of 'K' and 'L' along the back of the timber. Using a mortising machine, make a small mark either on the wooden or rear fence and line up the mark on the flap with this (photo 19). As the wood is rotated to drill the other side, just line up the marks again. Cut the %in brass tubes to length and tap in place (photo 20). When this has been completed, the lower edges

-/	-	
Viet	1	
STEEL !		

13 Note the use of figured walnut to advantage...



16 The components of the chassis take shape

CUTTING LIST			
	Long (ft, in)	Wide (in)	Thick (in)
(A) 2 sides	12	2%	%
(B) 2 wings (middle pieces)	4%	%	square
(C) 2 wings (inner pieces)	4%	1¾	%
(D) 2 wing fillers	1	1	%
(E) 1 radiator	3%	1¾	¾
(F) 1 dashboard	6%	2¾	¾
(G) 2 seat backs	5%	1¾	%
(H) 2 side seats	5¼	1	¾
(I) 2 side seat supports	5¼	1	%
(J) 1 main seat	5%	2	%
(K) rear side pieces	1½	2 ¼	%
(L) 1 rear flap	3%	2 %	¾
(M) 1 bonnet	5%	3 %	%
(N) 2 chassis members	10¾	%	square
(0) 2 bumper extensions	3¼	1	%
(P) 1 centre chassis bearer	5%	1	%
(Q) 1 rear chassis bearer	4%	1	¾
(R) 1 bumper	6%	%	¾
(S) 3 windscreen uprights	2%	%	¾
(T) 2 windscreen horizontals	6%	%	%
(U) 1 cover top	9	6½	%
(V) 2 cover sides	9%	2¾	%
(W) 1 cover back	5%	2¾	%
(X) 1 cover front	5%	1¾	¾

Floor from %in hardboard or plywood cut to fit the underside.

can be shaped and the tailboard glued in place between the two sides of the body. As I was making two flaps it was worthwhile making an MDF template of one of the lower curves, using a bearing-guided trimmer to cut these (photo 21). When assembling the flap look



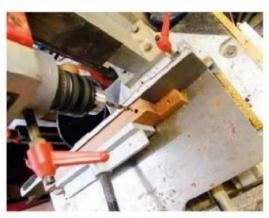
14 At this stage the rear benches are only glued to the rear of the front seats





17 Note the use of straightedge guides to form a neat finish on the window frames

for a couple of small washers to fit on the dowel; these help to keep a small gap between the three pieces before gluing the side pieces to the body (photo 22). To complete the body, cut the %in floor to shape either from plywood or gluing suitable timber edge to edge to make



15 Drilling the two axles together ensures that both sides line up



18 The top is glued in place on the side pieces



19 A piece of masking tape on the rear fence helps with accurate location



20 The brass tubes beat two nails hands down!

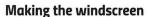


21 Trimming the corners to shape



22 Clamping the rear side pieces to the body

up the width. It might be worth considering fitting this at a later stage, after either painting or polishing the remainder of the vehicle which will allow better access to the inside of the body.

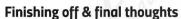


The windscreen comprises of two horizontal rails and three vertical pieces glued together. Here I digressed from the original plan that basically nailed the components together. A much more satisfactory method is to use a router to make the required half lap joints before gluing these together. A method that I find works well is to clamp the required timbers together and to secure an MDF guide in place at 90° (photo 23). Place one of the windscreen uprights against this and clamp another MDF guide against this. Remove the timber and run a bearing-guided trimmer between the two



23 A simple jig cuts accurate rebates

guides at a depth of half the thickness of the wood. The end half laps are cut in a similar way to the grooves cut in **photo 4**. The end result should be an accurate windscreen (**photo 24**). Finally, bevel the top and lower rails to allow the windscreen to tip back at an angle of 30°.



The original design allowed for the windscreen to hinge and though they are a little fiddly to fit, it does make the removal of the top much easier. The steering wheel is simply a 2in diameter wooden disc cut to shape and the 6mm dowel glued into a suitable hole drilled in the centre of the wheel. An upholstery pin tapped into the middle of the steering wheel simulates the centre boss. As previously mentioned, the choice of finish is up to you. I used hardwood offcuts for most of these cars, the majority of it coming from the remnants

of a reproduction chair that was being disposed of. To bring out the wonderful colours and grain of this I used three coats of tung oil, which gives a wonderful matt waterproof finish. The other vehicle was primed with a couple of coats of shellac and rubbed smooth with '0000' grade wire wool before spraying with Rustoleum spray paints, remembering

to avoid the metallic



24 The components for the windscreen

colours. Headlamps are ¾in gliders, the type used on the underside of chair legs and the side lights are upholstery pins or similar found in a hardware store and painted suitably. Note that the headlamps do not fit on the actual wings but are on either side of the radiator. Purely by chance I discovered a piece of plumber's abrasive mesh and this worked really well as the radiator grill after giving it a light coat of white paint to highlight the texture a little. This was then cut to shape and glued in place. The wheels are purchased from Hobby's, as are the axles and hub caps, and these are fitted after completion of any painting or oiling. A spare wheel on the bonnet looks really effective as well.

This was a fantastic project to make. The plans are accurate and the fact there are only two thicknesses of timber for the majority of the project simplifies the construction considerably. The designer has really captured the character of the car. I was spoilt by having suitable hardwood to hand, but this would look just as attractive using a softwood but, perhaps, staining the body a separate colour to the hood. Whatever you decide, think hard before setting on painting the wood. As soon as I put the first coats of paint on I regretted it; however, I do have one model left in its natural colours. The one promise I can make is that you will have an awful lot of fun making it and even more satisfaction giving this to a child to play with.



25 A three quarter view of the British Rail Landy accompanied by a cherry version

SUPPLIERS

The below components can be purchased from Hobby's – see **www.hobby.uk.com**

5 @ 3GH – wheels

1 @ HC4 – hub caps

2 @ TA4 – axles



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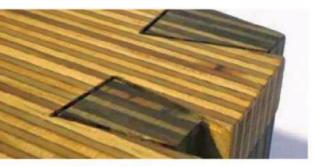
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CREATING AN EXHIBITION QUALITY PIECE OF FURNITURE

Jeremy Broun, Organiser of the Alan Peters Online Furniture Award 2021, shares his top tips and highlights key points for creating your own exhibition quality piece ahead of the entry deadline



Stimulus for innovation

Creating an exhibition piece is synonymous with entering an award – it is the showcasing and celebration of craftsmanship and design – and the piece should really be made especially for the occasion and say something new. When Alan Peters invited me, as an unknown young furniture maker in 1978, to exhibit alongside himself and John Makepeace at a major British Craft exhibition, I dropped everything I was doing and created four unique pieces in three months, sometimes working until 2am.

An exhibition is a rare opportunity for a maker to present new ideas (**photo 1**) to an appreciative if small public whereby early adopters can become lifetime patrons. It is an opportunity to express your identity. I think the word used today is brand, which doesn't really sit with an artist. People like to recognise the maker. A Picasso is not a Renault (of course I mean Renoir). Brand can be bland with a corporate connotation. A design should have a raison d'être. It can be radical or quietly innovative, perhaps in a detail or how materials and tools are used. It is much easier to copy the past for which there is an established marketplace.

Tradition is the springboard for the Alan Peters Online Furniture Award 2021, with an emphasis on hand skill but not exclusively so. In fact, in this article, I am going to explore the notion of 'hand skill' as I would argue that the way I used a router freehand on my exhibition piece was more skilful than using a hand tool (photo 3).

ith the Alan Peters Online Furniture Award 2021 entry deadline looming, it crossed my mind that there will be talented woodworkers out there who have not had a college or furniture school training. A feature of the online award is a virtual exhibition - a showcase of winning and shortlisted entries - and this includes examples from the three judges. As I am one of them, it made sense for me to document the creation of my exhibit, sharing my thought processes with a view to offering guidance and encouragement to those who have a flair for woodworking and design, and especially design as this is still not covered very much. YouTube masterclasses on 'traditional' woodworking practice are far more common

although the word is open to some interpretation.



1 Exhibiting alongside John Makepeace at Otterton Mill in 1984

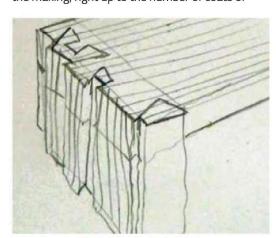
From concept to completion

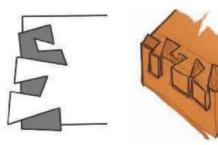
The design has to work and simplicity of form is always my goal, and although I created this concept very quickly, the actual making of the piece was quite time-consuming. It was also slowed down by the detailed video filming of every stage that I intend editing into a series of masterclass videos (see video link at the end). My approach has three elements: 1) a few scribbled sketches on A4 paper — done mostly late at night while I was watching *Al Pacino* on Netflix; 2) a mock-up of the main joint feature; 3) going for it — evolving the design as I made it.

So how did I arrive at the concept (photo 5)? By not arriving at the solution before I had worked through the problems! When I design a chair, I don't start with four legs, so I set myself a brief. I know the other judges (David Barron and Andrew Lawton) are both experts at cutting fine dovetails and Andrew is particularly fast. I hadn't made a dovetail joint since teaching at a furniture school in Western Ireland in 1993. I knew that Alan Peters delighted in cutting sometimes unusual dovetails that formed a highly visual element of his work and I think the dovetail is an icon of furniture history. I also knew that Alan used protruding tenons to allow for timber movement, and similarly in his dished tables, the grain direction was continuous. As I get older the rebel in me gets worse (most of my peer group seem to mellow), so I decided to use plywood rather than the usual well-mannered timbers and I love Brazilian pine plywood (photo 4).

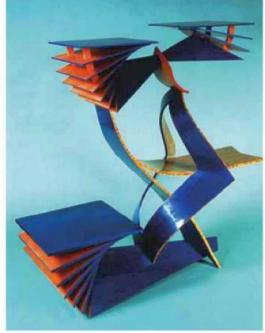
I anticipated that by matching the plywood grain wood, once the tricky joints had been cut they would be invisible (**photo 6**), so in the back of my mind was to employ a tiny 1.6mm wide routed groove along the glue line, which would transform the joint (**photo 7**).

This later served to separate the staining of the joint pins to match the rest of the legs once the joint had been trimmed flush. The subtle detail of the table only evolved during the making, right up to the number of coats of





5 Various concept sketches



2 'Megatron' by Fred Baier

lacquer to apply. Two and a half coats were just right to enhance the visual beauty of the plywood.

Challenging prejudice

Despite the superior characteristics of plywood in boatbuilding and airplane manufacture, there is still a lingering prejudice. One YouTube furniture making superstar recently delivered a sermon on how to cover the edge of plywood. Now why would you disguise the essence and visual beauty of what is a clever composite of solid wood!

I have been using plywood since the 1970s. In my early days of major British furniture exhibitions, a certain Frederick Baier was using plywood unapologetically in his art furniture (photo 2). I exhibited with Fred at major British group exhibitions for over three decades and only in 2013 did I actually meet him to chat to in a pub in Wiltshire.

Of course my little plywood table was full of risk, but I do believe the judging input for this modest but prestigious award should include some variation in approach. As judges, we are all agreed that the award should foster hand skills and that a balanced input of machining is acceptable. But how do we judge that skill?

What is hand skill?

Many years ago a professor of Furniture Studies at The Royal College of Art wrote a book exploring the nature of skill and referred to the skill of risk (e.g. a chisel) and the skill



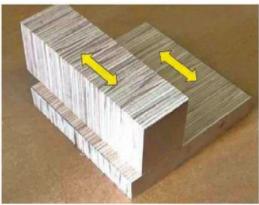
6 So much for continuation of grain — the joint is lost!



3 Used freehand, is the router not a hand tool?

of certainty (e.g. a wide chisel blade held in a hand plane is, in effect, a jigged device).

The truth is that few people can tell what tools have actually been used in the creation of a piece of furniture except possibly in the instance of fine dovetails in drawers and jewellery caskets. I say 'possibly' with reserve as technology is extremely advanced today and water jet and laser cutting is almost there and even slimmer router cutters using hybrid nano materials may one day fool the viewer that the corner of the shoulder is not radiused! So, accepting that the dovetail is the holy grail of woodworking and that the legacy of Alan Peters, who featured decorative joints in his work, I would say it was certainly my intention to make my little table predominantly with hand tools - chisels, planes and saws. Talking of planes, I used a Stanley



4 Aligning the grain direction of a softwood ply



7 A routed 1.6mm groove highlights the joint

Making a plywood table



8 Using a hand plane that belonged to Alan Peters



9 A Makita cordless trimmer was more effective...



... for accurately levelling the pin's shoulder lines

(Bailey) smoothing plane owned by Alan (photo 8), handed on to me by his widow in 2009. In my enthusiasm to use a rather coarse laminated softwood ply for fine furniture

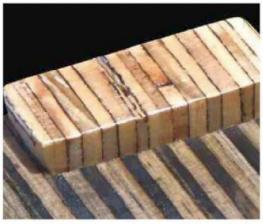


10 A low-cost tenon saw supplied by first prize sponsor Axminster Tools

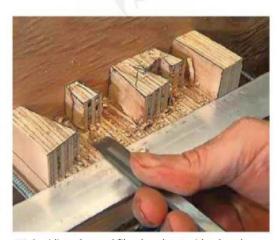
making and my disobedience to pitch the dovetails at around 1:7, but just quickly getting them to look interesting, I invited problems of short-grain and fibre breakout.



11 No visible evidence of sanding marks



12 No visible glue lines or razor-sharp edges



13 Avoiding plywood fibre breakout with a hand chisel was almost impossible



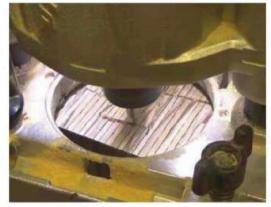
15 A hammer used (with protective scrapwood) has more impact than a mallet

It would have been much easier to have made my little table in a hardwood such as maple or ash. I carefully guided the razor-sharp chisel to sit in the scribed shoulder lines and tried various right angle jigs, but avoiding fibre breakout was almost impossible (photo 13).

On the subject of chisels, the conventional ground and sharpened angles of 25 and 35° are all wrong and I find I intuitively grind a much shallower angle to achieve an easier and more incisive cut.

So, with the problem of plywood breaking up on the shoulder lines, I used a router and not just any router. From my proud extensive collection I found the little cordless Makita DRT50 was the only tool capable of executing this highly risky freehand manoeuvre (photo 9). The slightest slip and the table would be ruined. The weight, size, visibility and lack of a trailing cable was like having the best pair of running spikes. I removed the chippings guard as this inhibits keen visibility at the tip of the cutter and the LED light is a boon. When I wrote The Incredible Router book in 1989, I designed a futuristic router that had an in-built light.

When using a hand chisel there are two or three considerations: holding firm, holding true (e.g. vertical) and taking off the right amount. With the router the considerations were: anchorage of the base, which is largely open and prevents titling; very fine freehand hand control throughout the travel; and lightness of cut to avoid the tool snatching and speed. If you linger you burn. The important thing is to learn the control and nature of the material by using hand tools much better first (photo 10). Having the most expensive tools does not guarantee excellent workmanship.



16 Using a batten guide, the routing of the 1.6mm wide groove is tricky



14 Use a clear and consistently accurate marker - a ballpoint pen



17 The tiny groove allowed for careful completion of the leg dyeing (after the pins are trimmed flush)

18 Gluing, clamping and checking for squareness is done against the clock

How perfect is a one-off?

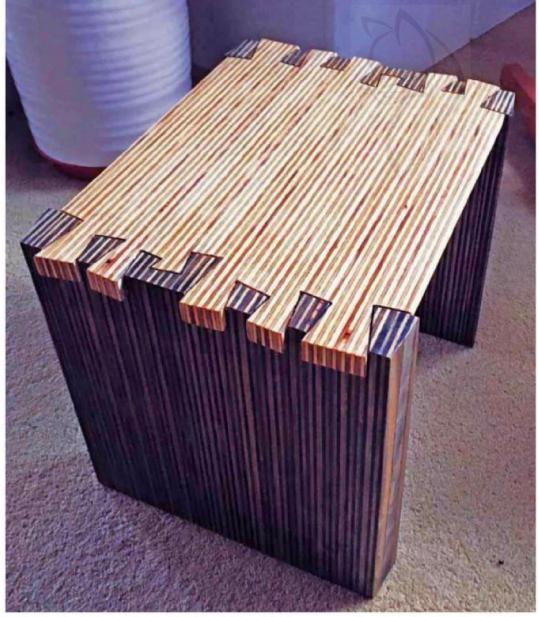
The irony is that one-off pieces of furniture are usually very expensive, yet can usually be improved in design if made again and are unlikely to be mistake free. If you look at the mainstream furniture industry, or indeed any industry such as car production, there is something called R&D and prototyping workshops. A one-off is at best a prototype and may hold some sentimental or monetary value over the creator's grave, but it is a

risky venture. Most good designs need developing.

The Alan Peters Online Furniture Award 2021 has evolved from The Alan Peters Award For Excellence, hosted by the now deceased 'Celebration of Craftsmanship and Design' exhibitions at Cheltenham for seven years previously. I was one of the original judges and we selected winning entries from photographs only – hence the importance of high resolution images and all the camera angles necessary for

scrutinising the difficult parts of making, such as no visible marked lines, nor evidence of abrasive paper marks and tight shoulder lines underneath.

So how perfect was my piece? Well, I was thankful I had not lost my hand and eye for cutting tight joints and mostly straight off the saw. This was due to using a clear and consistently concise marking tool – a ballpoint pen (photo 14). I don't achieve accuracy or clarity from a pencil. The Axminster Axcalibre tenon saw was a dream to use, better than my dovetail saw and my joints were straight off the saw. Just one pin had to be chiselled back slightly. Finishing is arduous and I drum sanded the top and legs initially, but I worked through the abrasive paper grades (photo 11) so there were no scratch marks. Shoulder lines were tight and the tiny routed grooves went to plan – except I noticed later at the finishing stage that one groove overlapped fractionally (photo 19) and I mean by half a millimetre. Not good enough to be a winning piece, but I think as a design it met the criteria the other judges would apply. David Barron said: "It needs to look nice first and foremost" and Andrew Lawton commented: "You have taken the more traditional 'decorative dovetail' a stage further in a way that is playful and, combined with the dyed ply, challenges our notions of what the joint should look like." 💸



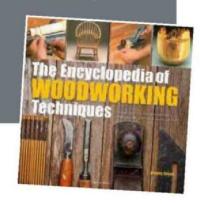
19 Subtlety in the design: the stack laminated plywood further expresses the edge in the dovetail sectioned slab ends and on the mitre sectioned top, which exposes very little of the bland surface veneer. Added to this, the reflection of light from a window on the top changes as you move around the room, highlighting the groove shadowlines

FURTHER INFORMATION

YouTube video on designing and making an exhibition quality piece of furniture: www.youtube.com/watch?v=87rqYzpqORo

An A-Z of hand skill techniques is demonstrated by Jeremy Broun in The Encyclopedia of Woodworking Techniques – winner of a top UK author's book award in 1993 and updated in 2018. Signed copies

are available direct from the author – visit www. woodomain. com





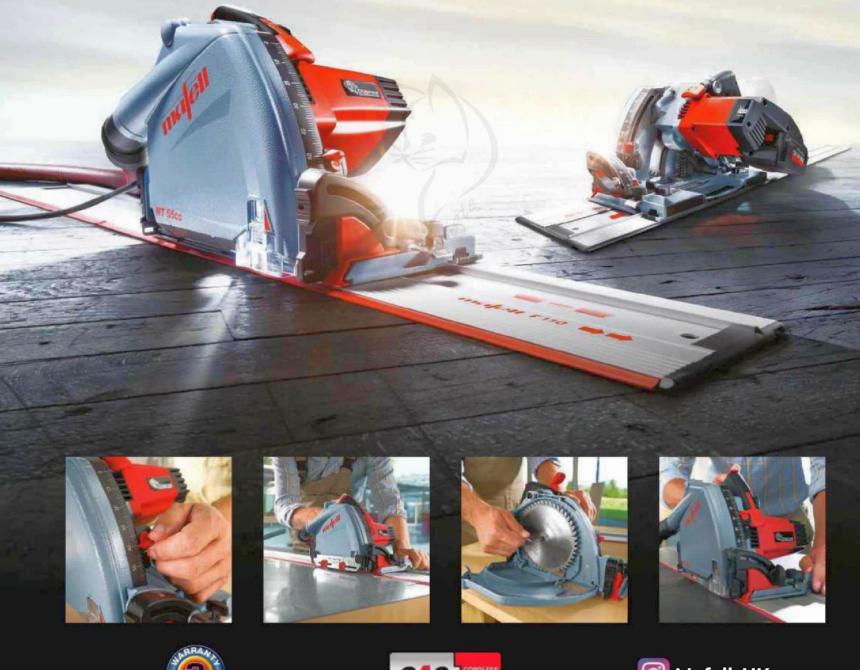
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Paul Greer looks at archery over the ages and the evolution of wood as a primary material

he 5,000 year-old frozen remains of the prehistoric man known as 'Otzi', discovered in the Alps in 1991, were accompanied by a bow and quiver holding over a dozen arrows. These were made of *viburnum lantana* (known as the wayfaring tree), a favourite source of archery wood during that era. Similar notable finds include 40 bows and more than 100 arrows buried in a sunken longship dating from the fourth century, and uncovered at Nyssam, Germany, in 1863.

Archery through the ages

Australia apart, the bow was, worldwide, the principal weapon of war and hunting from prehistoric times until the 16th century. In Europe, guns then began to replace it for military purposes, but it retained an important role for hunting across all social classes, and before long archery societies began to form in England. In his book *Toxophilus* (1545), the scholar and writer Roger Ascham depicts archery as a healthy recreational activity, and cites birch, hardbeam and some varieties of oak and ash as the best woods for arrow-making.

The first Grand National Archery Meeting was held in York in 1844, and rules standardised with the founding of the Federation of International Target Archery in 1931. The sport became phenomenally popular during the following decade, especially in the USA, where it enjoyed an estimated 10 million participants.

Comparatively few people today engage in archery, but some are first drawn to it by the coverage it receives at the Olympic Games. Many of them must be struck not only by the

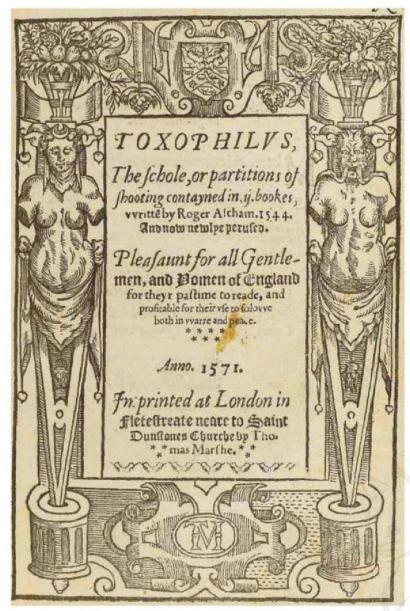
Otzi the Iceman

ever-increasing sophistication of modern bows and arrows, but by how little wood features in either. However, until well into the 20th century, this was the favoured material for archery equipment, as it had been during the Middle Ages, when the longbow played a major role in English history.

Bows & bowyers

The English longbow was employed to great effect during the Hundred Years' War with France, most notably at three battles: Crecy (1346), Poitiers (1356) and Agincourt (1415). The majority used there were of yew or elm, and their draw weight (of over 150lbs) required a degree of strength, which in time actually altered the skeletal frame of the archer.

The arrows were usually made of ash





A bodkin point arrowhead



Roger Ascham's *Toxophilus*

Broadhead arrows

and could pierce conventional armour at 200 yards. Accurately delivering these at up to six a minute, the English archers outshot the French crossbowmen and inflicted huge losses among their cavalry. This was the reward for archery practice being compulsory in England on Sundays. During this heyday, arrowheads were forged for specific purposes: the long, thin bodkin to penetrate mail and large, chisel-like broadheads to bring down horses, or penetrate plate armour.

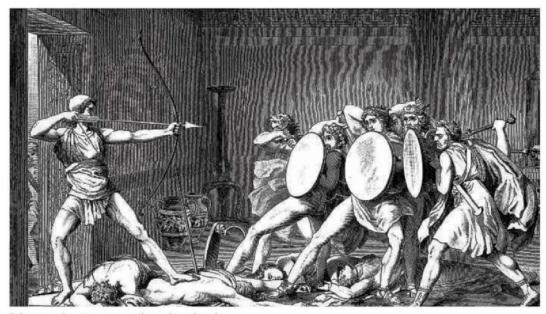
A maker of bows was called a bowyer and during medieval times most villages in England had their own. He would have had a workshop there offering room to operate and storage space for his materials, tools and work-in-progress. Besides yew, he employed poplar, ash and hickory and bent selected strips of wood into the required shapes using a rack, warm water and steam. As well as bespoke items, most bowyers sold some ready-made. Many of their customers were soldiers, but they could come from any level of society.

The route to becoming a bowyer was long and demanding. Paying an agreed sum to a master bowyer gained a boy or young man apprentice status. He then worked without pay for up to seven years, learning through the master's instruction on a wide range of procedures. On completion, he became a journeyman and was paid a daily wage. He could then, if he wished,

pay for further instruction, and so in time become a master bowyer himself and set up his own workshop.

Items made from a single material (normally wood) are called self bows. They consist of two pieces of equal length, the inner being resistant to compression, but the outer elastic enough to permit the necessary extension. Besides yew, the most popular woods have proved to be ash, elm and hazel.

The longbow is vulnerable to changes in temperature and humidity, which from the 1930s prompted its replacement by composite bows not so affected. These were typically made of laminated wood, plastic and fibreglass. Wooden arrows, too, were replaced by aluminiumalloy or fibreglass-tubing ones and the feathers substituted by plastic fins. Composite bows offer most archers considerable improvement, especially in target shooting, where most score



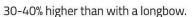
Odysseus shooting arrows through axeheads



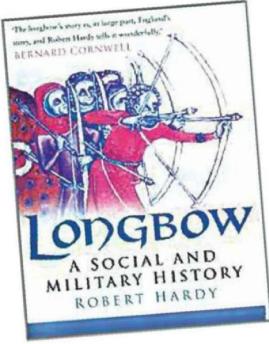
Robin Hood statue, Nottingham



The Royal Armouries, Leeds



Despite these comparisons, a good many archers today still opt for wooden equipment and the British Long Bow Society is dedicated to perpetuating its use. Relatedly, within the membership of the Craft Guild of Traditional Bowyers and Fletchers (founded in 1986) are some apprentices learning (and in due



Robert Hardy's book Longbow



course intending to pass on) the old (but very specialised) skills.

Historic enactors can conjure a vivid sense of what being alive at certain times, or involved in significant events, was like. One presentation ever-popular at the Royal Armouries in Leeds is by the 'Agincourt Archer'. Strongly fact-based, yet arrestingly dramatic, it leaves audiences eager to put questions to performers steeped in the topic.

A well-known actor equally renowned for his expertise on medieval archery was the late Robert Hardy, whose book Longbow - A Social and Military History, displays his knowledge. Film buffs will recall the Agincourt battle scene in the 1944 screen adaptation of Shakespeare's Henry V, which memorably features a hail of arrows descending on the French cavalry.

For identification purposes, or status, many archers had their arrows marked with their personal symbol or colours. This was known as 'cresting' and arrow-makers kept reference books in which these were recorded. The practice is popular to this day and many archers permit themselves a few 'flights of fancy' to ensure their missiles are distinctive.

Crossbows & longbows

More longbow-makers than you might think are in business today. Their products are tailored



Henry V film poster, starring Lawrence Olivier



Cresting on wooden arrows

to the individual and the waiting time for a bow may be several months. However, the finished item will reflect the customer's ideal draw length and poundage, resulting in greater comfort and accuracy. Options include the type of wood, its varnish, the handle material and kind of string, all of which enhance its distinctiveness as well as suitability. A bespoke bow for a novice may cost in the region of £250, with one to satisfy an experienced archer likely to be in the £400-800 range. A possibly cheaper alternative is to buy a professionally-made bow stave and make the necessary additions independently.

Full-length arrows are normally 32in and some are made from very particular woods, like Port Orford cedar, or Chris Boyton pine. A dozen shafts can cost about £100, with a small extra charge for cresting, if desired; fletchings are available in several colours. Because bows suffer wear-and tear, most makers offer a repair service, where they can be re-varnished, or worn parts re-shaped or replaced. Quivers and protective



A traditional archery recurve bow

equipment are normally available, too. One maker's website describes him as a 'Master Bowyer and Archery Artisan'.

Many crossbows were made at least partially of wood, but the potency of most derived from a metal winding apparatus. This allowed it to deliver a short bolt with great force, but made it much slower to operate than the longbow, leaving its users more vulnerable.

Literature offers two standout achievements with the wooden bow. One features in Homer's *Odyssey*, whose hero, returning home in secret after 20 years' absence, announces his arrival by performing a feat of which only he is capable – shooting an arrow through all the holes in a line of 12 axes. The other incident occurs in Sir Walter Scott's novel, *Ivanhoe*, in which Robin of Loxley (who becomes Robin Hood), faced with a tournament rival's unbeatable arrow in the centre of the target, splits it with his own. Modern competitors occasionally duplicate this feat, though more by accident than design.



Manchu wooden arrows



Port Orford cedar tree

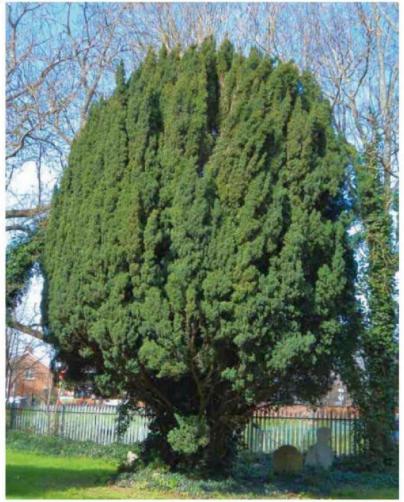
There is a statue of Robin Hood in Nottingham, and a West Yorkshire village, near Wakefield, also bears the name.



Archers in the Luttrell Psalter



Medieval crossbow made of wood and metal



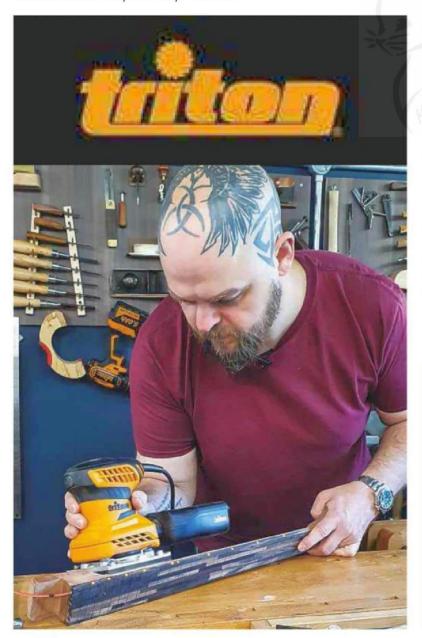
The yew tree — yew was the most popular wood for longbows



1 OF 2 TRITON TQTRSS **ORBITAL PALM SANDERS**

In conjunction with **Triton**, we're giving two lucky readers the chance to get their hands on a compact and powerful TQTRSS 200W orbital palm sander 1/4 sheet

Ideal for finishing tasks on a variety of materials, Triton's 200W orbital palm sander ¼ sheet features a lightweight, single-handed design and ergonomic, vibration-reducing rubber over-moulded grip to provide maximum comfort and versatility with minimal effort. The TQTRSS features both clamp and hook-and-loop type sanding sheet attachment systems and comes with a sandpaper punch plate to ensure effective dust extraction on any sheet-style abrasive.





Product features

- Powerful 200W motor provides ample power for a variety of sanding tasks
- Orbital sanding action for fine, even sanding
- Dust extraction port for increased operator safety and cleaner work areas
- Hook-and-loop backing pad and clamp attachment accommodates a wide range of sanding sheets
- Ergonomic rubber over-moulded grip reduces vibration and improves
- Soft carry case for convenient, transportable storage
- 3 × mesh sanding sheets, dust collection canister and punch plate for different sanding applications and effective dust extraction

Specification

No load speed: 12,000rpm

Power: 200W

Product height × length × width: 150 × 257 × 114mm

Weight: 1.35kg

Sanding area: 110 × 100mm Sound power LW: 73.5dB(A) Sound pressure LP: 84.5dB(A) Variable speed: 12,000rpm

In the box: 1 × TQTRSS 200W orbital palm sander ¼ sheet; soft carry case; 1 × dust collector; 3 × mesh sanding sheets; 1 × sanding sheet punch plate For more information on this and other products, visit www.tritontools.com.

HOW TO ENTER

To be in with a chance of winning 1 of 2 Triton TQTRSS orbital palm sanders, just visit www.getwoodworking. com/competitions and answer this simple question:

QUESTION:

How many mesh sanding sheets are provided with the sander?

The winners will be randomly drawn from all correct entries. The closing date for the competition is 8 January 2021

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



LETTER OF THE MONTH



Ted's lovely music box with scrollsawn design...



... which takes the form of a lidded bowl with a false bottom

MUSICAL GIFTS

Hi Tegan,

I thought you might like to see a music box I made recently. It takes the form of a lidded bowl with a false bottom inserted, which houses the musical movement. The music plays when the lid is lifted and stops when it is replaced. The lid is made in two parts: the base and the scrollsawn top, which are glued together with coloured felt between to highlight the Eeyore motif. This was made for my granddaughter, and I now have orders for more with different motifs! Thank you for a great magazine; I enjoy it a lot. Best wishes, **Ted Landon**

Hi Ted, thank you for sharing the photos of your music box creation — I'm sure your granddaughter will absolutely love it! It sounds like your design is already very popular judging by the requests for orders you have received! I really love the scrollsawn design on the top and the fact you can also keep small items within it. No doubt it will be treasured by the lucky recipient for many years to come. Keep up the great work!

Best wishes, Tegan

EXTENDABLE CLAMPS

Hi Tegan,

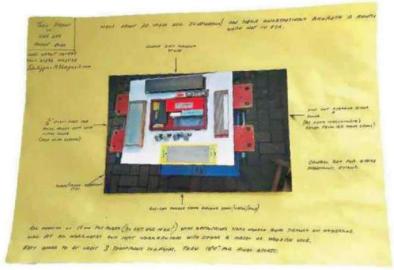
Intrigued by the Pony Jorgensen item in the Summer 2020 issue (page 10) and their 'patented feature allowing two bar clamps to be joined together,' I decided, as I do, to see if this was possible and easy for generally available friction bar clamps.

So choosing two heavyweight 'Wilko' clamps I had to hand, it became clear that removing one end on each clamp and using the available holes in the clamping bars would allow me to create an extendable bar (see attached composite image).

In my case, because I have access to a milling machine, I used some mild steel bar and milled a slot to just less than the depth of the clamping bar (so that the top face of the combined clamp could fit flat against the clamped item). The width was a tight fit to the clamping bars. I then drilled through the clamping joiner to 'marry up' with the holes already in the clamps. It was then just a case of using appropriate sized nuts and bolts to ensure a rigid coupling.

While the base of the slotted bar unit provides some extra support to the connection between the two bar clamps, it would probably be nearly as effective if just two flat lengths of mild steel were suitably drilled, placed either side of the clamp bars and bolted through. By making several of these junctions, I can extend any number of these clamps. While the extended bar clamp appears to have a 'bend' in it, that is caused by the wide-angle camera optics — I can assure you the extended clamp is flat. With best regards, **Colin Lloyd**

Hi Colin, great to see you've been busy in the workshop again. We're really impressed by your take on these extendable bar clamps and it looks like



A labelled diagram explaining the construction of the hand tool sharpening station

HAND TOOL SHARPENING STATION

Dear Tegan

I made this sharpening kit around 20 years ago and have been meaning to share it with other woodworkers. You will see from the attached photos and diagrams basically how it works.

I used DMT stones as they were what I had at the time, and they can be screwed to the baseboard. Other stones would require a small box-like support (as with the Eze-lap stone) to keep them stable when in use. Almost all types of stone could be used in this way, except perhaps Japanese waterstones. 15mm ply is probably the best material for the baseboard; I wouldn't use MDF. When not in use I put it on the floor of the workshop and slide it under the bench. I hope this is of help to others. Kind regards, **John Higgins**

Hi John, thanks for sharing this design with us — it seems very comprehensive. Even though it was made a fair few years ago, it is still relevant and hopefully others will be able to emulate it for their workshops. Many thanks again! Best wishes, **Tegan**



The sharpening station set up on a Workmate, ready for use



It can also be used on a bench set up in the workshop

they will come in very handy for clamping up your next woodworking project. Having the milling machine, as you say, gives great scope for being able to create your own tools and putting your own unique spin on them. Thanks, as always, for writing in!





Geoff's wonderful music stand was made as an anniversary gift for his wife

MUSIC STAND

Hi Tegan,

I'm sending you a photo of a music stand I made – an anniversary present for my wife who is learning the guitar. I used walnut and maple and the finish is Danish oil. Having built an adjustable mock-up, I was able to determine the height and angle of the top to suit her, thus making construction simpler. The Esherickinspired music stand featured in the October and November issues is a far grander affair and would be quite a challenge for my skills. Regards, Geoff Ryan

Hi Geoff, I absolutely love your music stand, and while perhaps not as complex in construction as Matthew

White's, it is nonetheless a great woodworking feat! I'm sure your wife is thrilled and I particularly like the addition of the lettering, which really helps to add a personal touch. The contrasting timbers work really well too and it looks like a sturdy stand that will last her well into her guitar playing days! Many thanks for sharing!

Best wishes, Tegan

READERS' HINTS & TIPS



one lucky reader per month the chance to get their hands on a fantastic Veritas apron plane with PM-V11 blade. Ideal for trim carpentry and featuring a ductile cast-iron body, its unique side wings allow for a comfortable, firm grip. To be in with a chance of winning this great piece of kit, just send in their woodworking journeys - to tegan.foley@mytimemedia.com, along with a photo(s) illustrating your tip in action.

To find out more about Veritas tools, see www.brimarc.com

TIPS FOR TURNED WOODEN LAMP BASES

Hi Tegan,

My handy hint shows how to fix the brass 'nipple' into the top of a turned wooden lamp base, which holds the bulb lamp holder

in the lamp base. To do this, simply drill a 10mm hole into the top of the lamp base, using a pillar drill fitted with a ¼in drill bit to align the nipple to the hole before pressure is applied.

The switched brass lamp holder can now be screwed into the nipple, which is fitted onto the base. If the wood is soft, then a spot of CA adhesive could be applied into the pre-drilled hole to stiffen it up after fitting the nipple.

Joe O'Neill





The brass nipple pressed into the base

The brass nipple mounted on the drill press ready to drive into the lamp base



A lovely selection of Joe's turned lamp holders

NEW FLEXIBLE CURVE ROUTING GUIDE TEMPLATE ACCESSORY An 8mm thick mini flexible curve used to make templates, enabling a shape to be cut repeatedly with precision.

- Used in conjunction with a self-guided cutter, a router or router table.
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- Includes fixing screws.

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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 Vin 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!



BLACK FRIDAY

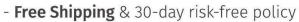


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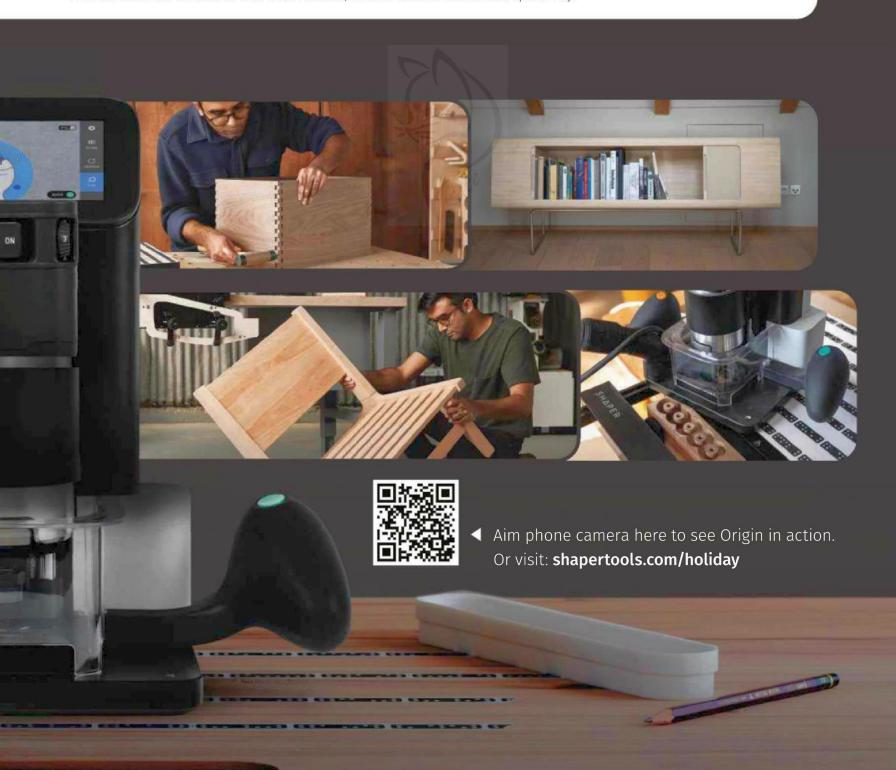








*Tools and accessories shown in the foam are not included; shown to illustrate customisation options only!



FESTIVE FROLICS



Carl Jacobson shows you how to turn this fun snow couple using leftover pieces of timber, which will make the perfect festive addition to any home

TOOLS YOU'LL NEED

- 6mm & 9mm gouges
- Parting tool
- 6mm & 9mm drill
- Combination chuck
- Jacobs chuck



provides contrast, but you could also paint or

stain the pieces to any shade you like. The final

pieces measure a little less than 229mm tall, but as with most woodturning projects, the dimensions can be changed to suit your individual needs.

Turning the bodies

I decided to use firewood for the bodies (**photo 1**), so started with the lathe set to a low speed until the piece was turned true and round. I picked a relatively straight piece of timber with some character to it, because I intended to leave some of the bark intact on the bottom.

With the lathe set to 1,000rpm, start out with a bowl gouge. Form the basic features: snowman shape, a flange at the bottom for the 'ground', and a tenon on top for the hat.

Having a tenon in place allows you to secure the hat with plenty of glue surface.

Once the basic shapes have been roughed out, speed up the lathe to about 1,500rpm and change to using a hollowing tool – here I'm using the Easy Wood #1 Hollower and detail gouge (**photo 5**). At this stage, you can add more detail to the body by slowly removing material. Shallower cuts will give you a cleaner finish and require less sanding later, so take your time here.

Turning the hats

To form the hats, I used a spindle gouge with the lathe set at 2,000rpm to form the basic shape (**photo 6**), before switching to a parting tool to face off the top of the snowman's hat (**photo 7**).





1 The piece of maple firewood used to turn the snow couple's bodies



 $\boldsymbol{2}$ Cutting out the shape requires using a bandsaw



3 Using the bowl gouge with the lathe speed set low, begin to form the basic features

TOOLS & MATERIALS REQUIRED Materials

- Maple firewood (or another light hardwood)
- Osage orange (or another contrasting wood – anything with colour)
- Piece of natural-edge burr for each of the bases, or your choice of timber
- Cyanoacrylate (CA) adhesive and activator
- Decorations from the craft shop beads, cloth, buttons, etc. to suit your snow couple
- Wooden mounting pins for arms
- Spray lacquer

Tools

- Lathe with chuck
- Turning tools: bowl gouge, spindle gouge, your choice of hollowing tool, detail gouge & skew chisel
- Bandsaw
- Spindle sander

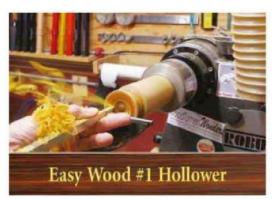
Turn a recess inside the hat to accept the tenon on top of the head (**photo 8**), then you can apply your finish of choice – I used CA glue as the finish due to its speed, durability and clarity (**photo 11**).

Making the arms

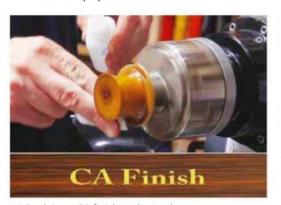
The arms are the only pieces of this project not turned on the lathe; instead, these are cut on the bandsaw (**photo 12**) and refined on the spindle sander (**photo 13**). The shape can be freeformed, but be sure to leave enough material at the shoulders to accept the mounting pins (**photo 14**). The arms can be drilled after sanding.

Adding the wooden details

We're getting near the finish, but a few details still remain. I made a handbag for the snowwoman by turning a small disc of Osage orange and then removing material from one



8 Turning a recess inside the hat to accept the tenon on top of the head



11 Applying a CA finish to the top hat



4 Here you can see the snowman shape starting to emerge



6 Forming the basic shape using a spindle gouge

side (**photo 15**). The noses were turned from scrap hardwood using a skew chisel (**photo 16**). You can get very detailed, slender pieces using this tool; just ensure to take your time and be careful. I also used the skew chisel to make a cane for the snowman (**photo 17**).

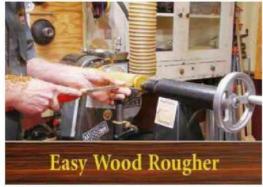
Assembly

To assemble the snow couple, drill the shoulders to accept the arms (**photo 18**), and the face to accept the noses (**photo 19**). You can simply glue these pieces in place using CA or wood glue (**photo**



9 Here you can see the hat starting to take shape...





7 Using the Easy Wood Rougher to face off the top of the snowman's hat — you can also use a parting tool to do this

19) – they won't take weight and aren't structural, so any glue will do. If you are careful with your gluing, the arms can swing freely after assembly. As I did, you can also add a base for the snowman and snowwoman to stand on – I used a few small pieces of leftover natural-edge burr, which looks really effective.

Finish & accessorise

Next, finish each of the pieces with several light coats of spray lacquer. Lacquer dries quickly and leaves a nice finish, but be sure to use it in a well-



10 ... and here it is!



12 Cutting out the arms using a bandsaw

13 Refining the arms using a spindle sander



14 Drilling the holes for the mounting pins



15 Turning the snowwoman's handbag



16 Turning the noses from scrap hardwood using a skew chisel



17 Using a skew chisel to turn the snowman's cane



18 Drilling holes to accept the arms...



19 ... and the face to accept the noses

ventilated area. Wear a respirator or mask if you have one.

At this point, the snow couple are finished! Now you can add decorations using common items from the craft store, including buttons, beads, etc. I added some jewelled details to the snowwoman's hat and handbag as well as buttons to the front of each. Scarves made from scrap fabric are also a nice touch (photo 25). This is a great time to involve your children or grandchildren – all of the power tools have now been put away and all that remains is a relaxing craft activity. Enjoy!



20 Applying glue to the holes drilled in the arms



21 Placing the wooden mounting pin before attaching the arm



22 Finishing the pair with several light coats of spray lacquer



23 Gluing on the hats and accessories



24 Adding final touches to one of the hats



25 Pieces of coloured ribbon make great scarves





Kebony christmas tree

The **Kebony** Christmas tree from **Habitree** is the perfect ingredient for a sustainable festive season

abitree recently launched a stylish and eco-friendly Christmas tree made from sustainable Kebony wood. Danish designer, Jonas Støvring, first developed the idea while working for the Randers microbrewery in Denmark, which used Kebony timber to build premium boxes for packaging their beer bottles. The process of manufacturing these boxes left the distillery with excess offcuts of wood, with which Jonas created a small tree as a way of upcycling the spare materials; the resulting design was so clean and striking that the designer teamed

up with entrepreneurs Søren Bach and Jan Strandkvist and decided to establish Habitree as an individual start-up company.

Unique & beautifully crafted

Comprised of overlapping stacks of Kebony wood, these unique and beautifully crafted Christmas trees provide the ultimate alternative to the typical Christmas fir, although the Habitree's aesthetic simplicity makes this an eye-catching sculpture that is not just for Christmas. The bespoke trees are a minimalist, stylish and sustainable addition to any household

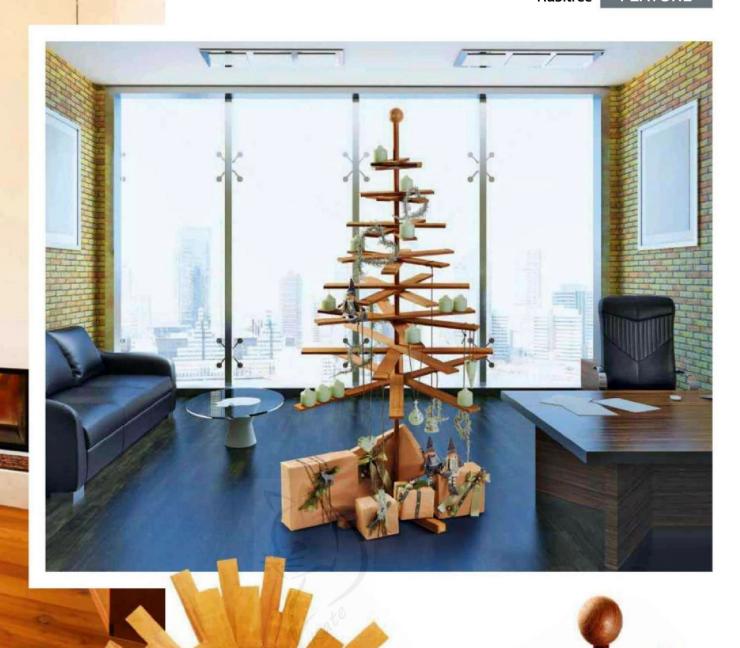
or workplace. Available online now, the Habitree can be individually shaped by the designer and decorated with candles or more traditional decorations during the festive season.

where values such as sustainability are as important as the joy we take in decorating for the holidays. Made from premium, sustainably farmed wood and reusable year after year, Habitree can be shaped and decorated any way you like. It warms any environment with its natural beauty and the positive spirit in

which it was created just for you. To order your Habitree, visit **www.habitree.dk**

Sustainable credentials

Kebony, the sustainable alternative to tropical hardwood, was selected by Habitree both for its aesthetically clean finish and sustainable credentials. Developed in Norway the patented Kebony technology is an environmentally friendly process, which modifies sustainably sourced softwoods by heating the wood with furfuryl



alcohol – an agricultural
by-product. By polymerising
the wood's cell wall, the
softwoods permanently
take on the attributes of
tropical hardwood including
high durability and dimensional
stability, without the need
for tropical deforestation or
environmentally damaging treatment.
The Habitree is produced from FSC-certified
Kebony wood types, and all Kebony woods
carry the Nordic Ecolabel 'Swan'.

Three different designs

This unique indoor tree is created for those who enjoy Scandinavian design and want to celebrate sustainably. The Habitree can be used all year round, ultimately reducing the number of trees that are cut down each year during the Christmas period, ensuring that the Habitree works successfully as both a design feature and an environmentally responsible product. The product range includes three different sizes – 950mm, 1,250mm and 1,800mm –

and two different wood types. Kebony Clear is dark brown, with a smooth knot-free surface, while Kebony Character is more rustic, and has the traditional Nordic style. All products are ideal for both home or office.

Jan Strandkvist, Co-founder of Habitree, comments: "Kebony is the perfect material for the Habitree – it is long lasting, beautiful, and comes with all necessary certifications and eco-labels, in order to truly celebrate responsibly."



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TAS165
TAS165 165mm dia plunge saw + 54mm max cut scoring function + fine track adjustment + depth scale + dust bag 1200W (S1) motor Basic saw 230v



TAS165PRO
TAS165PRO Plunge saw + 54mm max cut + 2000-5000rpm + scoring function + fine track adjustment + depth scale + auto kick-back + track lock - soft start + dust bag + alu carry case + 1400W (S1) motor Basic saw 230v



TK305

305mm DUO circular sawbench & mitre saw + 85mm max depth of cut (rip) + 180x50mm max mitre saw cut + 2Kw motor







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406mm scroll saw + twin table extensions + LED lighting + blower + top carry handle + vario speed 500-1700 1/min + 10 blades.



HBS230ECO

230mm HQ bandsaw + 90mm max depth of cut + sturdy rip fence + mitre att + LED light + dust port & drawer





HBS245HQ 245mm HQ bandsaw +

152mm max depth of cut + 2 speeds 400 / 800 rpm + cast iron table + mitre att + LED light + dust port & drawer + leg stand





OBF1200

Variable speed (11000-30000 1/min) + stepless adjustable depth stop + accy kit + 1.2kW motor + 6&8mm collets (1/4" optional)



OFT102

HQ 810x610mm router table + twin 458x152x25mm adjustable fences +



TFM610V

6 speed table router (11500-24000 1/min) + 6/8/12mm collets + twin extension tables +



SB3116RMN 16mm Radial arm drill

press + 5 speed (500-2500 1/min) + -45/+45 Dg L&R table tilt + accurate drill depth control



BT63

Universal 605X300mm drill press table + perfect add-on for all drill presses + rigid 605x75mm fence + twin T slots (330mm centres)



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Economic 100x150mm belt & disc sander + pivoting table 0-60dg + light alloy disc sander table + mitre att + Velcro fastener for disc















D300F

D300F wood lathe + cast iron construction vario speed + 305x105mm max standard capacity + rich starter kit + 250W (S1) motor



D460F

D460F wood lathe + cast iron construction + 3 step variable speed ratios (650-3800rpm) + 460x130mm max standard capacity + rich starter kit + 400W (S1) motor 230v



D460FXL

D460FXL Wood lathe + cast iron construction + 3 x step vario speed ratios (650-3800rpm) + 460x153mm max standard capacity + digital speed display + optional bed extension + rich accy pkg + 500W (S1) motor 230v



TS200

200mm Sawbench + cast iron table + sliding table carriage + table width extn + 60mm



TS250

250mm Sawbench + cast iron table + sliding table carriage + table width extn + 80mm



TS250F1600

250mm Panel cutting sawbench + cast iron table + 1.6m alu integral sliding table + outrigger carriage + 80mm depth of cut +



HOB260ABS

254x160mm Planer/thicknesser + integral dust extractor + solid alloy cast tables + feed rollers can be disengaged + fast change to choice of operating mode



HOB260ECO

250x195mm Planer/thicknesser + solid cast iron tables +

x knife cutterblock + substantial tilting planer fence + solid cabinet base

MEL22 Magnetic knife setting gauge / 2pcs £33.32





HOB305PRO Available from mid November

HOB305-PRO 305x220mm combined planer/ thicknesser + cast iron folding tables + 4 x knife cutterblock + 2200W motor (S1) 230v



HBS300J 315mm HQ Bandsaw +

polished cast iron table + die cast band wheels + 165mm max depth of

cut + extendable table + 2 cutting speeds + floor stand & wheels





FS160L

Vertical spindle moulder + 4 x speeds (1400/9000rpm)

- + cast iron table + 1000x215mm
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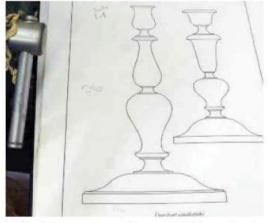
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WIZARD CANDLE POWER





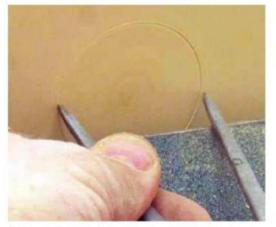
1 This design owes something to one of Stuart Dyas' Classic Forms



2 The bottom surface needs to be slightly concave...



3 ... so the candlestick won't wobble



4 For maximum grip the jaws must make a circle



5 The dovetail angle must closely match the one on the chuck



6 Put the wood onto the jaws and get ready to turn...



 $\boldsymbol{7} \dots$ a shape that requires just a small fillet and an ogee



8 The hole for the stem is 30mm diameter



9 This cleaned area will be filled with gilt cream

ometimes the ideas for my articles fall into my lap. A few years ago, I was asked to enter the Worshipful Company of Turners' Wizardry in Wood competition for a candlestick to be used at their banquets.

It had to be turned on a lathe and incorporate a solid brass sconce from the Axminster Tools catalogue, supplied to each entrant. There were no restrictions as to shape or style but the overall height, including the brass sconce, had to be 330mm, the base being of any shape so long as it had a minimum diameter of 150mm diameter (or square) and a maximum diameter of 180mm (or square).

If my work was chosen it would be photographed and this, together with a short CV, would be placed in a leather-bound book to be put out at the livery company's dinners and become part of its history.

It all sounded very exciting so I filled in my

application and started planning. I wasn't sure at first whether to do a traditional style or go for something a little more contemporary, but in the end I decided to go for a Victorian-type turning with a modern paint and gilt cream finish. This method of finishing requires a timber that is open-grained, limiting my wood choice to ash, oak, elm or sweet chestnut; I opted for ash because it gives consistently good results in conjunction with liming. The blanks were then measured and cut. They are not from the same board but as they are to be covered in paint, it shouldn't make a difference.

Design

This design is loosely based on one in the *Classic Form* book by Stuart Dyas (**photo 1**). I have used this book in previous articles and I would just like to say how essential it is for woodturning design. Any of the detailing I put on the base does need to

be really well cut because the gilt cream will accentuate any marks that I leave on there, so keeping it simple is a benefit if you think your tooling is not up to it. Amazingly, the design I have chosen from the book worked out that I just needed to add 50% to scale it up to the right size.

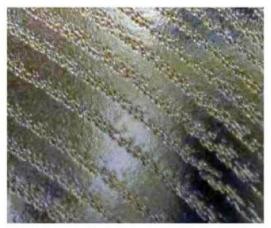
Base work

Whenever I do a project that involves faceplate and spindle work, I try and do the faceplate piece first, so I mounted the base on a screw chuck, using a bowl gouge to clean up the bottom surface. This does need to be slightly concave so the candlestick will not wobble (photos & 3).

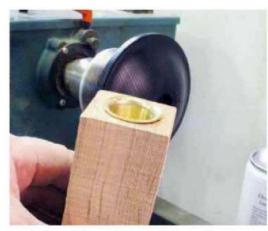
Once I was happy with the surface I turned a recess in the bottom to accept my dovetail jaws. This is 3mm deep and will be filled with hardboard before I put the baize on. To achieve maximum grip from the jaws, make sure they make a circle



10 Ebonising lacquer goes on next...



11 ... to prepare the surface for the gilt cream



12 The large hole requires use of a large-diameter point on the live centre



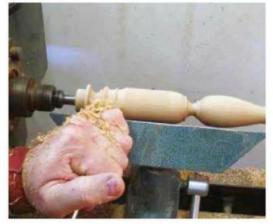
13 With the callipers set to the diameter of the base hole, the left-hand end is turned down



14 This being a one-off, I chose to take a freehand approach to the design



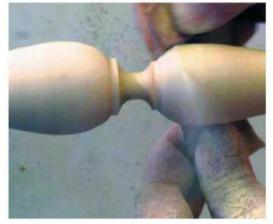
15 The fine details may need a little adjustment...



16 ... but you'll be surprised at how pleasing...



17 ... the results can be...



18 ... and they are even better with a good sanding...

(**photo 4**). Measure this before you put the wood onto the screw chuck and ensure that the angle you cut on the dovetail is as close as possible to the one on the chuck (**photo 5**).

Once done I put the piece of wood on to the jaws and was ready to turn the rest of the base (photo 6). The shape is fairly simple but elegant, with just a small fillet and an ogee profile (photo 7). The next job was to drill a hole to accept the stem. When doing a one-off like this I quite often do it on the lathe, but if I were batch turning these it would be done afterwards on a pillar drill. The hole does not need to be all the way through and in this case I made it 30mm diameter (photo 8).

Careful sanding

The completed turning now required careful sanding. I cannot stress enough how important it is to get this right, so make sure you remove all the sanding marks by not making too big a

jump in grit sizes and use a good quality abrasive, such as the Rhynogrip Red Line.

Once happy with the surface I used a liming brush — a suede brush would do — to remove some of the early growth from the rings to leave a lower area to be filled with the gilt cream (**photo 9**). A proprietary ebonising lacquer was then applied to the surface (**photo 10**). When I first tried this technique I used black shellac polish but the lacquer is much easier to apply well. You can see from this close-up of the surface that the paint has settled into the holes, making an ideal surface for the next stage (**photo 11**). I will apply the gilt cream when I have completed the stem.

Now for the stem

The piece of wood that I have for the stem is a little bit smaller in diameter than the plan implies but it will work, I hope. I mounted the timber between centres and to accommodate the

large hole (**photo 12**) used my large-diameter point on the live centre. As with all two-part turnings, the spigot needs to be accurate so the Vernier is set to the diameter of the hole in the base and the left-hand end of the stock is turned down to the right size (**photo 13**).

Because this is a one-off I did not work to a plan or rod, and once the work was round I marked out where I thought the details were going to be (photo 14).

The sizing cuts were carried out using a parting tool and the details shaped with a spindle gouge and a skew. Work from the tailstock end first because this will maintain the strength in the wood whereas if I thinned down the right-hand side, this action would weaken it.

I had to adjust the position of the details only slightly and I was pleased how the overall shape came out – working in this way, by eye, is a good test of your turning ability (**photos 15-17**).



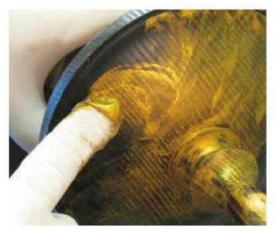
19 ... to prepare the surface for the ebonising lacquer



20 Mounting the candlestick between centres on the lathe means your hands can be kept off the work while applying the gilding wax



21 Rub the cream into the grain...



22 ... until all the low areas are filled with the gold...



23 ... and the grain is completely filled



24 Excess gold will mar the finished result



25 For a professional appearance, attach baize to the bottom



26 Cutting the baize with abrasive produces a neat result

The shape was now complete and, like the base, needed to be sanded perfectly before spraying (**photo 18**). Using the liming brush as before, I removed the softer growth by

working in the direction of the grain before

spraying with ebonising lacquer (**photo 19**). Once it was really dry I mounted the project between centres on the lathe; this allows you to apply the gilding wax without handling the work (**photo 20**).

Gilt cream

Gilt cream is available in colours such as gold, silver and bronze. The jars are small and your first thought will be that they are expensive, but only a small amount is used at a time.

I like to apply the cream with my gloved index finger, rubbing it across the grain until all the low areas are filled up with the gold (photos 21 & 22). When the grain is completely

filled (**photo 23**), remove the excess with finishing or lemon oil. Do not make the surface too wet as you can start to wash the gold out of the grain; if this does happen just apply more gilt cream.

Keep looking closely at the work to make sure that the surface is clean; any gold left on that's not in the grain will ruin the overall effect (**photo 24**). You could use a paste wax to help rub off the excess gilt cream, but do a trial piece as some of the proprietary paste waxes contain harsh solvents that can remove the black.

Assembly

After gluing the candlestick components together, I attached the candle cup via a screw down the centre, then covered over the bottom surface with baize (**photo 26**). Cut a piece slightly over size, stick it on and then use a 100 grit piece of abrasive to lightly rub around the edge until the baize is cut through. This gives a very good, neat finish.







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THE 'PURE' TABLE

This table and stool set is assembled without the use of glue or any fixing devices, relying solely on precise joints for its strength and integrity. Here its maker, **Jiefu Yu**, tells the story



1 The table's underframe reveals its interlocking structure and the two stool support rails. Most of the components are turned

y name is Jiefu Yu and I am a Product Designer. Please let me introduce myself. Back in 2013, I graduated from Edinburgh Napier University. My major project was the 'Pure' table. Our environment now has some problems — for example global warming, air pollution, white pollution, industrial pollution and so on, especially in developing countries. I saw and heard about a lot of cases on TV, radio and online, so I thought I needed to design a product that would not damage the environment. Finally, as you can see, this project's name is 'Pure'.

For local consumption

This project focuses on building a table for use by street food sellers in China, with the aim to create a better and healthier eating environment. 'Pure' is a green product: simple and pure. The whole project was built by hand and constructed





2 The complete set consists of a table and four matching stools, and was designed for use by street food sellers in China





3 At the end of the day the legs of the stools are simply hooked over their support rails, allowing easy floor cleaning beneath

without the use of any glue or screws, using only mortise & tenon joints to connect each part. The material used is solid wood, 100% recyclable and easily biodegradable. Meanwhile, it is very suited to cleaning; there is no longer a need to place the stools on the table when cleaning the floor. In China, a lot of street food sellers use plastic tables and stools for customer use, but these plastic products are not of a good quality. Sometimes someone will break their finger; sometimes a child will even have an accident. So in my project, I chose solid wood to build the product, aiming to make the surface of the table smoother, which I think will reduce accidental injury.

Wood is green

Using solid wood may be viewed as less environmentally friendly, but in fact, using wood can actually tackle climate change. Wood is a very green material: when trees grow they absorb carbon dioxide. If the trees are being cut



4 The stool legs are joined to each solid, chamfered seat with wedged mortise & tenon joints. Note the laser engraving

down, then the carbon dioxide will be locked within. Therefore, when the timber is used to make products, no further carbon dioxide is released. If these wood products become useless, burning the timber can also be beneficial. Burning timber releases carbon dioxide, which is equal to the absorption of carbon dioxide when the trees mature. These trees must be cut down to ensure a healthy and sustainable forest; only illegal logging will damage a rainforest.

For this project, I chose mortise & tenon joints to connect each part – I didn't use any glue and screws, which ensures the piece remains 'pure'. On the other hand, I know a lot of old Chinese



7 The set contains 20 tapered legs, two turned columns and four short linking rails. Note the scale models in the background



5 The three solid sections forming the table top are locked together with full-length dovetailed tongues for strength

buildings use mortise & tenon joints, and they can be hundreds of years old. I believe this structure is very strong and smart.

During the research process, I found that, in many restaurants, staff usually put chairs or stools on the table then clean the floor. On my project, however, you only need to hook the stools over their support rails, which is very convenient and allows for easy cleaning.

You will find some Chinese words on the top of the stools, which is Chinese food poetry. I used a laser engraving technique to do this as I want people to learn or see something before they sit down to eat.



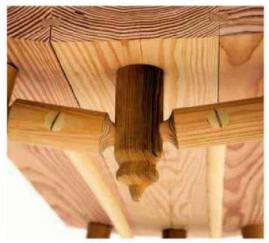
8 Each table leg will be linked to the turned column by a short rail that is drilled to receive one end of the stool rail



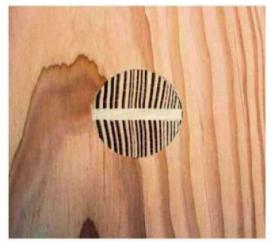
6 The narrower cylindrical part of this turned column will be wedged into a large hole bored into the table top



9 The underframe is assembled piece by piece. Finally, the turned central column is fitted into the table top and cramped tightly



10 The two stool support rails fit between the pairs of short turned end rails, and run the full length of the table



11 Every tenon in the set is locked securely into its mortise with a contrasting wedge; no glue is used anywhere in the assembly

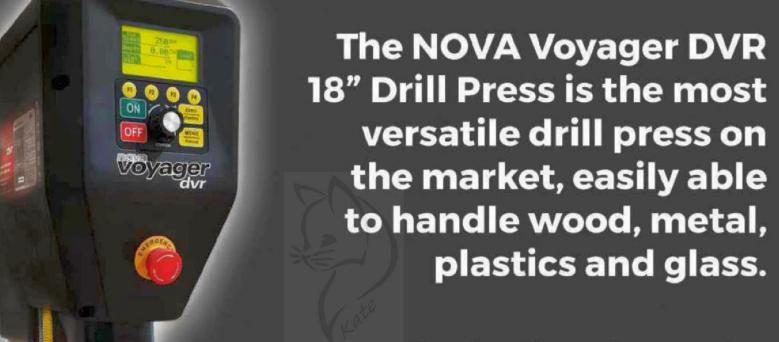


12 Each stool bears a small laser-engraved disc let into a shallow recess on its underside, which carries its maker's name

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AROUND THE HOUSE WITH PHIL DAVY



Apologies for mentioning it again, but it seems more important than ever to support our local hardware shops. I don't mean the big DIY sheds, which are fewer now anyway, I'm referring to those small independent high street retailers who are fighting to survive. Recently I needed some knotting solution in a hurry. A quick search online revealed some steep prices for a small quantity, with several trade counters not having it in stock, either. Later that day I found myself in Wottonunder-Edge, a small Cotswold town I'd never visited before. Strolling up the main street, I spotted the same brand and size in the window of a DIY shop I stumbled across. Perfect, and a couple of guid cheaper, too. Not only do these shops often have lower prices, they tend to stock more of those hard to find items, which the big stores don't bother with. Remember, we're in danger of losing these suppliers if we don't support them...



With a bulging bathroom cabinet, it was time to build a cupboard specifically for first aid items, most of which had been shoved into any spare nook or cranny in no particular order. Of course,

FLEXIBLE STORAGE

WINTER PROJECT: FIRST AID CABINET

Takes: One weekend Tools you'll need: Biscuit jointer, jigsaw, bench planes, router & bits, mitre or table saw, drill & bits

Phil Davy's cabinet construction can be adapted to suit any type of storage, from first aid items to CDs

you could use a cabinet like this for any sort of storage. It would be ideal for CDs or DVDs, though you would need to increase the depth by about 25mm to accommodate these with the door closed.

I used steel hanging plates for fixing the cabinet to the wall, but if filled with CDs it would be pretty heavy. I'd prefer to use French cleats instead, though this makes fitting the back panel tricky. You would either need it to sit in a groove in front of the hanging batten, or reduce it in height so it does not reach the top of the cabinet.

Both the carcass and door are assembled with biscuits joints, but you could just as easily use dowels or lap joints, depending on what power tools you have available. I used No.20 biscuits for the carcass, while smaller No.10 biscuits are more suitable for the door components.

Glazed alternative

If this is to be the main cabinet in the bathroom, it makes sense to substitute glass for the 6mm MDF panel in the door. Instead of mounting the glass in a groove, rout a rebate from the back so that you can either bed it into silicone or pin retaining beads around the edge. That way it's easy enough to replace the mirror should it ever get broken. Shelves can either be fixed or adjustable. For greater storage flexibility I used steel shelf supports, which simply require 5mm holes. Rows of holes drilled in the sides about 30mm apart enable you to rearrange the shelves for taller items. Fixed shelves make the cupboard slightly more rigid and could be biscuited or housed into the side panels.

Decoration

The lower apron is simply decorative and not essential to the construction. You could add hooks or pegs to this for hanging bits and pieces.

For further decoration I added a bead around the inner edge of the cabinet, although it can be fiddly to get a clean result at the corner intersections. The correct method is to use a mason's mitre joint, although it's possible to get a reasonable finish with a chisel and sanding blocks. In hindsight, I would probably rout a bead around the door's inner edges instead, leaving the cabinet edges square. Remember that if you decide to use the cabinet for first aid storage it would be wise to fit a lock to the door, especially if there are kids in the house.

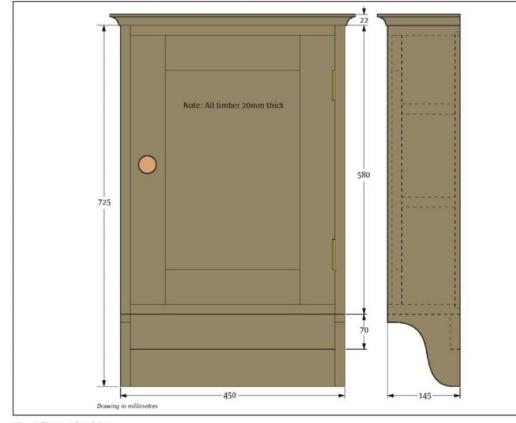


Fig.1 First aid cabinet

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1 Using thin card, make a template for the shaped lower ends, then draw around this onto the timber



2 Carefully cut out the curves with a jigsaw, ensuring to keep just on the waste side of the pencil lines



3 Clean up the sawn curves with a sanding drum mounted in a drill stand



4 Mark out positions of joints on top, bottom and sides and cut slots with a biscuit jointer



5 Use a bearing-guided router bit to add a decorative bead around the carcass edges



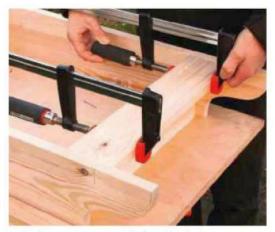
6 Assemble the cabinet with PVA glue, using sash cramps across the joints. Check for square



7 When the glue has dried, plane the end-grain of both sides flush with the top



8 The position where the beading intersects at each corner will need tidying up. Do this with a sharp chisel



9 The lower apron is simply fitted to the bottom panel with biscuits. Glue and pin the sides



10 The cabinet is mounted on the wall with steel hanging plates. Rout recesses and drill screw holes



11 Rout a 7mm deep rebate for the MDF back panel. It's easier to do this before gluing up the carcass!



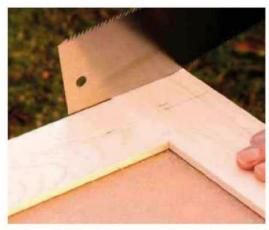
12 Rout a groove along the inner edges of the door stiles and rails. The MDF panel should be a sliding fit



13 Cut slots for 10 biscuits in the door stiles and rails. Do a dry assembly, then glue the biscuits in place



14 Insert the panel and cramp up the door on a flat surface, checking everything is square



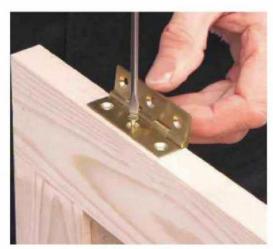
15 Saw off protruding horns on stiles, leaving enough to trim flush with a bench plane



16 Plane the edges of the door to fit the carcass, allowing a gap of about 1mm all round



17 Mark positions of butt hinges on the stile. Flap ends should line up with the rails



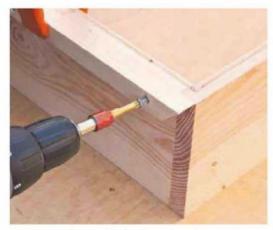
18 Rout or chisel out recesses for hinge flaps. Drill and screw these to the door stile



19 Mark the position of knob or handle on the stile and drill for a mounting screw. Counterbore from rear



20 Both shelves are adjustable and sit on steel supports. These are a push-fit into 5mm holes



21 Mitre and screw blocks along the edges of the top panel to support the coving



22 Saw the coving to length with a mitre saw, and trim with a block plane if slightly over length



23 Fit the front piece of coving first, pre-drilling before pinning to the blocks



24 Mark and drill fixing holes in wall and lift cabinet into position. Fill pin holes, then sand and paint

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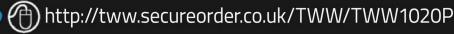
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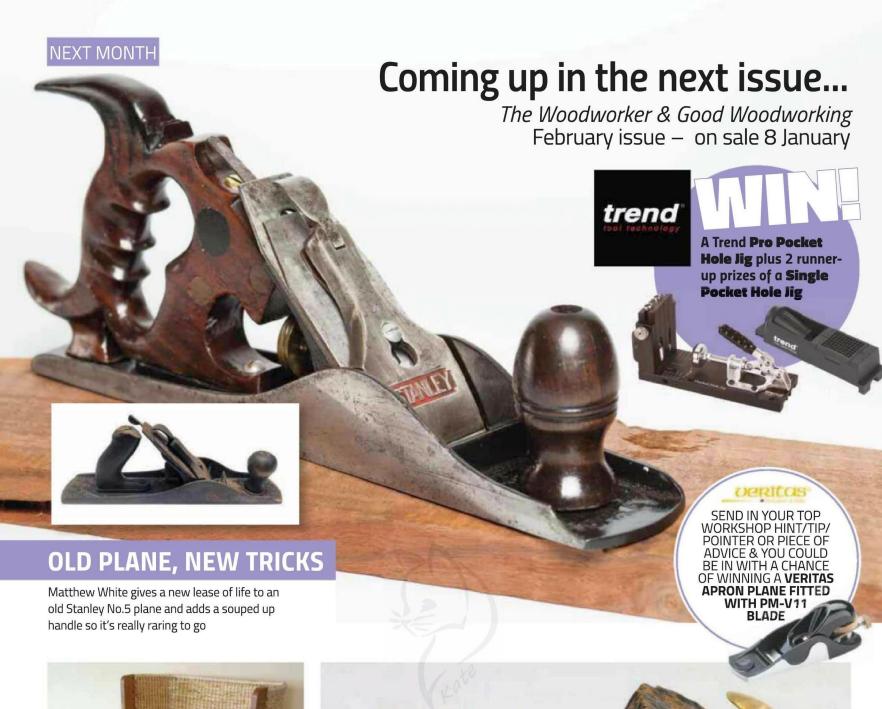
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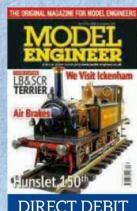
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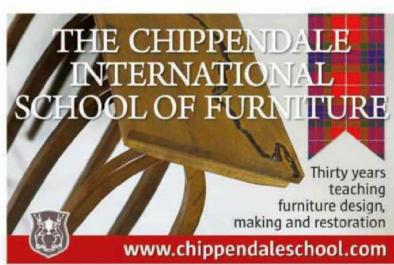
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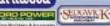
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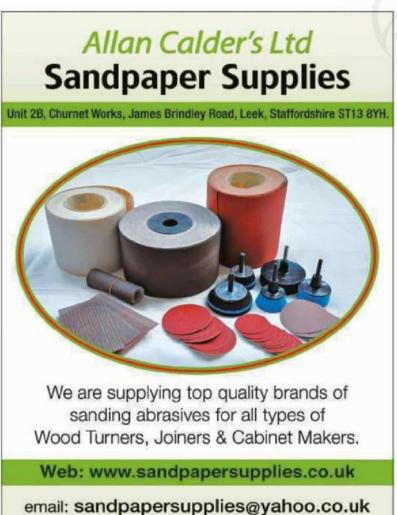




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As we head towards the end of 2020, we bring you another five examples of wonderful woodworking from the world of Instagram





- One of Andrew Nathanson's 'surf chairs' based on the shapes of surfboards and a design that he has honed and perfected over many years, posted by @madeinwarren
- 15 spindle entryway bench finished with @realmilkpaintco in Arabian Night and trimmed in Flag Red, by @silent.mill
- 'Nautile' woodturned sculpture, 53cm tall, 2019, by **@benoitaverly_sculptor**
- Mallet in white oak, maple and hickory, by @ljungkull.designs
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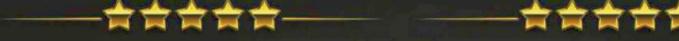




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