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The Woodworker

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December 2017



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& Woodturner



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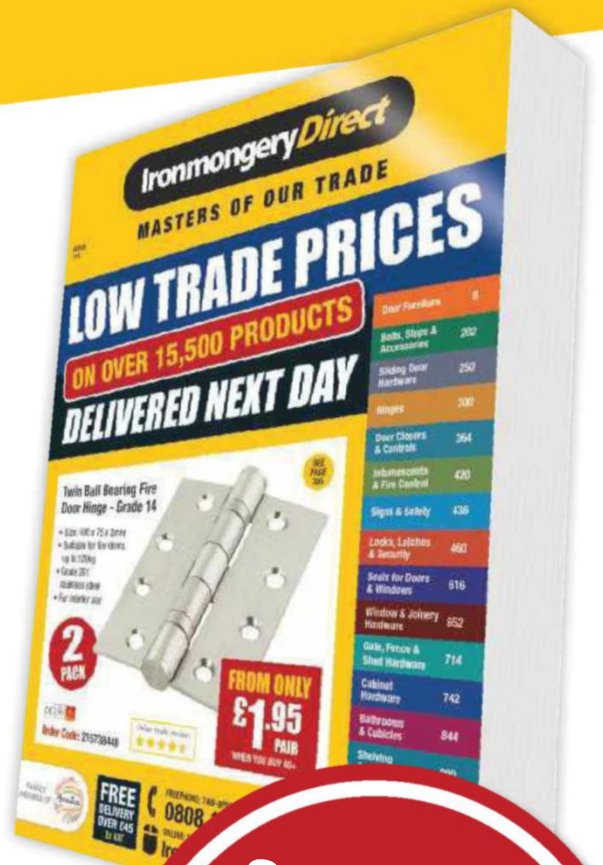
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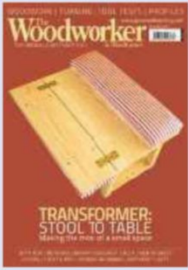
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Published by **MyTime Media Ltd**
Suite 25, Eden House, Enterprise Way,
Edenbridge, Kent TN8 6HF

UK & overseas
Tel: +44 (0)1689 869 840
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SUBSCRIPTIONS

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CURRENT & BACK ISSUES

Website: www.mags-uk.com
Tel: 01733 688 964

EDITORIAL

Group Editor: Tegan Foley
tegan.foley@mytimemedia.com
Editor: Mark Cass
editor.ww@mytimemedia.com

PRODUCTION

Designer: Nik Harber
Retouching Manager: Brian Vickers
Advertising Production: Robin Gray

ADVERTISING

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

MARKETING & SUBSCRIPTIONS

Subscriptions Manager: Kate Hall
Subscriptions: Sarah Pradhan
Tel: 01858 438 798

MANAGEMENT

Group Advertising Manager: Rhona Bolger
rhona.bolger@mytimemedia.com
Tel: 01689 869 891
Chief Executive: Owen Davies
Chairman: Peter Harkness

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



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The Woodworker & Woodturner, ISSN 1752-3524, is published monthly with an additional issue in summer by MYTIME MEDIA Ltd, Enterprise House, Enterprise Way, Edenbridge, Kent TN8 6HF, UK.

The US annual subscription price is 59GBP (equivalent to approximately 98USD). Airfreight and mailing in the USA by agent named Worldnet Shipping Inc., 156-15, 146th Avenue, 2nd Floor, Jamaica, NY 11434, USA.

Periodicals postage paid at Jamaica NY 11431. US Postmaster: Send address changes to The Woodworker & Woodturner, Worldnet Shipping Inc., 156-15, 146th Avenue, 2nd Floor, Jamaica, NY 11434, USA.

Subscription records are maintained at dsb.net 3 Queensbridge, The Lakes, Northampton, NNA 7BF. Air Business Ltd is acting as our mailing agent

Welcome

Quite apart from the initial design – plus the general excitement that heralds any new project – much of the satisfaction derived from a job comes right at the start in the planning stage. And this is a long-lasting and slow release type of pleasure which keeps pace with the work, peaking as various milestones are passed successfully along the way, culminating in a satisfactory conclusion and a deadline well met. Although the average woodworking project is not quite on a par with say, building a suspension bridge, it's still important to have a well thought out plan and to try and stick to it.

This is one of those things that should get a bit easier as the years go by; no longer are we in quite such a tearing hurry, but can afford to be patient as we know it will all come good in the end. It's the difference between cleaning up (and even applying a finish to) a part of a job which will become tricky to access once the whole thing is assembled, or just gluing it up quickly without a thought. The years have taught us that, in many circumstances, it pays to wait. I have to confess it took me longer than it should have done to learn this lesson; I guess I still have the same feelings I had years ago when racing to get the latest Airfix kit assembled, not caring that it would look a lot better if I painted a few parts first.

So, we now have our (sensible) plans in place and things are progressing nicely, but as we know, even the best laid of them can often go awry. In a closed – and almost controlled – environment such as a workshop, it's all too easy to find yourself asking "what could possibly



The Editor considers a change in plan as the rain clouds gather over an outdoor job

go wrong?". Clearly this is all the temptation a sometimes cruel fate needs, and any one of a thousand 'unforeseen problems' can soon be expected. From simple leaks and floods to animal intervention and materials failure, the hazards for the over-confident woodworker are many and various. And if you're working outside? Just multiply the potential for difficulty by a factor of *n*.

But hey, it's not all doom, gloom and disaster, and anyone who expects the worst will almost certainly receive it. So, draw up those plans with optimism and make a start on that job, but just be prepared to be a bit flexible on the finish date...

You can contact Mark on editor.ww@mytimemedia.com

THIS MONTH THE EDITOR HAS BEEN:

Making plans ■ admiring his tidy workshop ■ sharpening ■ changing plans

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In part 1 of making a ditty box, Robin Gates reclaims old oak for the sides and ends, cuts rebates by saw and chisel, and finds a sweet technique for restoring a rusty saw

31 Chisels & gouges

Even though Gary Cook doesn't have a workshop, it hasn't stopped him from amassing an impressive collection of old chisels and gouges, which he shares here

33 Making a portable tool case

Nearly 70 years on, this tool case project from *The Woodworker* of August 1944 should still prove inspiring for readers

34 Metamorphic stool to table (& vice versa)

Tasked with another commission, Peter Bishop manages to hit the brief of producing a stool that also doubles up as a handy coffee table

40 A rural idyll on wheels

As John Greeves shows, although retaining many of its traditional features, the shepherd's hut has evolved to meet the requirements of the 21st century. Here, we look at how a modern version is made, courtesy of Charles Lyster and Jeremy Harris

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Embarking on a road trip to visit his local UK Men's Sheds Association premises, Rick Wheaton is warmly greeted by the members and discovers that each is doing their bit for charity while practising what they love – woodworking

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When the big names of European Modernist design met a brave new British company the result was Isokon. Mark Gould reports

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This month, we step inside the workshop of London-based furniture restorer, Linda Kemp of L J Conservation & Restoration

69 Full bloom

With its fuchsia pattern and black veneering, Ian Hawthorne's box is a real challenge, not to mention a veritable feast for the eyes

90 The writing on the wall

Just when it all was going so well... How mechanisation and new technology combined to bring the best and the worst to Stan Clark's precarious ladder world

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Andrew Hall returns with a fun Christmas turning project, which sees him using simple hollowing techniques to create a wooden snowman that actually smokes!





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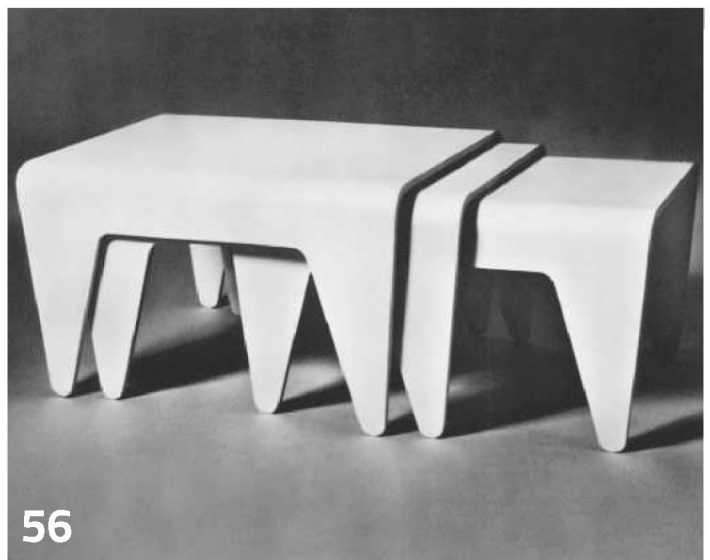
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ANY OTHER BUSINESS

I may have said this before, but it never ceases to amaze me just how much new stuff comes before us in shops, on stalls and online; there is not just one tool for every job, but often two or three or more. Whether they be hand tools, power tools or unique and patented work aids, the list of available items grows bigger by the day. Market trends in new tools are fascinating to follow, especially if you can identify one early on and then try and guess what the most unlikely extrapolation might result in. It's quite clear to the observer that the broad trend at the moment is one of size and scale.

As Li-ion battery technology improves, so is it increasingly possible to make smaller cordless tools and to improve their capabilities to beyond almost their actual size. Smaller – and lighter – power tools are a definite boon for anyone

who isn't a fit, strong lad (who wants to wield an 18V cordless drill all day when a 12V will do the job?), and I think we can all see the advantages in the most portable version of any tool or machine. Can things get too small, though? Will there ever come a point when miniature kit just can't cut it? Hopefully some common sense will reign, and in the meantime, let's just make the most of that new kit and see what they come up with next.

And while you're waiting, I have to say that it's always great to hear from readers, especially if they have a tale to tell or some kind of news to impart. And in this fast-paced electronic world where communication is almost instant, here at *The Woodworker*, things are reassuringly slow and we're not really in any kind of hurry. Drop us a line soon, why don't you?

Mark

NEW DEOS TO SHAPE THE FUTURE OF SANDING

The new Direct Electric Orbital Sander (DEOS) with its revolutionary design is being launched by Mirka and allows the user to get closer to the surface, easily accessing hard-to-reach areas and delivers a flawless smooth finish quicker than other sanders. The DEOS is available in two sizes: DEOS 383 CV 70 x 198 and DEOS 353 CV 81 x 133, making it suitable for use across multiple applications, including stripping back old paint and lacquer, for example.

The DEOS is the only electric orbital sander on the market that has been optimised for net abrasives by incorporating more than 45 holes in the pad. When the tool is combined with Mirka's net and paper abrasives, it offers an excellent scratch pattern and a dust-free work environment. Its innovative features incorporate a powerful brushless motor, which provides a high power to weight ratio when in use. The design



team has been able to reduce the weight, size and height of the sander, providing customers with a compact, lightweight and easy to use tool. In addition, it has an integrated vibration sensor with Bluetooth technology that can be connected to a mobile device with the new myMirka app to give guidance on vibration levels; see www.mirka.com/uk for more information. Please note that Mirka offers a two-year warranty as standard, with an additional year given subject to the tool being registered within 30 days of purchase on the Mirka website.

BRAND-NEW BROWNING WAX

Whether you're looking to perk up a dining table or completely transform a dresser, Frenchic paint gives you the tools you need to renovate your wooden furniture with their huge range of creamy, rich paint that is incredibly easy to use. The Frenchic range now includes 30 colours in their Original Range, 15 colours in their Lazy Range and six in their All Fresco Range, alongside their Easy Crackle, Finishing Coat, waxes, stencils and accessories. All are EN:71-3 certified meaning they are safe to use on children's toys, and are virtually odour free with no VOCs.

Hot off the press is their brand-new Browning Wax – a rich, dark brown colour with a body butter-like texture that is virtually odourless. This product will not only seal your painted furniture, but will also give it a depth of age and richness that buffs easily to a mirror-like shine. Simply apply using Frenchic's signature waxing brushes (from £16.95), wipe off any excess and leave for 45 minutes until buffing. Available in a 400ml tin for £14.95; see www.frenchicpaint.co.uk.



DIARY – DECEMBER

- 1 & 1* Pen making
- 4–5, 7–8 & 7–8* Beginners' woodturning
- 4–5 Introduction to milling
- 5–8 Make a side table
- 11–15 Make a Windsor chair
- 13* Sharpening with Tormek Woodturning
- 15* Scrollsaw course

* Course held in Sittingbourne, Kent

Axminster Tools & Machinery

Unit 10 Weycroft Avenue
Axminster, Devon EX13 5PH
Tel: 08009 751 905
Web: www.axminster.co.uk

- 11 Green wood spoon carving
- 15–17 Woodturning – bowls with texture
- 18 & 19 Make a small turned bowl

West Dean College

West Dean, near Chichester
West Sussex PO18 0QZ
Tel: 01243 811 301
Web: www.westdean.org.uk

- 9–10 Dovetailing weekend
- 29 Half-day woodwork taster
- 30 Half-day marquetry taster

Chris Tribe, The Cornmill, Railway Road
Ilkley, West Yorkshire LS29 8HT

Tel: 01943 602 836

Web: www.christribefurniturecourses.com

- 11–15 Skills week: Sharpening & essential cabinetmaking hand skills

John Lloyd Fine Furniture, Bankside Farm
Ditchling Common, Burgess Hill
East Sussex RH15 0SJ

Tel: 01444 480 388

Web: www.johnlloydfinefurniture.co.uk

- 3 Introduction to spoon carving

The Goodlife Centre

49/55 Great Guildford Street
London SE1 0ES
Tel: 0207 760 7613

Web: www.thegoodlifecentre.co.uk

- 11–15 Furniture making for beginners – fundamentals & tool sharpening
- 18–19 Safe operation of wood machines

Peter Sefton Furniture School

The Threshing Barn, Welland Road
Upton Upon Severn, Worcester
Worcestershire WR8 0SN

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Black Isle Woodturning (Scotland)
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Web: www.blackislewoodturning.com

Brodies Timber (Perthshire)
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Brooks Brothers Timber (Essex)
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Web: www.cilfieganawmill.com

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

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Web: www.thetimbermill.com

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Web: www.woodrecycling.org.uk

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Web: www.thorogood.co.uk

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Web: www.timberman.co.uk

Tree Station (Lancashire)
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Web: www.treestation.co.uk

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

Waterloo Timber Ltd (Lancashire)
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Web: No website

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Web: www.wentwoodtimbercentre.co.uk

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This rugged yet highly manoeuvrable extractor weighs 16.9kg, has large rear wheels and a front caster for full mobility with large bumper surround. This extractor is available in 110V mode with 600W power take off or 240V mode with 1,900W power take off. Both models are supplied with a full cleaning kit including 2.5m of flexible hose, pipes and floor and crevice nozzles. Priced from £903.60 inc VAT, see www.makita.com to find out more.



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Machine Mart's new Autumn/Winter catalogue

Also now available, Machine Mart's Autumn/Winter catalogue has all the tools and equipment you need. Packed with over 1,600 great new products and massive price cuts, the catalogue is a 'must have' for woodworking enthusiasts wanting huge choice at unbeatable value.

Machine Mart offers a superb range of woodworking tools and machinery including sanders, saws, lathes and log splitters along with a superb range of heaters and cast-iron stoves, plus much more. To request your free copy, see www.machinemart.co.uk.



NEW TORMEK T-4 MODEL PROMISES SERIOUSLY SHARP KNIVES & AXES

Tormek has introduced the limited Tormek T-4 Bushcraft Edition, which is made especially for the outdoor market. The T-4 includes jigs for sharpening knives, axes and other essential accessories. Also included is a Kansbol knife – an ultimate outdoor knife – made by Morakniv of Mora in Sweden.

The Tormek method of sharpening gives the user complete control over the angle and shape of the edge. The method removes the minimum amount of material, thereby prolonging the life of the tools. Also, the water cooling prevents any loss of temper in the steel and leaves a longer lasting edge.

This limited Bushcraft Edition is supplied with the Tormek Original Grindstone and a genuine leather honing wheel. It comes with all the standard accessories: Stone Grader SP-650, AngleMaster WM-200, Honing Compound PA-70, Tormek's Handbook on sharpening, and the DVD. Besides this, you also get jigs for sharpening knives and axes. With this equipment, you can sharpen almost every type of knife (including kitchen knives) and axes, and bring them safely to a long-lasting razor edge. Also included in the box, free of charge, is a Kansbol knife with sheath. This knife has the flexibility of a lightweight knife and the strength of a more robust model, making it perfect for your outdoor excursions. Tormek offer a range of jigs for various tools, which can be purchased separately and used on the same system according to your needs: for example, cabinetmaking, woodturning and woodcarving. Currently priced at £319.36; see www.brimarc.com for more information.



'SAFEGUARD' SENSOR LIGHT RANGE

One of the world's biggest battery manufacturers has introduced its own range of high-quality outdoor security lights, with a battery life of nearly two years. The motion-sensitive and cordless SafeGuard range from GP Batteries is available now with a price range from £24.99-£49.99.

This is the first time the updated range has been made available to the UK market. Home protection is a key benefit, with over 35 million burglaries or thefts recorded in England and Wales in the last 12 months. SafeGuard has already proved popular in the Nordic market due to their versatility – requiring no extra wiring – and high durability to temperature dips and wet weather, in comparison to cheaper models. They are also liked by customers with outbuildings or workshops. "As the nights draw in, attention turns to the outdoor security sector, and these new products are going to be a valuable new addition to the market," says Managing Director Gareth Wheller. To find out more, see www.gpbatteries.com.



WINNERS ANNOUNCED FOR INDUSTRY AWARDS

Put it down to perfect timing, with the heightened interest in offsite technology, combined with the abundance of outstanding projects, and it's easy to see why the 2017 Structural Timber Awards surpassed all previous events in terms of the calibre of entries and attendance.

Construction professionals recently gathered at this prestigious award ceremony, held at the National Conference Centre, Birmingham, to celebrate the great, the good and the simply outstanding.

With over 200 highly impressive submissions, this year's Structural Timber Awards judges had an onerous job of selecting the winners. The big winner on the night was B & K Structures and Waugh Thistleton Architects for Dalston Lane who scooped the Winner of Winners. One of the judges described the project as "inspirational in demonstrating what is possible using the correct balance of time, cost and performance."

There has already been a large amount of attention focused on next year's awards, which will be returning in October 2018. The Awards, once again, will reward excellence, celebrate expertise in timber technology and the ways it contributes to an attractive, energy efficient and sustainable built environment.

For the hundreds of construction professionals who have attended this event, there is no need to explain the promotional opportunities that go hand in hand with it. The Awards provide one of the most effective platforms to promote brands or companies alongside the best of the best.

For further details, contact amy.pryce@radar-communications.co.uk and please note that the submission deadline for entries into next year's Awards is 31 May 2018.



Winners of the Structural Timber Awards 2017

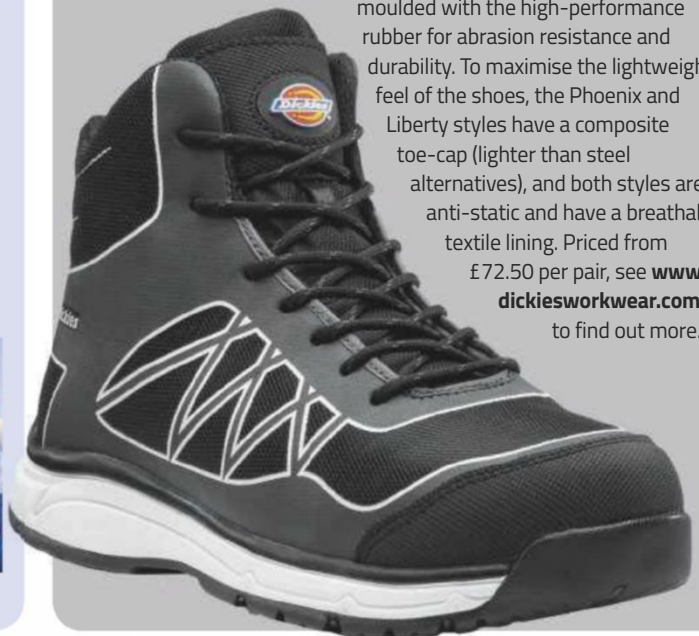
DICKIES LAUNCH NEW FOOTWEAR RANGE

Dickies Workwear is launching two new footwear lines offering greater flexibility than ever before, using its latest innovative outsole designs. The newest additions to the company's extensive footwear range, the Phoenix and Liberty styles, are both available as a trainer or boot and feature Dickies brand-new DTC outsole. Designed by footwear experts to achieve the highest grip performance on smoother surfaces, the DTC sole has ergonomic flex lines and geometric tread patterns for maximum ground contact – even in wet conditions.

Ideal for tradesmen working in an indoor environment, these styles are particularly suitable for anyone who is often required to kneel or bend, while offering a high level of comfort for those who are on their feet all day.

The midsole is made from EVA (ethyl vinyl acetate), which is especially lightweight and flexible. This material provides cushioning and rebound, which helps absorb shock from the ground, while the outer sole is

moulded with the high-performance rubber for abrasion resistance and durability. To maximise the lightweight feel of the shoes, the Phoenix and Liberty styles have a composite toe-cap (lighter than steel alternatives), and both styles are anti-static and have a breathable textile lining. Priced from £72.50 per pair, see www.dickiesworkwear.com to find out more.



NEW TREND HEAVY-DUTY DOOR LIFTER

Carpenters, shopfitters, plasterers, dryliners, locksmiths and general builders will all benefit from the new Heavy-Duty Door and Board Lifter from Trend. As an aid to speeding up productivity, it will immediately become a sound investment and asset where awkward securing and alignment tasks involving heavy lifting is required.

The powerful pivoting lifter will make controlled lifting, positioning and securing of doors, panels and sheet materials up to 200kg a breeze, as it not only lifts up to 60mm in height but also moves laterally, allowing precision alignment prior to fixing. The robust steel construction has a large lifting flange to hold the work at the front, along with a non-slip rubber foot pad to aid grip as you lift. Additionally, the lifter can also be operated with foot or knee pressure to suit the work being secured or positioned. The DOOR/LIFT/C is priced at £41.40 inc VAT; see www.trend-uk.com to find out more.



PROKRAFT INTRODUCES AFFORDABLE SOLID BRASS SIDE RAIL HINGES

Prokraft has further expanded its specialist range with new solid brass boxmaker's side rail hinges. Available in polished brass finish or chromed finish these are finely engineered and finished solid brass products made from 2.2mm brass section. The 6mm width makes them ideal for both narrow walled boxes and wider ones alike, and both feature a stop point at approximately 93°. Each pair is supplied with traditional slotted head solid brass screws with polished brass or chrome finish to match the hinges perfectly. Priced at £13.99 per pair for either finish, see www.prokraft.co.uk for further information.



FORGEFIX SCREWSART™ FUNDRAISING GOES INTERGALACTIC

ForgeFix looks set to repeat its success in using an innovative form of art to raise money for charity.

Earlier this year, the business donated a 1.2 x 1m portrait of David Bowie, which was created using 4,000 of its ForgeFast elite performance woodscrews, for sale at a silent charity auction held at the NMBS Gala Dinner.

The picture subsequently sold for £1,000 with all proceeds being donated to CRASH – the construction industry charity – which supports homeless and hospice charities with free advice, practical assistance and financial aid.

Now, the company aims to go one better with a new portrait of Carrie Fisher. This time, the tribute to the recently deceased actress has been created using over 5,000 ForgeFast screws. It features Carrie in perhaps the most famous role of her career – as the iconic Princess Leia in *Star Wars*.

The latest portrait recently enjoyed pride of place on the ForgeFix stand at the UK Construction Week (UKCW) exhibition 2017, which ran from 10–12 October. In the near future, the company will once again donate the portrait to NMBS so its sale can be used to raise funds for CRASH.

ForgeFix began creating the screw-based portraits of legends from the world of music, sport and film – which has been dubbed ScrewsArt™ – as a unique and fun way of demonstrating the capabilities of its ForgeFast range.

The Leia picture, and all of the ScrewsArt™ portraits, have been created with the help of existing and potential customers who attended the ForgeFast launch events last year and by visitors to ForgeFix's stand at various trade shows and exhibitions. People have been offered the opportunity to insert screws into different templates to enable them to experience some of the benefits of ForgeFast first-hand; to find out more, see www.forgefix.co.uk.

A MODERN PAINT WITH TRADITIONAL STYLE

Providing an extremely high gloss finish that replicates the look of traditional oil-based products, Teknos Futura Aqua 80 is a waterborne paint so is a popular choice in conservation areas where products better suited to today's environment are required. The highly versatile paint retains its appearance and can be used on doors and other joinery as well as furniture and metalwork, including railings and radiators.

Teknos Futura Aqua 80 is a waterborne urethane alkyd-based top coat designed for interior or exterior use and offers an incredibly tough finish on wood, metal and building board surfaces. Environmentally-friendly and complying fully with European VOC emission standards and REACH regulations, it has low VOC levels and no odour.

The paint can be thinned with water and is easy to apply by brush, roller and spray. It flows well, leaves few brush marks and does not drip; the surface is dry after one hour and through-dry after two to three days. Clean up is with appropriate detergent and warm water.

A key feature of this new paint is its durability. It can be tinted to most colour shades and the modern pigments used disperse evenly through the paint to provide lasting colour that is fade-, weather- and UV-resistant.

The Futura Aqua portfolio of waterborne paints provides varying sheen levels and comprises Futura Aqua 20, which offers a semi-matt finish, and Futura Aqua 40, with a semi-gloss finish. The range is complemented by the versatile Futura Aqua 3 primer and is available in 0.45, 0.9 and 2.7 litre sizes; to find out more, see www.teknos.co.uk.



What's new from



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'THE' TOOL SHOW '17 AT KEMPTON PARK

D&M Tools would like to say a huge thank you to exhibitors and visitors who attended our 17th annual show in October and helped to make it the most successful to date.

Visitors travelled from far and wide to attend the exhibition of hand tools, power tools and woodworking machinery at Kempton Park Racecourse in Sunbury-on-Thames, which took place over the weekend of 6–8 October.

This annual free event is arguably the highlight of the woodworking calendar with probably the largest display of tools and accessories from all the leading brands. Visitors to the show had the opportunity to get their hands on the latest products, try out the kit, compare various brands and talk to the experts before taking advantage of the exclusive show deals and special offers.

The show featured huge stands from all the leading names, and the fine weather allowed visitors to enjoy the various outdoor displays as well as the two floors of indoor exhibition space.

A new feature for 2017 was Woodworking Live from Record Power. This exciting event brought together some of the UK's most respected and popular woodworkers – Nick Zammeti of NZ Woodturning Co; Jim Overton of Jimson's Stuff; Ben Crowe of Crimson Guitars (who also had a large collection of antique tools on display and for sale); and professional woodturner David Lowe as well as Stuart Pickering and Craig Heffren from Record Power – for three days of inspiration, creativity and entertainment.

We look forward to seeing you again next year! Look for details and updates on www.thetoolshow.com.



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SIDNEY THE SMOKING SNOWMAN



Andrew Hall returns with a fun Christmas turning project, which sees him using simple hollowing techniques to create a wooden snowman that actually smokes!

TOOLS REQUIRED

25mm spindle gouge
10mm bowl gouge
3mm parting tool
10mm beading tool
Skew chisel
Bedan
Hollowing tool of your choice
Centre finder
Abrasives and finish of your choice for the exterior

It's that time of year when we want to take to the lathe and produce something for Christmas. I first turned the snowman featured in this article after I'd demonstrated at the Irish Woodturners' Guild in 2010 after being inspired by my very kind hosts Sam and Minnie Emmerson. Minnie had lots of turned incense holders around the house, which gave me the idea of adapting the design to that of a snowman smoking a pipe. **WW**

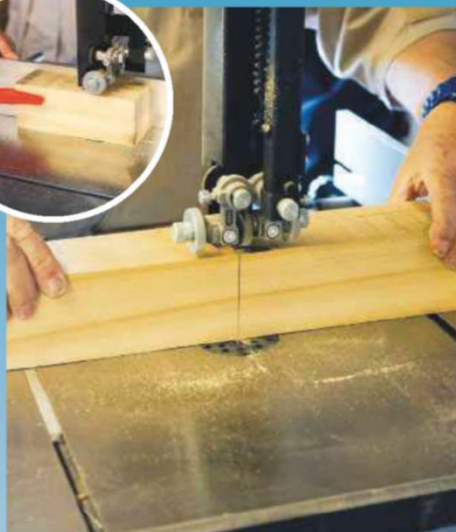




1 Start with a dry piece of branchwood or square section that is larger than 200mm long x 100mm diameter, which will allow it to be turned down to that size



2 I prepare most of my materials on the bandsaw but one thing to note is when cutting log sections, always use 'V' blocks as it can be potentially very dangerous if the piece rolls into the blade – the hand could be drawn in or the blade buckled



3 When using square section, I use the sliding mitre square and keep the guard as close to the material and my hands as far away from the material as possible – always use a push stick if in doubt



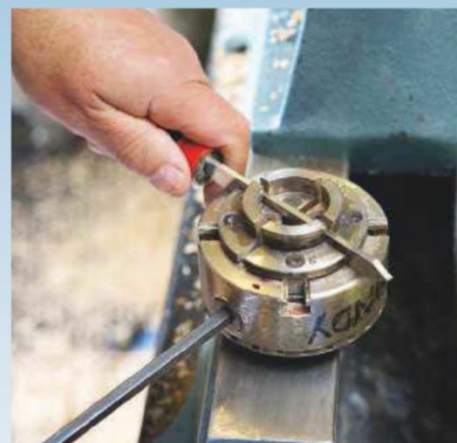
4 Find the centre on the end of your branch – I use a centre finder on the 60° lines or the jaw carriers of a 100mm chuck



5 With a square section I use a rule, the centre finder on the 90° lines, or I finger gauge and eyeball the centre for speed



6 I'm using the log section for the main body of the snowman and the square section for the hat. Place the material between centres – I use a Steb drive, but any drive with two or four prongs will suffice. I find the Steb centres very useful for removing the spindle from between centres and replacing it accurately. Remove the waste and turn down to a cylinder measuring 200mm long × 100mm in diameter



7 Cut a spigot or tenon using a 10mm skew chisel – I grind mine to an angle of 6° to reflect the dovetail on the jaws of the chuck. Make sure the spigot is the optimum circle; this can be achieved by closing the jaws and opening them to the thickness of a 3mm parting tool and most jaws will be at their full 360° circle. This creates a great hold and prevents bruising



8 When cutting the spigot use bow callipers and if you are new to turning, always stop the lathe to check the size. Once you have the confidence, turn a spigot to size with the callipers resting on the wood. Safety note: always round the points of the calliper off with abrasive as they are sharp when they are new and will dig into and bounce off the wood. Also, ensure to hold the callipers so that one rounded arm is at the clock position of 12 and the other at 4. They should safely drop over the diameter when it is at the correct size



9 Using a 3mm parting tool, part off 25mm from one end for the base. Ensure to part it to within a 12mm dowel and then proceed to cut the section off using a pull saw



10 Place the material in the chuck and using a 10mm bowl gouge, face up the material and create a lead in with the 3mm parting tool



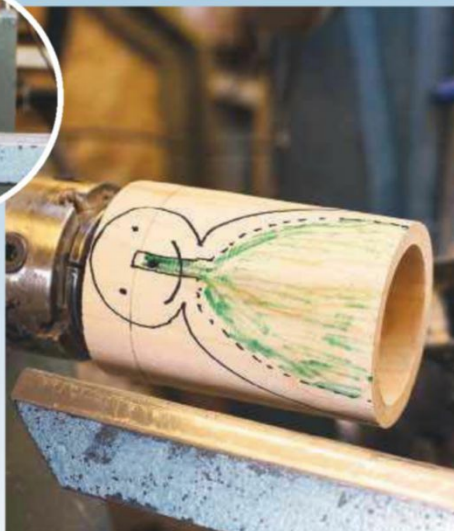
11 Drill a 10mm hole 150mm deep using a Jacobs chuck. Drill 12mm deep at a time and clean the flutes with a brush. Safety note: never drill on the lathe any faster than 500rpm. Then, using the 10mm bowl gouge with a swept-back grind, remove the first 24mm of timber in a hollowing cut, using only the bottom third of the wing



12 Next, I use hollowing tools such as the Little Brother or the small Rolly Munro to remove the bulk of the material, and for the finishing cuts, I use the closed cup cutting tool from Ashley Iles, or the tungsten cutting tool from Simon Hope



13 Hollow out the body of the snowman and keep clearing out the shavings using an air gun or blow them out manually with a straw or a tube until you get to your final depth, checking the wall thickness as you remove the material with callipers. Note the light on the toolrest, which illuminates the inside of the piece. This is a magnetic light available from Woodart Products, which allows you to see what you're doing



14 Onto the hollowed vessel, sketch the shape of the snowman's face – let's call him Sidney



15 The hollowing for this vessel is the same process used when hollowing a basic box, goblet or open hollow form



16 Turn the outer shape and then sand the main part of the body down to a 400 grit finish



17 Reverse Sidney round and hold him on the outer jaws of the chuck so that the shape is supported by the tailstock, then turn the head using a bowl gouge with a swept-back grind



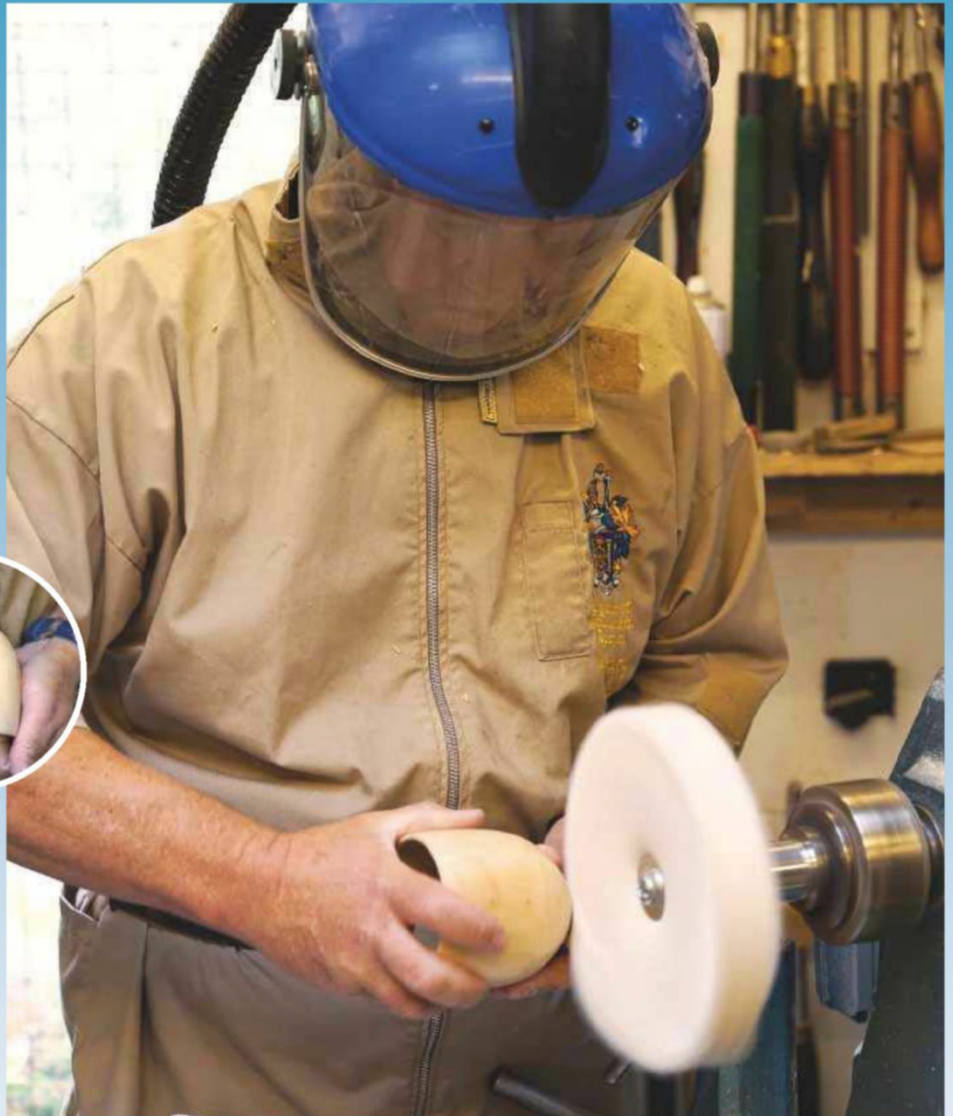
18 Sand to a 400 grit finish, then mark the positions for the eyes, nose, mouth and jacket buttons



19 Use a bradawl to mark holes and drill for the eyes and mouth using a 3mm drill bit...



20 ... Sidney is then ready to have the tails at the back of his coat cut out using a jigsaw. This gap allows a through flow of air, which in turn allows the smoke from the incense cone to cleverly exit from his mouth



21 Whenever sanding or polishing with a mopping system, always protect your lungs: I have an air mask, Record Camvac extractors and a Record fine dust unit. I can't stress how important it is for me to protect my lungs having worked with wood all my working life. I should have protected them better when I was younger as now I know when I've been sanding, even with the protection I use. So to all young and old turners just starting out, in my opinion, the first thing you should buy is a good quality air mask, then your lathe and tools



22 Sidney will need a nose, pair of eyes, buttons, a hat and of course his pipe. I turned a nose out of a piece of orange-coloured sheoak...



23 ... and the pipe from an African blackwood pen blank



24 The buttons are upholstery studs and his eyes are teddy bear eyes, both of which can easily be sourced online



25 Sidney's first little hat is made in the same way as that shown in the last article (see *WW* Sept)...



26 ... and the second hat is turned and left solid inside, rather than being hollowed out



27 The hats are held on Sidney's head with the aid of self-adhesive hook-and-loop strips



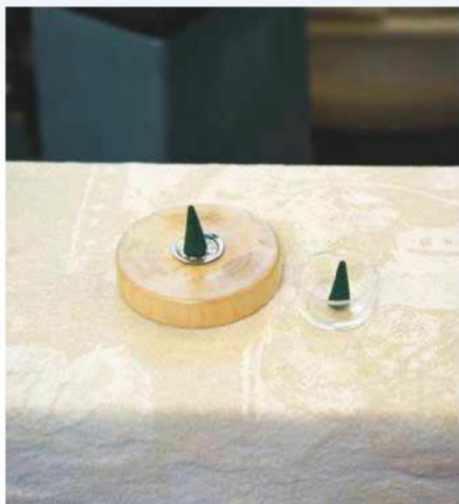
28 The last process is to take the 25mm piece parted off at the beginning and turn it into a base



29 True up the base and cut a recess to chuck the piece, then true up the face and sides



30 Sand through to 400 grit and buff to a shiny finish using the Beall or Chestnut three-stage buffing system, using tripoli and white diamond followed by carnauba wax



31 Incense cones can be purchased online or in various ethic shops – jasmine and Nag Champa are my favourites. Some burn quicker than others but the quality cones last about 30 minutes per cone. Safety note: use the foil tray supplied with the cones to form a barrier between the heat of the cone and the base, or use glass tealight holders, which also offer an effective way of protecting the surface from burning



32 Sidney the smoking snowman is now complete – Merry Christmas!

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A box called Ditto PART 1

In part 1 of making a ditty box, **Robin Gates** reclaims old oak for the sides and ends, cuts rebates by saw and chisel, and finds a sweet technique for restoring a rusty saw

I had been planning to make a box of some sort for about a year, with designs flitting in and out of my head like butterflies over the garden wall. It seemed I'd never get started.

Thinking it might help to skip the design stage and use someone else's plan, I picked up a book on basic box making, only to discover its author used a table saw, bandsaw, thicknesser, jointer, and more jigs than a Highland cèilidh. If this is 'basic' box making, I thought, my approach would have to be labelled 'primitive', because my most sophisticated tool is a hand plane.

The tipping point for me to slide from planning into action was flattening my bench. Having struggled to clamp anything sufficiently flat and stationary to truly square a board, a flurry of activity with jack plane, jointer and winding sticks had given me the essential flat surface required to join piece 'A' to piece 'B' with reasonable chance of achieving a right angle.

Box wood

The project took another step forward when I turned my attention from design to materials, and considered what wood I had to make a box from, which amounted to some odd boards

reclaimed from discarded furniture. Saving thrown-out timber from the flames suits me well. It avoids waste and supplies well-seasoned wood very cheaply. It also imposes a few restrictions on design and this helps to steer a project in the early stages. Splits here, clusters of screw holes there, and weird shapes everywhere arising from long-lost purposes, typically reduce a piece by an order of magnitude once pruned to a clean and practical board. Time spent designing a dining table would be better spent on a set of coasters if that's all the timber that's available.

In this instance some oak salvaged from an old sideboard was in good nick on the faces, with only some hinge recesses, and the wreckage of machine-cut dovetail joints to dispose of, so I earmarked it for the sides and ends of the box. I also had a narrow plank of elm, slightly bowed, having come from an old table, which had stood outside under a mountain of junk, but it showed attractive grain and would be worth persevering with for the box's base and lid.

Both timbers were darkly and deeply stained, so I began by stripping surfaces down to clear wood with the scrub plane (**photo 1**), then smoothing away the scrub's furrows with the jack plane



(**photo 2**). The oak ended up 15mm-thick. After resawing the elm and planing out the rip saw marks, thickness was reduced to about 8mm, and the bow had disappeared, so I cut it to approximate length to marry up with the oak.

Now, the approximate box dimensions allowed by the materials to hand were 250mm long × 130mm wide × 80mm high, approximating to the proportions of a brick, and with this in mind I stumbled on a likely box design while browsing in a local antiques shop – a sailor's ditty box.

Project Ditto

The way the box hefted, being so eminently portable, appealed to me straight away, and reckoning that a box design in the hands is worth two in the book, I decided I could do ditto – which is how this project got its name.



1 Stripping stained oak back to plain timber with the scrub plane



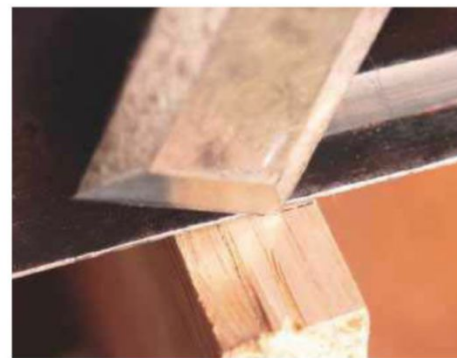




2 Smoothing away the scrub plane's furrows with the jack plane



3 Scribing width with a chisel for the first corner rebate...



4 ... and continuing on the edge to mark the depth



5 Using a marking gauge on the end of the board



6 Deepening the line across the face of the board...



7 ... before chiselling out a trench and shoulder...



8 ... then splitting out the waste from the end of the board



9 Removing wood in smaller bites near the depth line



10 Paring vertically back to the line

Traditionally, a ditty box is for a sailor's personal items – shoe brushes, razor, sewing kit – and it usually has a hinged lid, but this box (from the German navy, circa 1900s) had a sliding lid, slotting tidily into its grooves, whispering along and shutting with a resounding knock of wood on wood. In terms of space the sliding lid is highly efficient, since the box demands barely more than its own volume. Whereas the sliding lid removes and stows flat, a hinged lid requires space to swing through an arc, and unless it has that space you can't get into the box. In the cramped accommodation of a ship, a ditty box with a sliding lid seems very practical.

Having settled on the timber and the design, my thoughts turned to details of construction, and corner joints in particular. The original German box, in pine, was assembled with dovetail joints, but with simplicity as my guide, I decided to down-grade to rebated corner joints. With one board being inset to the rebate cut in another, the shoulder of the rebate would give a boost to a corner's right-angled stability, while the rebate's floor would reduce the amount of

exposed end-grain. The base of the German box was nailed into place, and that suited me perfectly.

Down the years I'd cut rebates long, short, narrow and wide, but none of a quality befitting a small box to be nestled in the hands and scrutinised. The sins of the glazing rebate had been smoothed over with putty, while a functional quality seemed adequate for those secreted in lofts and under floors. Cometh the ditty box, however, cometh the fine rebate joint, or so I hoped. There were two techniques I wanted to compare for this: chiselling, and sawing.

One chisel

The metallurgically inclined have written reams on the qualities of steels used to make chisels, but what sold me on Marples chisels was their jolly plastic split-proof handles, which glow like honey when they catch the sun. Well, the steel's not bad either – so I took the 25mm tool, honed its edge and attempted cutting a rebate with it alone.

I began by using the inset board as a guide to the width of the rebate required, scribing a line across

the face with the corner of the chisel (photo 3), and continued this line about halfway down each edge of the board to mark the depth (photo 4). I used a marking gauge, set to the rebate depth, to scribe across the end of the board (photo 5).

Next, placing the chisel in the line scribed on the face of the board, and with the bevel facing the waste, I gave it a sharp rap with the lump hammer to deepen the cut; harsh treatment, perhaps, but the split-proof handle can deal with it. Now, lowering the chisel to a shallow angle, I cut a sloping trench (photo 7), which created a vertical shoulder. I repeated these steps a couple of times to deepen and widen the trench.

Working against a bench stop, I began splitting the waste from the end of the board (photo 8), taking progressively thinner bites as I neared the depth line (photo 9). For the last smidgen of waste I clamped the board vertically and pared down to the line (photo 10). Once the floor of the rebate was flat, I paried across the grain to clean up the shoulder. After so much hammering, chipping and paring, I was pleasantly surprised at how well



11 A fair fit for the chiselled rebate joint



12 The S & J tenon saw as found, with blunt and rusty blade



13 Disassembled for restoration



14 Bath time for the blade, with Sellotape protecting the brass



15 Green fungal islands in a dark sea of molasses



16 The blade after soaking for three weeks



17 Adding an oak jaw to the bench to improvise a saw clamp



18 Sharpening the rip teeth with a triangular saw file



19 Scribing the oak for a sawn rebate

the joint went together, with ne'er a glimmer of light between the wood and the try-square.

Next, I wanted to compare the chiselled rebate with one that had been sawn, and my best tool for the job was an old tenon saw I'd recently restored.

Royal purple

As a child of the 1960s, I have a soft spot for the tools of that era, and back when Dad took me with him to pick up timber from the Chichester merchants, I recall Spear & Jackson's Double Century tenon saw displayed behind glass, a DIY enthusiast's dream, with a Royal Purple badge.

Today's old tool connoisseur might lament the streamlined handle, which dispensed with the curling horns and lamb's tongue of old, but for me it is sleekly symbolic of the age. Besides, the handle is solid Brazilian rosewood, which, poised behind that heavy ingot of brass bearing down on the blade, only needs shunting lightly forward to slice through timber like the proverbial hot knife through butter. Or it would do, if its once gleaming chrome vanadium steel blade was not rusty as a garden

trowel, and its once razor-edged teeth could still handle solid food. That this battle-weary tool had been delivered to my door was down to a nostalgia-fuelled moment dipping into eBay, when a fuzzy photo and a modest £12 buy-it-now price convinced me I'd found the bargain of all time. My heart sank when the bubble wrap revealed a saw so toothless it almost worked as a straightedge (photo 12), but the blade was indeed straight, and, if the rust could be removed and the teeth filed back to sharpness, there was hope.

Besides, I had an experiment in mind. While perusing old tools in a charity shop, a fellow customer had asked if I'd tried soaking the rusty ones in a solution of molasses. So I bought a jar of the stuff and got stuck in, literally, because once you get this viscous material on your hands it gets everywhere. It's also difficult to dissolve, requiring much hard stirring with the back of a spoon.

Bath time

When the brass saw nuts were removed the handle slid free to reveal a shining area of steel

that had not seen the light of day in 50 years, and a correspondingly gleaming inch of brass back. A bit of research suggested that although molasses removes rust without attacking the ferrous metal itself, it may attack the zinc in brass, so I sealed the saw's spine with Sellotape before lowering the blade into the pitch-black bath (photo 14). I also scraped small spots of paint from the blade, and gave it a preliminary scrub with detergent to remove traces of oil and grease.

For the bath, of 50g molasses in 500ml water, I used a plastic craft box with a lid. In the warmth of late summer I'd reckoned the lid was needed to prevent evaporation, but it was as important for containing the smell; when I opened the shed door next day the sickly-sweet pong was overwhelming, and it seemed every wasp in the neighbourhood had come to visit. After 12 hours there appeared to have been no effect whatsoever on the rust, and the same was true after 24 hours and even a week. Meanwhile pale green mould had begun to grow like islands in a dark chocolate sea (photo 15). Then, after two weeks, scraping away the sludge revealed a definite improvement. My patience was

eventually exhausted after three weeks, when I began to question what any of this had to do with woodwork, and I ended the experiment with a brisk brush off under running water (**photo 16**).

Scrubbing away the brown slime revealed a surprisingly smooth surface, with only minor pitting where there had been rust, and while I'm no chemist I understand the process is called chelation. Something in the molasses, which is made from raw sugar cane, acts as a chelating agent, binding with the rust and rendering it inactive. Just as amazing was how the Sellotape had stuck fast to the brass throughout its 21 days submerged in the sinister solution. One coppery-red streak suggested the molasses had crept inside a crease to attack the zinc, but generally the brass was untouched. Rubbing with methylated spirit removed the sticky residue of the tape, while fine steel wool charged with toothpaste restored a moderate shine to the blade.

To improvise a saw clamp for filing the teeth, I attached an oak 'jaw' to the edge of the bench with screws (**photo 17**). Sharpening a rip saw is about as simple as saw-doctoring gets, only having to push the file perpendicular to the blade (**photo 18**), yet I managed to file one or two teeth into oblivion. By the time I got to the last tooth I'd just about got the hang of it, and considered jointing the blade – filing flats on all the teeth – and beginning again. But when I tested the blade on an offcut, as yet without the handle fitted, it fulfilled that knife-through-butter dream, leaving a fine and clean kerf. So although they were not the teeth to pass a Hollywood screen test, if a measure of sharpening proficiency lies in the saw's ability to cut, then this experiment must be rated a qualified success.



26 Preparing the reclaimed oak

Saw... & chisel

Now, back to rebating that oak, and using the saw this time, although the chisel had a supporting role to play in marking out. Although a chisel is more cumbersome than a marking knife, its weight is an advantage when scribing across the coarse grain of oak (**photo 19**). Even so, it's all too easy to let the grain take charge of the marking tool if pressed too hard, so I begin with a light touch and go over the line several times (**photo 20**).

Working with a chisel proceeds with short, considered movements, whereas sawing is a constant reciprocating action in which the effects of an error stack up quickly, and I've often been disappointed at how far I've strayed from the line and how fast. My particular weakness is to see-saw the saw, cutting deeper at the ends of the kerf than in the middle, and this gets worse the further I am from the reference parallel of the bench surface. Bearing this in mind when sawing the floor of the rebate (**photo 21**), with the work clamped vertically in the vice, I stopped a little short of the line, then turned the work before sawing almost to the line on its other edge, intending to

break out the waste with the chisel (**photo 23**). If I were to aim for a perfect meeting of floor and shoulder saw cuts, it just wouldn't happen; I know I'd see-saw the saw beyond the line.

For sawing the rebate's shoulder (**photo 22**) I used the bench hook, which not only supported the work but prevented me tipping the saw too much. Taking a belt-and-braces approach, I clamped the work to the bench hook using one of my crook holdfasts, which are made from walking sticks, so the whole set-up was rigid.

After breaking the waste from the rebate there was still some cleaning up to do with the chisel (**photo 24**), especially in the angle of the rebate, but once that was done there seemed little difference in quality between the sawn and chiselled rebates (**photo 25**). The saw speeded things up, but where the chisel may have the advantage is in cutting a long rebate, where it can be awkward to keep the saw perfectly straight, vertical and level. Then again, a rebate plane is the tool designed for cutting a long rebate – and that's what I'll be describing in part 2, when I shape the sliding lid and nail this box together. **www**



20 Continuing the line across the end-grain



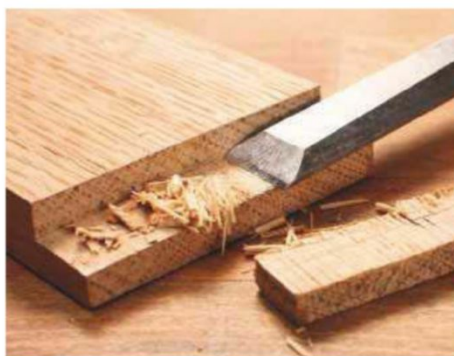
21 Sawing the floor of the rebate...



22 ... followed by the shoulder



23 Breaking out the waste with a chisel



24 Cleaning up the surfaces



25 The sawn rebate is on a par with the chiselled one



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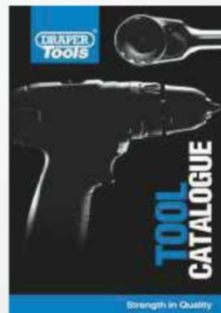
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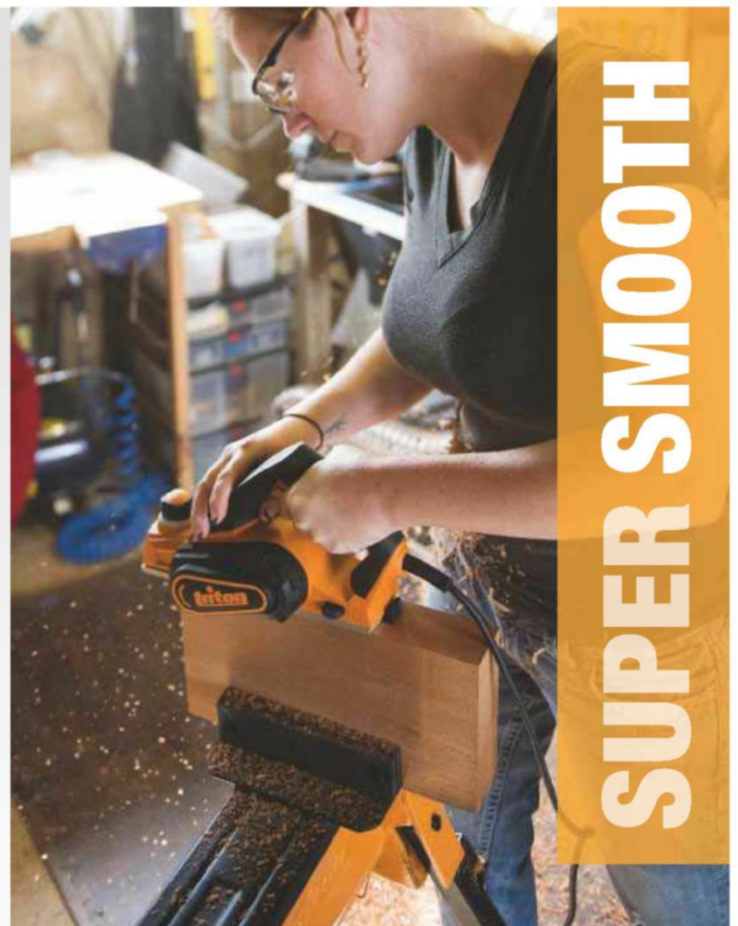
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Chisels & gouges

Even though Gary Cook doesn't have a workshop, this hasn't stopped him from amassing an impressive collection of old chisels and gouges, which he shows us here

I wish I had a workshop space, I really do. For now, our rather compressed existence in the family home means I'm forever working out the best way of storing tools to use and to travel with on days when I'm doing joinery and cabinet work. I currently use a shared workspace in East London (and usually manage to leave behind the tools I need most!) Oh, for a space where I can 'down tools' and return to the next day, without endless packing away.

On this theme of endless re-organisation, I recently repaired an old broken tool chest I found and can now enjoy the relative luxury of having one tool tray solely for my chisels. It sounds a bit ridiculous, I know, but after years of 'making do' with chisels all over the house, in various boxes, I find it quite comforting to have my daily 'go-to' armoury in a single place.

Tray bien

The tray consists of chisels I've brought together over many years of trading with retired joiners and some from online auction purchases. Most are boxwood-handled, bevelled chisels and are sized for small-scale cabinet work (**photo 1**).



1 Close-up of some nice handles



4 A Tyzack chisel



Chisels in daily use

I also have two larger I.Sorby bevels (**photo 2**), which are great when you require a bigger surface to clean up large mortises or tenons.

One common theme across all my chisels is that they are made from the older cast steel. I find this steel is markedly easier to sharpen and it holds an edge for a good day or two in normal use. I hunt for the older 'I.Sorby', 'Marples', 'Thos. Ibbotson' or any of the earlier Sheffield makers, but my most favourite chisel is a Ward (**photo 3**), which for some reason holds an edge even better than the rest, despite it having been ground at an angle much closer to 20° in the past. I've kept it on a low-20s angle and mostly use it for paring, but it is a delight to use.

In the chisel tray there's also a Tyzack firmer chisel (**photo 4**), which I love having around because it's from a Sheffield maker who also set up shop in Old Street, London, just up the road from me. I've documented some of the Tyzack story on my blog – www.hackneytools.com – should anyone want to read more.

Quite often the chisels are found with owners marks, such as a double grinder mark close to the tang and of course stamps into the wood.



2 I.Sorby large bevelled chisels

'Second division' tools

There has recently been a shift towards thicker A2 steel in tools, but I'm happy to stick with what I've got. I spend less time actually sharpening, even though the sessions might be a little more frequent. I've yet to have an issue with any of the older high-carbon steel with my planes, chisels or any other edge tools. I use diamond plates through to green compound on a leather strop and can't imagine tools being sharper.

I also now have an ever-expanding 'second division' of less-used chisels and a lot of gouges, with most of the gouges having been purchased from retired pattern makers (**photo 5**). These men worked at the highest possible level, making incredibly detailed wooden forms for engineers to make sand castings from. Not only did the pattern maker have to work extremely precisely, but he also had to account for the contraction in size of various metals that would occur in the cooling process after casting. It is almost unbelievable to me that in these days of 3D printing, CNC and CAD, there are still men out there who did it all with their hands, a paper drawing and a chisel. **WW**



3 My favourite Ward chisel



5 Various gouges by good makers

FURTHER INFORMATION

Gary's blog – www.hackneytools.com – concentrates primarily on quality woodworking tools from the 19th-20th centuries. You learn something every day, so do get in touch if you have some information that others might find useful – this will be the last article in the series

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Making a portable tool case

Nearly 70 years on, this tool case project from *The Woodworker* of August 1944 should still prove inspiring for readers

If there's one thing that will always be useful to the woodworker, it's a tool box of some kind. The one pictured here is a nice variation on a classic theme but with one difference to the designs normally encountered. I'm referring of course to the separate lid. Instead of the customary hinges, the lid locates into the body proper by means of four flat pegs, and is secured on sides and top by means of standard case clip fittings. Hinges on a tool case can sometimes prove to be vulnerable (I will always be tripping over an open box on the floor), but the independent lid means a greater chance of tidy working, and I suspect that it could double up as a useful tray or ad hoc carrying device on any number of domestic jobs.

Early outing for the metric system

Preferable to a kitbag (better access and improved tool protection), this nice little project from *The Woodworker* of August 1944 should still prove inspiring for readers over 70 years later, and I hope that someone out there will take it on for a job (please let us know here if you do). I don't expect that deal, the recommended timber for the carcass, will be readily available these days, but I would have thought that a length of $6 \times \frac{3}{8}$ in prepared softwood will prove to be a suitable replacement. Interestingly, an early outing for the metric system pops up here in the first magazine mention I can recall noticing; 4mm birch ply is suggested for the front and back, and this in a time when most ply was simply graded and sized by the number of plies involved.

Mark

DO GET IN TOUCH

If any readers have memories and photos of things they or their forebears made from *The Woodworker*, please get in touch as we'd love to see them. Just email me on the usual address: editor.ww@mytimemedia.com and we'll get them in the mag

PORTABLE TOOL CASE

The portable tool case is much in favour with woodworkers since most, if not all, of the tools required on a small job can be easily carried from place to place, the tools being arranged in the case in a neat manner without lost space.

THE home woodworker may find this case of interest as it could be adapted to stand at the back of the bench and hold those tools that are in general use.

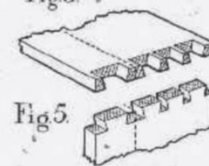
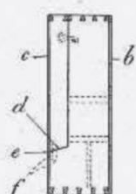
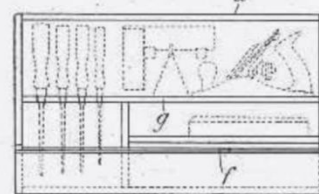
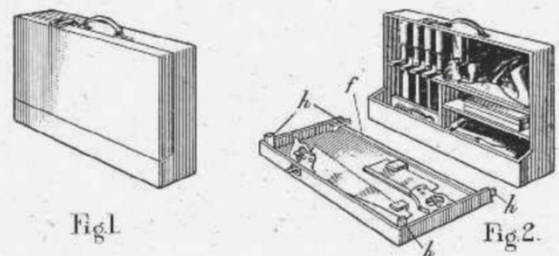
The length is determined by the panel saw which is carried in the lid portion; the other dimensions could be worked out so that the tools are allotted a definite space without waste. A convenient size is 26 ins. by 15 ins. and 5½ ins. deep. A suggested arrangement of tools is shown in Figs. 2 and 3, but with a little ingenuity an even more compact storage could be devised. It will be noted that the edges of the chisels are protected from other tools in the case by a pocket into which the blades project. In planning a layout, due regard should be given to the balance of the case.

Construction.—It will be found that it is easier to make the case as an enclosed box and then separate the lid from the case proper. The frame *a* is best made from ½ in. planed deal and the sides *b* and *c* can be 4 mm. birch ply. It is best to dovetail the frame and it is advisable to have the pins on the top and bottom portions as shown in Fig. 5. There will then be no tendency for the joints to come apart due to the weight of the case. On the top portion of the frame wider pins should be arranged at the position of the joint of the lid.

When the frame is completed, the plywood side *b* can be glued and pinned in place, leaving a slight projection of the plywood all round for cleaning off. This done, gauge a line for the lid and carefully saw through the case on the line with a panel saw. The cut *d* can be done with a tenon saw. The sawn edges of the case and lid are next cleaned up, removing as little wood as possible in the process. If the lid frame is temporarily placed in position on the case, it will be found that the lower edges of the case, below the lid, project slightly. These edges will have to be planed until all are flush.

Next prepare the remaining plywood side, *e*, allowing about ¼ in. in excess of the length and 1 in. in the depth. At a position corresponding to the joint *e* cut the plywood in two and, level with each edge, glue and pin a ½ in. by ½ in. strip, the ½ in. face being against the plywood. Each strip is cut to fit tightly between the ends of the case. The strips are shown at *f*, Figs. 2, 3 and 4. The meeting edges should now be bevelled to the angle of the cut *d* thus when the plywood is finally applied to this side of the case a close joint will be obtained at *e*. As with the face *b*, the plywood is glued and pinned in place and the edges cleaned off.

It will improve the appearance of the case if the exterior edges are slightly rounded. If it is intended to make provision for chisels, as shown, the shelf *g* should be made of ½ in. plywood in order to provide adequate strength between the slats for the chisels. Deal will suffice for the other shelf, partition and pocket. If desired the lid may be hinged at the joint *e* but the lid can be satisfactorily held in place by



EVERY WOODWORKER WILL FIND THIS USEFUL.

A suggested size is 26 ins. by 15 ins. by 5½ ins., but this can be arranged to suit special tools. The interior fittings, too, can be designed in accordance with the tools you have.

blocks *h* screwed and glued to the lid. The saws are held in position by slotted blocks in which the blades rest, the handles being secured by blocks provided with turn buttons.

It is possible to purchase a handle and lock for a wooden attache case which will serve for the present purpose, but these fittings could be obtained from an old case and adapted for use. If the case is for home use only, the lock and handle could be omitted and the lid secured by hooks and pins, as indicated in dotted lines.

Before applying a coat of paint to the case, all nails should be punched and filled with putty. It will probably be found necessary to apply three coats of paint before a good appearance is obtained. (297)

Metamorphic stool to table (& vice versa)

Tasked with another commission, Peter Bishop manages to hit the brief of producing a stool that also doubles up as a handy coffee table

TOOLS & MATERIALS REQUIRED

Materials: English ash and some stripy fabric

Tools: A basic set of hand tools; routers; jointers; powered saws, etc.

Time taken to make: 4-5 days cumulative

Skill level: Intermediate

WARNING: Please note that although many of these images show machines unguarded for clarity, you should ALWAYS ensure that when operating equipment the appropriate guards are in place

At my age you can be a bit selective about the projects you take on. I have this rule now that says: "If it's not interesting or essential, then don't do it!" This one dropped into the interesting bracket. An ongoing dialogue, probably over a year, saw the design of a metamorphic table into a stool come about. I'm not sure that I'd personally go for this particular piece of furniture, but the customer is always right. A husband and wife team wanted a wide, fireside stool that they could share in front of their open fire in winter, toasting their toes to their hearts content. However, the twist was that

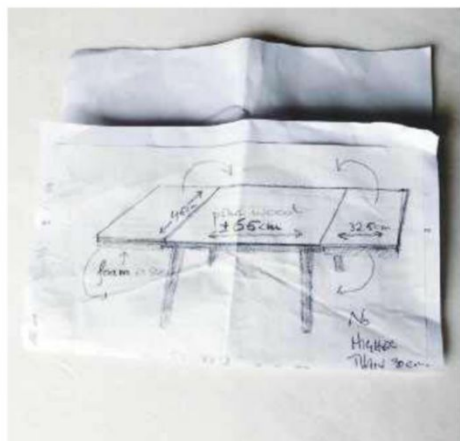
as space was limited, they wanted the stool to turn into a coffee table. This was going to be a challenge in a number of ways.

Making compromises

The trouble with anything that morphs from one thing into another is that there always has to be a compromise. This project is a prime example. Normally a standard height coffee table would be anything from 400-430mm and a foot stool height may vary from as little as 180-350mm. In this case we had to get a balance of sorts. With the flaps out and the table created it had

to be lower than average because as soon as it turned into a stool, you needed to add another 75mm to the overall height. In the end I settled on a low table height of just over 360mm and a high stool at about 440mm; bound to be good for your health with your feet higher than your bum! The other benefit is that you actually end up with a third option: a spare, slightly low seat to sit on – three for the price of one!

The other key challenge was how we could keep the table top flat and level once the stool flaps were turned over the edges and out of the way. I thought through a number of ways



1 The initial plan



2 Acclimatising



3 The top in three pieces



to achieve this, including pull out and hinged supports, but they all seemed a bit chunky and clumsy to me. I had some really strong brass counter-top butterfly hinges in my store cupboard left over from a job many years ago; they have an in-built stop system that ensures the hinge, once folded out, stays pretty level. I reasoned that four of these, with some other sort of adjustment to keep the top level, might just do the job. I committed to their use and pondered on how I could finely adjust them at a later stage. With those decisions made, it was time to get cracking and the first step was to choose the timber.

Timber choice

The timber of choice was ash. I knew I could source that locally so a few months before work actually started I ordered it in, cut it into the blank sizes and popped it into my office to acclimatise for as long as I could leave it (**photo 2**). When I started, I concentrated on the top first by selecting the pieces that would give me a good grain pattern and colour. The flaps were produced in one width and the top in three (**photo 3**). I could have made the top in two but I wanted to balance the grain with narrower strips down the edges. The pieces were planed square and the edges

straightened to fit flush. I used Domino joints to bring the middle pieces all together (**photo 3**), and once they'd been jointed and the glue set, the excess was sanded off.

Hinges, barrels & bolts

I marked the position of the butterfly hinges on each of the three top pieces. Using a straight router cutter set in my old Stanley, I then, very carefully, cut most of the waste out of the hinge recesses (**photo 7**). Using the router ensures that the depth is even and avoids odd patches of lifted grain if it's a bit interlocked. You can also test the



4 Domino jointing the top



5 Plenty of glue



6 Cutting the edges of the hinge recesses

depth on a bit of gash stock. Of course, the edges and final fit still needs to be done by hand. Each hinge was numbered on its back wing and the corresponding number put into its fitted recess (**photo 10**).

One of my key concerns was how to level the three component pieces of the top when the padded leaves were flipped over out of the way. After a bit of head scratching, I decided that I needed something that was adjustable. The only thing I could come up with was to use some threaded barrels and bolts (**photo 11**). These are normally used as a simple joint mechanism that can, if need be, come apart.

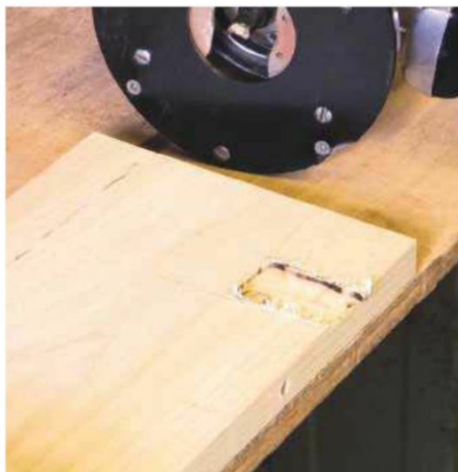
The barrel has a threaded centre into which a matching bolt can be fitted. I thought that if I could get the heads to meet on the adjoining edges they would do the job – here's hoping! Having decided what to use, I could now position and cut the holes for the barrels and bolt adjusters.

Sub frame assembly

The sub frame assembly components were then cut from the remaining stock. The solid shelf was deep cut from one of the thicker pieces of 26mm ash and put to one side so that it could settle down before planing (**photo 14**). All the mortise holes in the legs were marked out and cut, and the

longer side rails were then tenoned to fit leaving the angled, short ones to be sorted later. Button grooves were also cut in the inside face of the top rails. Once cleaned up the two side assemblies were glued and clamped up square, and while these were left to set I drew a full-sized end section on my bench surface – from this I could mark out the angles of the end tenon joints (**photo 16**). These were all cut on the pull over cross-cut using simple jigs (**photo 17**), and with the sides already joined up the whole frame was glued and clamped together.

I made half a dozen buttons from some of the offcuts (**photo 20**). These would be used



7 The bulk of the recess waste is cut away with a router



8 Fine fitting each hinge



9 Do they fit flush?



10 Each hinge and recess is numbered



11 The barrel bolt and nut adjusters



12 The top and flaps get their first coat of sealer



13 Preparing the legs



14 The shelf is deep cut against the fence (not visible)



15 The first stage of the base frame construction

to fix the top to the frame and allow any further movement to take place. The shelf pieces were retrieved and planed both sides to as thick a finish as I could get. Each was then trimmed, grain matched and cut to fit round the legs. I used some stainless steel screws to fix them onto the lower rails leaving the heads showing for decoration.

Upholstery

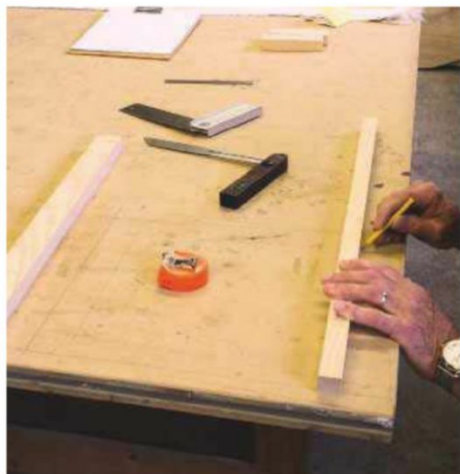
A bit of upholstery came next. A pair of simple, flat sub frames, for the bases, were made up from some spare pieces of chestnut, which is a good medium to take staples. These were then cut to match each of the flaps. I'd ordered some

50mm-thick blue upholstery foam, which I cut to size on the bandsaw with a new blade. To stop the foam moving around when I was covering it, I used some spray glue to stick the two pads to their sub frames (**photo 23**). I then stretched and covered each of these with calico, a hard-wearing cotton fabric used for this job (**photo 24**). When I'd finished I decided that the foam was too thick, so off with the calico and the whole lot, both pieces, were passed through the bandsaw on their edges to make the reduction. That was better. At about 38mm-thick I was now happy with these pads, so on with the calico again, then the top material, and they were finally ready to fit to the flaps.

Finishing & assembly

By this time all the timber components had at least three sealing coats applied. Each had been cut back and this produced a nice, smooth finish. I used a water-based, satin varnish. These acrylics are best for this purpose, especially because I wanted the pale, creamy colour of the ash to persist for as long as possible. Now it was time to assemble everything to see if it worked!

The threaded barrel adjusters were tapped in and the stainless steel bolts inserted (**photo 25**). The flaps were then attached to the central section with the numbered butterfly hinges. The top was turned over, bottom side up,



16 The angle joints are marked off a full-size drawing



17 A jig is made to cut the angled shoulders



18 The frame in final assembly mode



19 First sealing coat on the frame



20 Making the buttons



21 Fitting the shelf



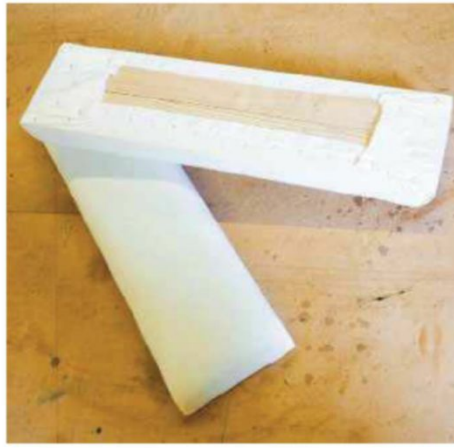
22 The top pad frames are glued and clamped up



23 The foam is glued to the pad frames

WOODWORK Stool to table

on a soft cloth to avoid any marks. The sub frame was then inverted and fixed in place with the buttons. Now for the moment of truth: did the hinges hold and were the heads of the adjusting bolts in line? Fortunately all was well and the adjustments made to allow the top to sit flat. I'd decided that each flap would have its padded seat fitted straight through showing the screw heads again – stainless steel screws did the job. Once the flaps were flipped over I could see how well everything fitted – it looked good. A final coat of sealer to the top, applied with a soft, lint-free rag finished the job off nicely, and now all I had to do was present the finished project to the client and hope they liked it as much as I did. **WW**



24 The pads are covered in calico



25 Fitting the barrel adjusters

26 The completed metamorphic stool/table



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The typical internal floor dimensions are 12ft x 6ft 3in with headroom of up to 7ft



A variation with doors on the side of the hut

A RURAL IDYLL ON WHEELS

As John Greeves shows, although retaining many of its traditional features, the shepherd's hut has evolved to meet the requirements of the 21st century. Here, we look at how a modern version is made, courtesy of Charles Lyster and Jeremy Harris

The shepherd's huts we see today represent a culmination of hundreds of years of development and pre-date the Victorian era by hundreds of years. Illuminating manuscript images from the 1400s show these huts to be made from wood or woven willow and set on wooden wheels with a roof of thatch. At their height in the 19th century, shepherd's huts varied greatly in design from the 'knocked up' versions to those produced commercially by manufactures such as Farris (Dorset), Reeves (Wiltshire) and Bolton & Paul (Norfolk) to much higher specifications.

1829 heralded the invention of corrugated iron, which became widely used on light weight buildings and structures such as shepherd's huts. This familiar image is one we recognise today as a hut on four wheels, although other variants existed, and it's possible to find examples of two- and three-wheeled vans from the past.

The huts we often envisage today come from the Victorian period where they typically measured 10 x 6ft or 7 feet. Their dimensions were less determined by price, and more by size and weight. It was the ability of a cart horse to haul one along narrow lanes and through small gateways measuring under 8ft that really counted.

Past to present

A shepherd's hut in the 19th century was an economical necessity provided by the farmer for the shepherd to tend his valuable flock, especially during lambing time, which could be far from the farm. It provided portable shelter for the shepherd and a store for his tools, so he could remain with his flock at all times.

A platform bed, with a sheep pen underneath for orphaned or injured lambs, often formed part of the structure. A stable-type door was nearly always situated at the rear of the hut and away

from any horse shafts or tow bars. Other features included a medicine case and a simple table or stool. Some were equipped with a stove, where a shepherd could simmer a stew, dry his wet clothes and heat a little water for washing after a hard day's work.

Accommodation by our standards was Spartan with a mattress often being a hessian sack stuffed with straw and little more. Despite these huts providing some shelter from the elements, a shepherd's way of life remained a hard-edged existence.

Shepherd's huts gradually disappeared in the 20th century due to smaller flocks, mechanised farming and the diminishing profitability of wool. The expense of employing a shepherd, by a farmer, solely to tend sheep didn't match the rapidly changing economics of the 20th century.

In recent years, something of a revival has taken place in the building of shepherd's huts that still retain quirky echoes of a bygone age. Charles Lyster and his business partner Jeremy Harris have built roughly five huts a year for the last six years. "What we are interested in building is a modern hut, which is as far as possible traditional in its construction," Charles tells me. "We believe in imposing the minimum possible impact on the environment and take great



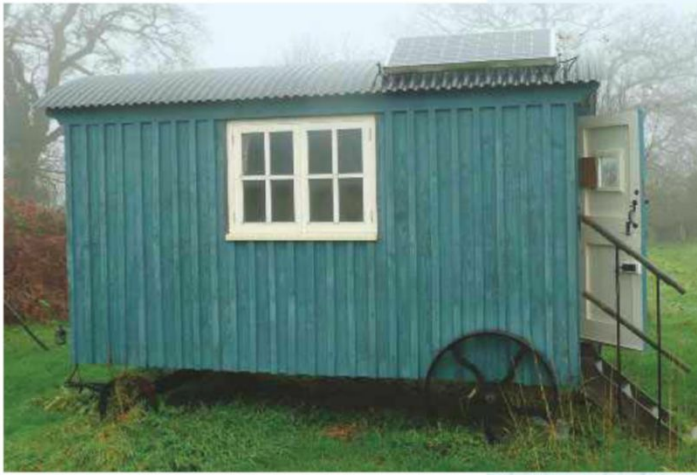
Corrugated steel galvanised and colour coated, with a solar panel on the roof



Double glazing units are fitted using warm edge technology to achieve significant improvements in thermal insulation



Huts can be built to longer lengths



care to source materials locally and avoid those materials or substances that are harmful or polluting.”

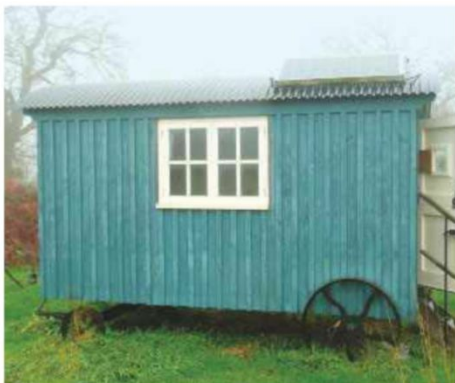
CONSTRUCTION

The chassis

A steel chassis is the starting point for the shepherd's huts built at Hollow Ash in Herefordshire. The chassis is made fairly locally and consists of two axle assemblies, which are linked by a pair of 75 × 75mm longitudinal angle irons. These support the long edges of the hut, which are bolted to the angle irons. The axle assemblies are all the same and only the length of the angle iron changes in accordance to the length of the hut.

The floor

The floor assembly is made from treated 12mm plywood. A 75mm deep frame of joists are screwed on, with the plywood underneath. Charles describes it as a 'tray-shaped structure' that's laid into the chassis between the angle irons, which is then bolted together. Floor insulation is 75mm of wool (which has been treated with boron), so that it's fireproof and resistant to vermin. Across this Charles or Jeremy lay the tongue & groove floorboards, which are usually oak or Norwegian pine. These materials are sourced



A traditional chassis with large wheels at the back and turning wheels at the front



Charles Lyster

‘Such Shepherds’ huts are dragged into the fields when the lambing season comes on, to shelter the shepherd in his nightly attendance’ – **Thomas Hardy** – *Far From the Madding Crowds*

from the neighbouring Forest of Dean. If the hut requires electrical installation of some sort, wiring is laid in at this time to go up the wall.

Building the wall frame

The next stage is building the wall frame. That's a stud work frame of 2 x 2 and 4 x 2 made from Douglas fir, which is glued and screwed with diagonal bracing. Charles and Jeremy build the four walls with apertures for the windows and door.

Curved roof beams

By that time they have also laminated the curve beams, which support the roof. These are made



Oak floor bed construction in progress

from seven 10mm-thick softwood layers that are glued together on a former. These are finished off with chamfers at each end. Beams will be attached at either end of the hut, and these will disappear into the thickness of the wall, while two or three others will show in the hut when it's finally completed.

Lining the hut

Work now starts on lining the inside of the hut with a thin building quality ply that's glued and nailed onto the frame. Any joints that need sealing are taped with a special vapour-proof tape. The ply gives the frame racking resistance and provides stability and strength while the tape provides a secure vapour barrier to stop moisture getting into the insulation.

The roof construction

The ceiling is laid next, which is painted tongue & groove boards that are laid onto the curved beams so the painted side is showing inside. Over the top is glued a full layer of ply. Again, all the seams are taped, so that the walls and

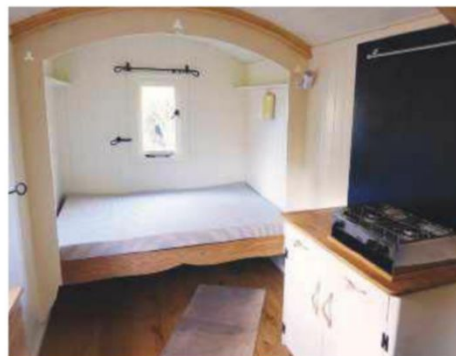
ceilings are properly linked to prevent any vapour leaks. "That's where a lot of work and detailing has to be got right at that point," I'm told.

75mm of insulation is used in the top and bottom of the hut and 20mm in the walls on the outside of the ply. The walls are then covered with a breathable membrane such as Tyvek, which prevents liquid water from getting in, but allows water vapour to escape.

Completing the inside

The inside is then lined with painted tongue & groove softwood, which is erected vertically. Every hut is bespoke, but multiple fixtures exist, such as beds, woodburning stove, sideboard, fold-down tables, charging points, and even an internal cubicle can be built for a compost toilet or a gas-powered shower.

Window frames are installed and architrave and skirting is added. The locally made windows are painted before they go in. Not only are they double glazed but inside the layers of glass are rigid insulation strips, which gives a much higher level of insulation. Then the door, usually a stable



Oak floor, LED lights and gas cooker



Studwork frame of 2 x 2 and 4 x 2 Douglas fir glued and screwed with diagonal braces



The framework attached to the chassis. The chassis is two axle assemblies linked by a pair of longitudinal angle irons



Insulation membrane



Some 25mm batten work now in place over the membrane



The ceiling is laid with tongue & groove boards onto the curved beams



The inside of the hut is lined with high quality plywood to give stability and strength



Fold-down oak table and double glazed windows

door (also locally made), is hung before the locks are fitted.

Completing the outside

The roof then goes on, which is made from curved corrugated iron and is very reminiscent of the type of van Thomas Hardy would have known on the Dorset Downs. Charles describes his earlier attempts of fitting corrugated iron "as being like a black art" and "taking them the longest to master." The sheets are fixed to five longitudinal purlins. There's a 25mm air gap beneath the corrugated iron and the Tyvek membrane, which gives added protection. A solar panel can then be fitted. Walls will be battened with 25mm-thick wood – again, to create an air gap – and either vertical corrugated iron (of whatever colour desired) or vertical painted board will be used to clad the outside. If there's a stove, a permanent air vent will have been added inside and a lead slate will surround the chimney, which can be seen below. Finally, lead will be laid around the windows and the door to provide the connection between the different elements to ensure it's water tight.



A lead slate is provided for the chimney



Environmentally friendly low odour paints, oils and waxes are used to complete the decoration

Uses

The shepherd's hut, although retaining many of its traditional features, has evolved to meet the requirements of the 21st century. The flocks may have gone, but the functional utility of these huts still remains. Charles has found there are many uses for his huts, but the most common ones are either a spare room or as some sort of studio or retreat. This can be for writing, music or for the requirements of an office. "It works well because these shepherd's huts don't require planning permission as they're on wheels." It's overcome the difficulty for people who want to work from home, but can't obtain permission to build an office. Farmers continue to diversify today. Ironically, many are purchasing shepherd's huts once again, not to accommodate a 21st century shepherd, but to rent out as a holiday home.

Many of us, it seems, still crave the rural idyll, where we can glimpse the serenity of rolling meadows and downs from the steps of one of these shepherd's huts and embrace again the 'simple life' nature can afford. To find out more, see sidebar above. **WW**



The corrugated cladding is now fitted and allows a 25mm air gap to the breathable membrane and insulation within



Corrugated cladding has the benefit of being very traditional and low maintenance



The hut can be utilised as a spare office or even a studio and doesn't require planning permission

FURTHER INFORMATION

More information about Charles and his Hollow Ash Shepherd's Huts can be found here: www.hollowash.co.uk



Oak steps and stable door



50mm of wool insulation between the frame members outside of the plywood, which is then covered with a breathable membrane



This awning can be raised on a summer's day

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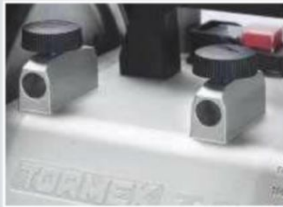
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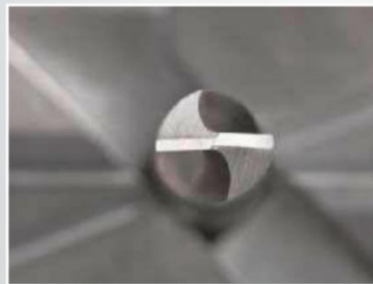
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Olly wins Tormek Scholarship award

The UK winner of the 2017 Tormek Scholarship Award is Olly Christian from Bristol. Olly designed a large, multifunctional dining table, which can be adapted to suit the needs of his son, wife and mealtimes.

Change of career

Olly, formerly a qualified nurse with many years working in the NHS, decided to change his career to match his creative talent and fit in better with home life. He recently finished a two-year course studying Furniture Making at the City of Bristol College. With his second-year project, he won the Somerset Guild of Craftsman 2017 furniture prize and now, through winning the Tormek scholarship, he has received a new Tormek T-8 Sharpening System.

His first involvement with woodworking came about when he set up home with his wife and needed furniture, flooring and more. On a small budget, Olly's first workshop had a vintage second-hand DeWalt saw and a low-cost lathe to get him started. He admits he was "... building shelves, laying flooring and other carpentry for myself out of necessity. I soon realised I liked woodworking and wanted to pursue this as a career. Designing and creating is something I really enjoy, and I wanted to learn the finer aspects of furniture making." So, enrolling on the Furniture Making course at the City of Bristol College was a big step from the security of a full-time job.

Winning entry

Produced out of necessity, Olly's winning project is a large, multifunctional dining table. He wanted to create a table that would provide space for his son's Lego creations and his wife's art projects while still being able to have a clear uncluttered dinner table. The addition of drawers and a Lego pit provided the solution. "My son now has a great space for his Lego, my wife's drawing materials are on hand after a stressful day at work, and we have a great space to eat and drink together and with friends," says Olly.

He is now beginning a career as a self-employed cabinetmaker in a shared workshop near Bath where he has installed the Tormek T-8, much to the excitement and gratitude of his fellow workshop users. All are able to create razor-sharp edges on their tools, thanks to Olly and Tormek.

For more information about Tormek products, see www.brimarc.com.



Olly using the new Tormek system at his shared workshop



Olly's winning large, multifunctional dining table



A space in the top provides great storage for his son's Lego bricks

MIS MEN IN SHEDS

Embarking on a road trip to visit his local UK Men's Sheds Association premises, **Rick Wheaton** is warmly greeted by the members and discovers that each is doing their bit for charity while practising what they love – woodworking

Man + Shed = Happiness!! Isn't this a formula most *WW* readers would recognise and agree with? Certainly, in my case, once I get stuck into a workshop project, I often find myself singing out loud (fortunately no-one can hear) and any negative thoughts drift away as the hammer hits the nail, or the chisel bites the wood.

A movement is born

In 2007, in Australia, this Man + Shed formula struck a chord with the federal government of New South Wales. Concerns had been raised at state level about serious problems seen in their increasing population of older males. Problems such as breakdowns in mental and physical health, much of it brought about by depression, loneliness and isolation.

Of course, older single women face similar troubles, but research shows that women

get together more readily, and – once in a group – they socialise more easily, and happily support each other, often finding and sharing solutions to their common problems.

So it was suggested that the solution – to the older single man problem – lay in creating an enticing and safe environment where men could gather together to do their own socialising and practical problem solving, and Hey Presto! the Men in Sheds movement was born.

In the short space of only 10 years, and with limited government spending, the Australian Men's Shed Association has shown amazing growth. There are now over 1,000 'Sheds' across the country, with tens of thousands of members, and the idea has spread to other countries as fast as a Wallaroo bush fire on a windy day.

The Men's Shed idea is now well established in Ireland, Sweden, Finland, Spain, France, USA, Canada and New Zealand, and is under active



discussion in many other far flung corners of the world. On our own doorstep in the UK, the Men's Shed Association is currently active in 432 locations, with 10,450 members. On top of which, over 100 sheds are in development and about half a dozen new ones are opening up every month!

Meeting the 'Shedders' – Exeter

I live in South Devon, and – keen to learn more – the website showed me two 'Sheds' within 10 miles of my home: Exeter and Exmouth. I visited the Exeter shed first, was made exceptionally



Adrian Bull – coordinator at the Exeter Shed



John works on a garden trug



Hanging in the corridor – nobody knows what these are! Any ideas?

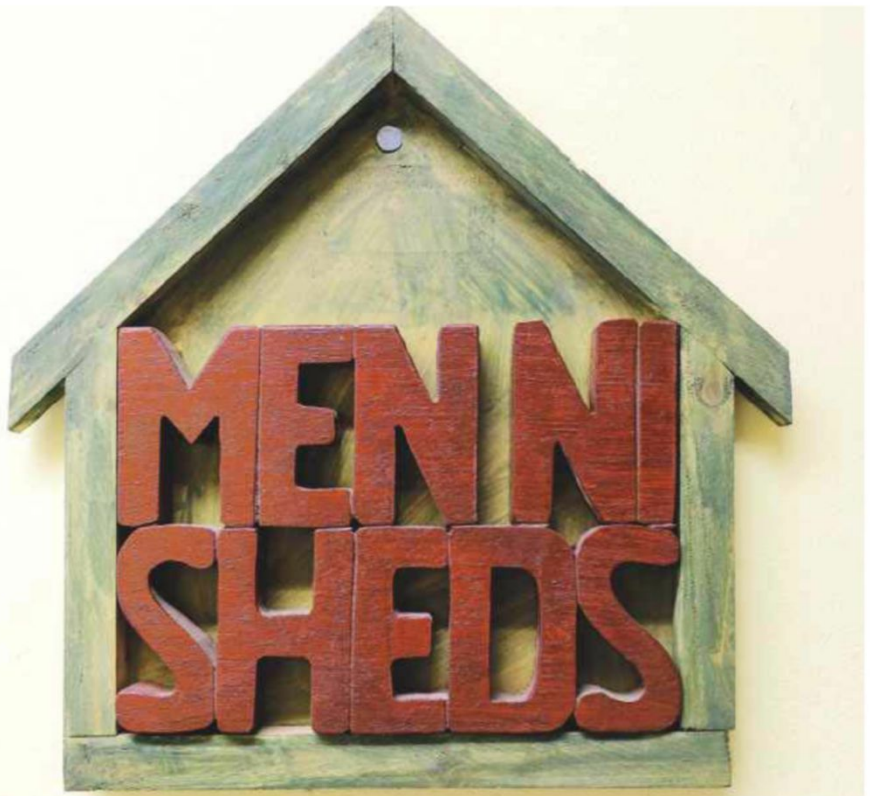


welcome, and given the full tour by Adrian Bull, the friendly coordinator on duty. As he showed me around, I was struck by the high level of equipment, supervision and organisation and the enthusiasm of the 'Shedders'.

The superbly equipped main workshop contained: a circular saw, pillar drill, planer, lathe, belt and disc sanders, mortiser, chop saw, grinders, and – with more than a nod to H&S – a big dust collector, a ceiling-mounted filter, and a first aid/burns kit. Off to one side was a 'dirty' workshop for repairing and painting, ▶



First aid corner



Everyone loves the spelling mistake!



Mick Cox – my welcoming committee at the Exmouth Shed



Louis and his finished trug

a small store, and of course the inevitable office/canteen where there seemed to be an endless supply of mugs of tea!

It was populated by a cheerful bunch of older men (they have a regular drop-in of around 70 'Shedders') and there was a real buzz of activity. I say 'older men' with some accuracy: this particular shed is run by Age UK Exeter, and currently membership is only open to males aged 50+. Their Chief Executive, Martyn Rogers, told me with great enthusiasm how successful this project has become: "It was initially planned," he said, "to attract older men who might be socially isolated, before broadening it out to older guys with health or disability issues who could be

supported by volunteers. Some of the guys who are now involved have years of woodworking experience, which is a huge asset to the project."

Supervision and, of course, Health & Safety are obviously paramount. The two paid coordinators share supervision with those many volunteers who have the higher levels of experience and skill. Most importantly, there's a system in place that 'signs off' each person to a level where he's fit and able to use a certain machine, and this is adhered to rigidly.

Also, as Martyn explained: "The guys have really embraced the project. Every day they receive donations of old tools and garden implements from the public, and refurbish

them into things of beauty. They take so much pride in what they do, recycling their skills as well as old tools!" Amazingly, the guys also run their own shop in the city centre where they sell their renovated tools, plus things they've made such as bird boxes and garden benches over the counter, to the tune – I was proudly told – of around £1,000 a week!

Obviously this helps to finance the 'Shed', as does other fund raising by Age UK Exeter, with a local charitable trust providing the balance of the budget. Happily – and significantly – this project also won a £25,000 prize in the 2012 'Ageing Well Challenge' run by NEST: the National Endowment for Science and Technology.

The first thing that went through my mind was, "Wow!" Immediately followed by: "If I lose my own shed, I'll soon come knocking on the door of this one." Time to check out my other neighbouring shed, in Exmouth.

Meeting the 'Shedders' – Exmouth

Here, there was the same high level of equipment and enthusiasm, excellent organisation and a buzzing atmosphere. Their home was a splendid 60 x 20ft wooden workshop, filled to the rafters with smiling guys, and the familiar sights and sounds of bench-centred activity, but there was another vibe in the air... these men had built this shed entirely by themselves!

The idea started in a small way in 2013 when one of the old gents made a trip to Australia. He returned home to Exmouth with a tale to tell: a Men's Shed he'd seen in Tasmania. He got about 30 like-minded pals together, they put the idea to their local council, and were immediately given the use of a room in their community centre. There was such a demand for space, however, that they quickly outgrew this temporary home, and they set their sights much higher.

By now, this particular group of men were confident they had enough skills between them



Stuart about to set up the pillar drill



Frank and Mike working on a display for the National Trust



Norman and Malcolm on the lathe

to build their own permanent workshop, so they put this more ambitious plan to the powers that be. This was such an obvious benefit to the community that the Council made some land available, the planners said "yes" – even the water authority didn't object (this might be a first) – and in less than 12 months, the Exmouth 'Shed' was built, manned and equipped.

My welcoming committee – the ever cheerful and knowledgeable team of Mick Cox and Peter Chalkley – explained that this 'Shed' was run and largely funded by Open Door Exmouth, an independent local charity set up to provide help in the community, wherever it was needed. They have about 60 regulars, and about 20% of

their membership have disabilities of one sort or another. The H&S box is well ticked of course. There's a 'signing-off' system in place, which brackets each man as beginner, intermediate or advanced, allowing him access to a particular tool station accordingly, and names go in the 'Fire Book' every day the shed is open.

Beyond all the smiling faces and the buzz of organised activity, the enormous success of this enterprise is illustrated by the numbers Mick showed me in his meticulous log book. Last year they had over 2,500 attendances, and between them these 'Shedders' had contributed to many local charities and community schemes, as well as selling items to organisations such as the

National Trust, and of course enjoying their own DIY projects.

Helping out & becoming involved

With 432 'Sheds' up and running in the UK – a number that may well be 442 by the time this goes to print – my bet is that many, if not most, readers of *WW* will have a shed within striking distance. I mention this because charitable organisations like this, that do such a fantastic job in the community, always need help. This might be donations of old tools for use or renovation, offers of physical help, and of course unwanted timber, even down to pallet quality.

I'm lucky enough to have my own workshop, but these visits to my local Men's Sheds have opened my eyes – and caused me to donate my spare Stanley No.4 – to this astounding idea, and I'm sure many readers will also want to help out, or even become involved, in some small way. To find out more, see details below. **WW**



Some garden planters ready for the Christmas sale



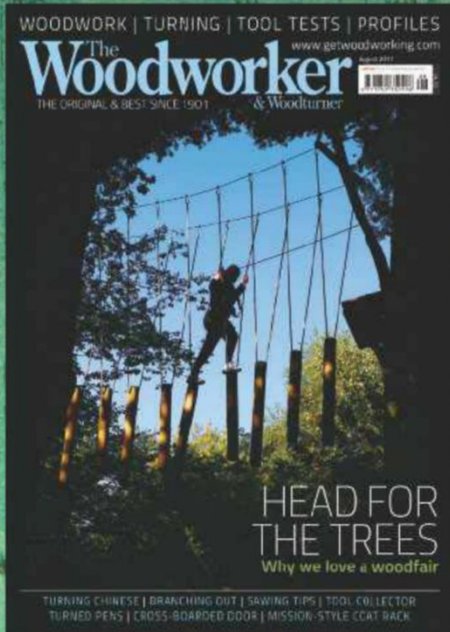
An impressively clear notice!

FURTHER INFORMATION

For anyone interested in learning more, the Association's helpful and informative website is definitely worth a visit: www.menssheds.org.uk

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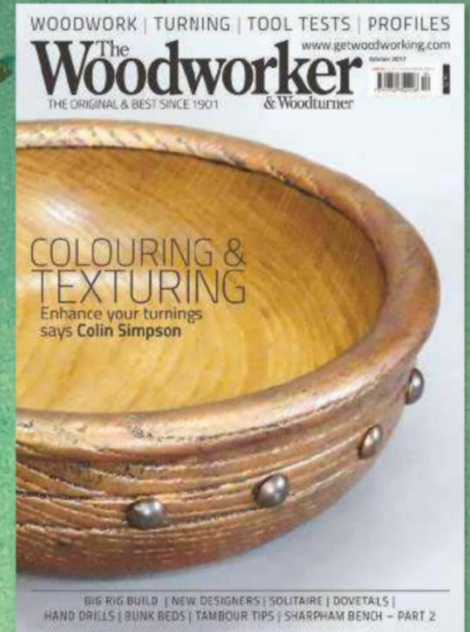
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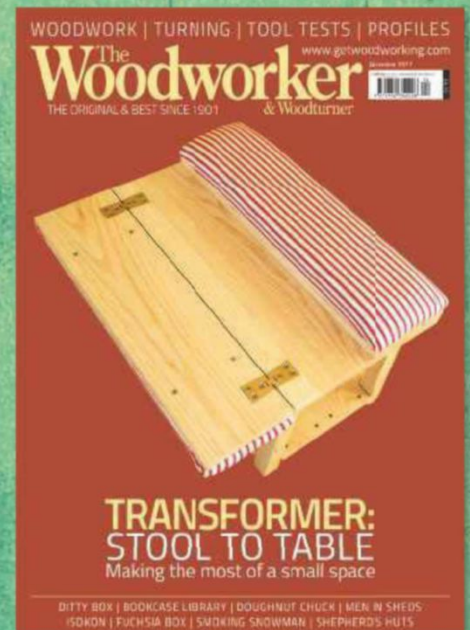
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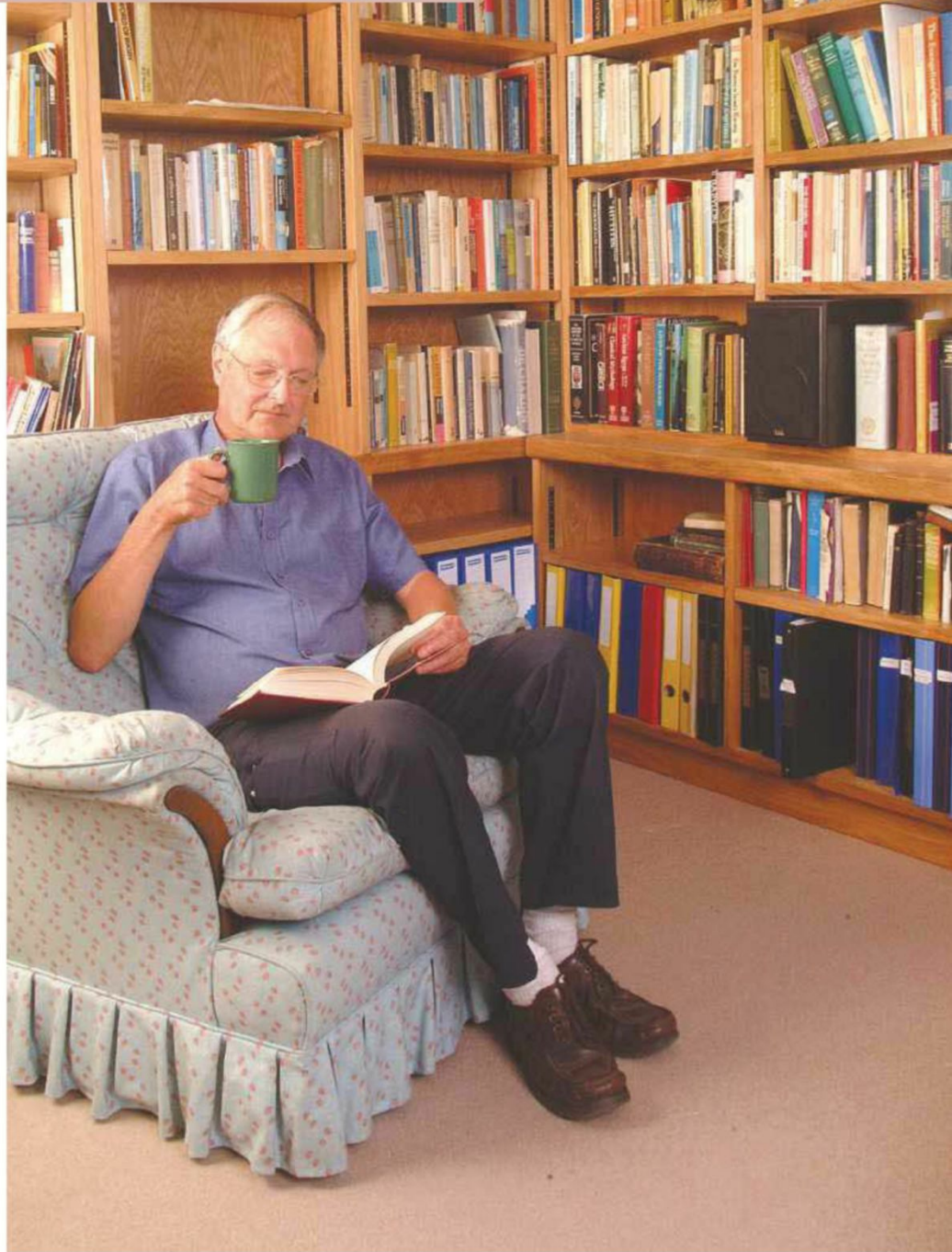
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THE READING ROOM

David Hatherley's library-style bookcases let the books do the talking

I built these bookcases for my brother, who wanted to replace his worn and dated shelving with bookcases that ran around two of the four walls in his reading room. In the library-style approach that I adopted, it's the books that do the talking: the bookcases themselves are quite minimal in their design while providing the maximum of space on their shelves and flexibility in their sizes – he made both high and low bookcases, and a stacking combination unit – and their different depths. The shelves, meanwhile, are made adjustable by using brass shelving tracks.



CAD: look before you leap?

I find it very important to obtain accurate drawings, especially when fitting units in an enclosed space. Besides ensuring that the furniture will actually fit the intended space, drawings also help you to visualise the finished piece. For this project, for example, I used a CAD package not only to generate face and end elevations from which I drew up a cutting list, but also perspective drawings that allowed me to better assess the final design





1 With the upright panels cut to size, rout the 7mm-deep shelf housings...



2 ... which should be a snug fit; note that the vertical divider housings are only 3mm deep



3 Rout housings for the shelf tracking; a dedicated cutter will rout the deeper central recess for the studs at the same time



4 The back edge of the sides and top is rebated for the back panel



5 The top and bottom edges should be lipped first...



6 ... ready for the front lippings, which will need to be cramped in place with a timber batten, or...

Though I could, of course, have used solid timber for the job, I decided on 25mm-thick veneered MDF, which has the advantages of economy, uniformity and stability while still offering a choice of veneers, including oak, cherry, teak, maple, sapele, mahogany and ash.

One of the drawbacks to veneered materials, however, is that their sawn edges expose the substrate. In this case, I dressed the edges with 3mm oak lipping, though you could use thicker lipping if you wanted to decorate it with a routed moulding. There's no particular need to lip the unseen edges, though, if you're like me, you'll want to make a thorough job of things and finish all sawn edges whether they're seen or not. If nothing else, this will protect it from knocks and snags.

I've focused on building a tall bookcase here, but the construction method is essentially the same for the tall and low cabinets I've made, with the exception of the top which – in the case of my low cabinet – sits on, rather than between, the sides of the bookcase. The combination unit, meanwhile, is a foreshortened 'tall' bookcase stacked on a low unit. As built by me, the bookcases rely for their strength on the glue area of the housing joints, as well as the internal bracing afforded by a central divider, a fixed middle shelf, and the back panel.

The build

With the panels cut to size (allowing for the thickness of any lipping that you may plan



7 ... if your cramps are long enough, you can put two uprights edge to edge and cramp four edges at once



8 Clean up all lipped edges with a plane, scraper or sander, but take care not to cut through the veneer



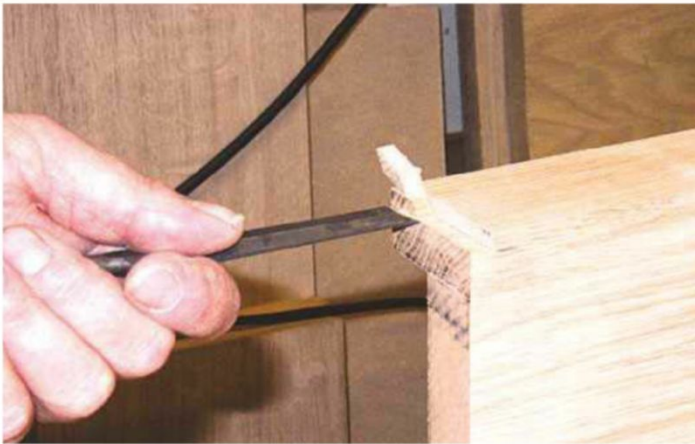
9 Use a sharp chisel to clean up the stopped housings after the lippings have cured



10 The fixed shelf sections are notched to fit around the lippings on the uprights. After marking up...



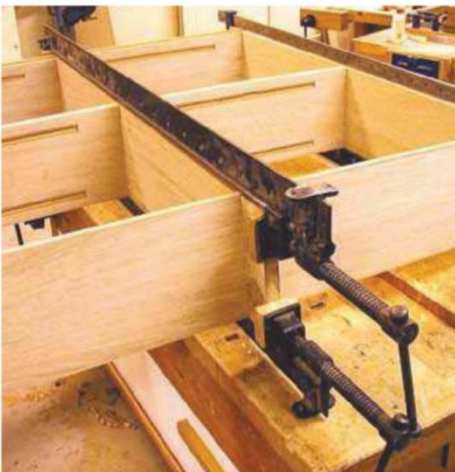
11 ... use a fine back saw like a dovetail saw and saw to the line...



12 ... then chop out the waste with a sharp chisel, and pare the surfaces to clean them up



13 Assemble the carcass in stages, starting with the mid sections...



14 ... then add the tops and finally the bookcase sides; use cramping blocks and check for square



15 The bottom plinth is added before gluing up the sides; note the screw blocks reinforcing the plinth face

to add to the top and bottom edges) the first job is to look at the direction and weight of the grain on the uprights and decide which ends will be at the top and bottom, and then mark the top edge and inside face.

Glue lippings to the top and bottom of the uprights, allowing them to sit proud of the board all round so that you can saw the ends perfectly square, and plane the edges flush with the veneered faces.

At this point, I marked out and routed the 7mm-deep housing joints at the top, middle and bottom of each upright, setting the lower

housing 100mm up from the bottom edge to create a plinth for the bookcase. You can see that I routed the uprights right across their width, then converted these through trenches to stopped housings by applying 3mm lipping to the uprights' long edges. With care, you should be able to apply the lengths of lipping in pairs, thus saving cramps and time. Again, when the lippings are dry, saw and plane them flush with the veneered board all round, and dress off all the lippings with a cabinet scraper and sand to a finish. You could use a belt sander for this, but be careful of cutting through the veneer.

Next, prepare the horizontal sections – the top, central, and bottom shelves. They each have stopped housings to receive the vertical dividers; note that the depth of the housings on the middle fixed shelf are reduced to 3mm so as not to weaken the middle shelf.

The horizontal boards are also edged differently: the top piece has 3mm lipping on its back edge, but to create interest the front edge is faced with 35mm-deep lipping. Similarly, while the rear edge of the central divider, which will be hidden by the back, does not need to be finished, I gave the front edge an even deeper 45mm lipping. The edging on the bottom shelf, meanwhile, was the same as for the uprights – 3mm thick – and trimmed flush with the board. While you're at it, prepare the vertical dividers by notching their ends to fit around the stopped housings and wider edging of the horizontal sections, and by lipping their front edges, too.

The next step is to rout the rear edges of the uprights and of the top to receive the 6mm-thick veneered ply back, then cut the slots for the shelf tracking and studs.

On the upright divider, remember to stagger the tracking rebates on either face so that they do not coincide and so weaken the board, and also to avoid the risk of the screws from one side fouling the track on the other. Don't take these rebates all the way to the top and bottom, either – a 100mm gap at either end is visually more pleasing. Finally, cut the housing for the plinth



40mm back from the front edge of the uprights, noting that the uprights will now become handed. The plinth itself is another piece of veneered MDF, cut to size and lipped on its bottom edge.

Assembling the carcasses

When assembling large units it is always better to break the job down into manageable stages. Ideally, you'll end up with the assembled bookcase lying face down so that you don't have to turn it over to fit the back, which will itself give the whole structure more rigidity. Speaking of rigidity, when you fit the plinth, you might want to reinforce it along its length with one or two screw blocks.

The back, meanwhile, is secured in the rebate with glue and panel pins, whose heads are driven slightly below the surface of the board.

Finishing

If you're going to polish the back, then now's the time to do it; I also planed and sanded the lippings level with the back, though whether or not you do this is simply a matter of taste. I also sanded off the arris all around the back edges, and the bottom edge of the plinth.

Next, with the bookcase turned on its back, clean up the front edges of the unit and take off the arrises, either by routing, planing or sanding; I used a small radius cutter to round over the front edge of the top and the middle shelf.

The adjustable shelves, meanwhile, were simply cut to length from veneered MDF (a gap of about 4mm in length will allow the shelves to be fitted and moved within the bookcases without binding) and only their front edges were lipped with oak. Remember, though,

that while lipping will help to increase the rigidity of a shelf, you need to give careful consideration to the material of which the shelf itself is made, its length and thickness, and the job you're asking it to do.

After a final sanding, the bookcase was given

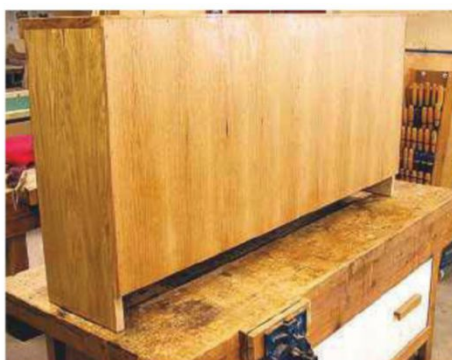
one coat of cellulose sanding sealer, then de-nibbed and top-coated with one coat of melamine lacquer, though obviously the final finish is up to you. Once dry, the brass tracking was cut to length, tapped into place, and secured with 20 x 3mm screws. **WW**



16 Run a router and chamfer bit carefully over all arrises to soften them a little



17 The lower units should be sized to allow the top to sit on the uprights rather than between them



18 When securely fitted, the back panel will help the carcass to avoid the risk of racking



19 Finally, fit the shelf tracks, ensuring that all the slots in each set of four line up perfectly

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EMBRACING THE ZEITGEIST

Photographs courtesy of Pritchard Archive University of East Anglia, unless otherwise stated

British it may be, but when Isokon was set up in 1931 it was given a name with an Orwellian ring in keeping with a company that was all about standardisation of parts, rationalisation of manufacturing processes and methods and “modern industrial design based on the principle of conspicuous economy,” according to one of its key figures.

What makes Isokon furniture – particularly the iconic Long Chair, the Dining Table, Nesting Tables and the quirky and charismatic Donkey bookcases – stand out is a combination of fantastic designs, inspired designers and a company that developed fruitful relationships with its manufacturers – even if one of the factories making furniture designed in London was thousands of miles away in Estonia. In 1930s Britain they represented all that was new.

Finnish design

“They would have stuck out pretty strongly,” says Chris McCourt, who has been making

When the big names of European Modernist design met a brave new British company the result was Isokon. **Mark Gould** reports



Now a Grade 1 listed building...



... the Lawn Road flats are owned by a housing association



Marcel Breuer (left) and Walter and Ise Gropius celebrating the first birthday of Lawn House in 1935

Isokon furniture, known as Isokon Plus, under licence since 1982. "The only similar ply furniture, which would have been selling in England at the time, was the Finnish pieces by Alvar Aalto that were showing the way for modern design."

Chris says Isokon's use of ply was at odds with the mainstream British taste for 'dark brown' furniture. "Ply was considered cheap and inferior. And there was precious little use of blond-coloured natural woods – only people like Gordon Russell and Arts and Crafts would use natural oak – most was fumed to make it darker."

Unlike many other British furniture companies of the late 20s and early 30s, Isokon was not the brainchild of architects or cabinetmakers. The founders were an odd collection: the directors were bacteriologist and psychiatrist Molly Pritchard, solicitor Graham Maw and economist Robert Spicer; but according to art historian Alastair Grieve the two most influential people in the company were Molly's husband Jack and the architect Wells Coats.

The name itself was a confabulation of 'IsometricUnitConstruction' – apparently the founders wanted a Russian-sounding name and Wells Coats was a big fan of isometric drawing.

Cambridge-educated Jack Pritchard was the dynamic fixer and man with connections – he handled economic planning, publicity and marketing – but the company would have been an obscure footnote if it were not for the albeit fleeting influence of brilliant Jewish designers fleeing Nazi Germany. Walter Gropius, the head of the Bauhaus School, came to London and with him came the genius furniture designer Marcel Breuer who would design the Long Chair and would also design another classic, the Wassily Chair.

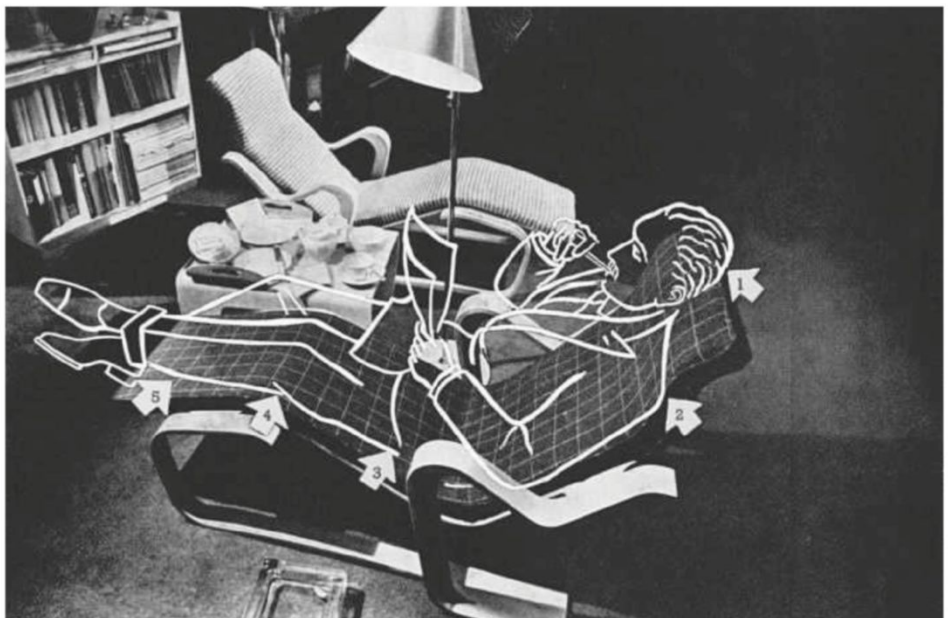
Although it predates Orwell's 'newspeak' by nearly two decades, Isokon wasn't just about making ultra-modern furniture. The original plan was that the firm would make furniture, fixtures and fittings, and houses and flats. The company brought new ideas about where and how we lived, its philosophy being encapsulated in Lawn Road Flats, in Hampstead, North London, which were envisaged as the blueprint for future living.

Isokon's flats were for the young intelligentsia – people on an income of between £250 and £500 a year who might otherwise live in digs. And they came fully fitted with the "equipment for the living of a free life... all you have to bring is your rug, armchair and favourite picture."

Intellectual centre

In an interview published in *The Listener* in 1933, Wells Coats described the approach to life that lay at the heart of the building. "We cannot burden ourselves with permanent tangible possessions, as well as our real new possessions of freedom, travel, new experience – in short what we call life."

The Hampstead base was a magnet for left-wing intellectuals and a social club/drinks bar at the flats, called the Isobar, became a meeting place for them. Famous residents included Agatha Christie, and regulars at the



The Long Chairs were designed for support and comfort as illustrated in the diagram



Predating IKEA by 30 years, the Isokon bookshelves came in a carton

Isobar included sculptors Henry Moore and Barbara Hepworth and painter Ben Nicholson. "Breuer was a genius. The Wassily Chair still looks great in any interior although I find them a little uncomfortable. It must have been a real hot bed of talent – a bit like Hoxton now," laughs McCourt.

By 1935, with Gropius on board as Controller of Design and living in the Lawn Road Flats, the company formulated its plan for a new furniture company. Although making some furniture such as book units and stools – essentially the same stools as the Luther factory designed and made in Tallinn from 1931 – a press statement from early 1936 sets out their intentions: "The ideas developed by Professor Walter Gropius at the Bauhaus in Dessau are the inspiration behind a new organisation for the design and manufacture of furniture in Great Britain. The policy of the Isokon Furniture Company is to carry out research work as well as to undertake the designing and manufacture of furniture."

The aim of the new company would be to

secure closer collaboration between designers and specialists in different kinds of materials. "It is particularly emphasised that the furniture will be thoroughly practical, with its aesthetic qualities dependent on its form rather than superimposed adornment. In chairs for instance, traditional English comfort will be the aim, though modern forms and materials will be the means of attaining it. Owing to its strength, lightness and flexibility, plywood will be the principle product used in constructing of the first models. The old idea that good furniture should be heavy is fallacious. Much has been learned from light plywood construction in aeroplanes that can be adapted for domestic use."

World first

The first piece of furniture marketed by the new Isokon Furniture Company predated IKEA-style flat-pack furniture by decades – but there wasn't a bit of ply in sight.

Contemporary advertisements proclaim the Isokon bookshelves as 'Something New in World

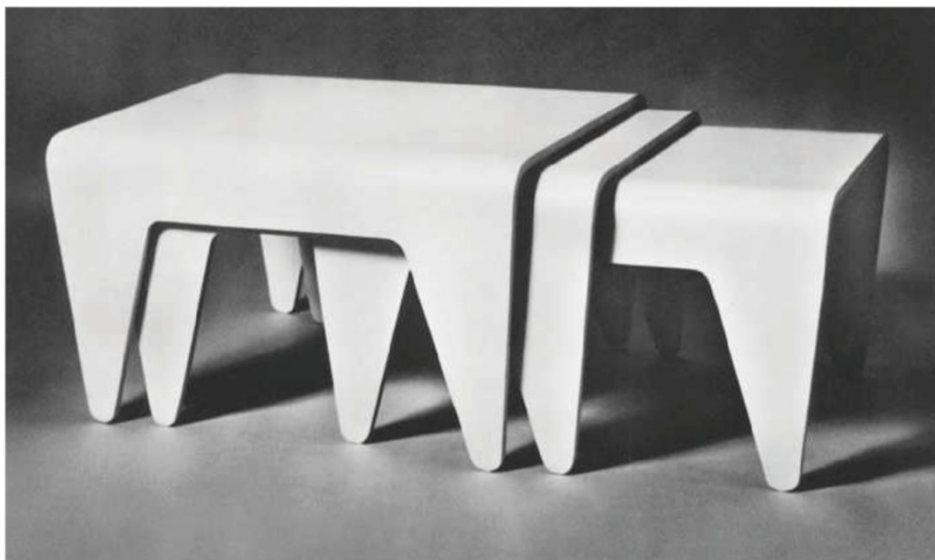


Furniture – a bookcase in a carton! They were designed by Wilhelm Kienzle and made by Swiss aluminium manufacturing company Embru-Werke. Isokon made them under licence; the shelves were of oak or deal in various lengths and widths and were joined by metal parts that slotted into grooves. They were easy to assemble and could stand alone on the floor or be wall mounted. The striking publicity leaflets were produced by Fleetwood, an advertising company that was run by Pritchard's older brother.

Another Bauhaus old boy, Hungarian photographer, painter and designer László Moholy-Nagy, was brought in to produce display cards showing the adaptability of the shelves. He also designed a folding leaflet for the Long Chair showing how its anatomical design gives 'scientific relaxation to every part of the body... You have the amazing sensation of the principle of Archimedes without being in water,' the leaflet proclaims. Moholy-Nagy also designed the brilliant Isokon logo of the curved plywood chair.

Leopard comparison

Alastair Grieve quotes '30s style guru Clive Entwistle as saying Breuer's Isokon furniture had an "economy of line and form comparable with that of a leopard or an orchid." Breuer's original plan for a series of plywood recliner chairs and the system of strengthening the laminated arms with right-angled fins and holding the frame rigid with the seat was patented by Isokon in July 1936. The patent says: "Instead of building up a structure



The design of these pieces...
Photographs courtesy of Sydney Newberry



... owes much to the light ply used in aeroplane manufacture

which is complete in itself so far as load-carrying members are concerned, and then applying a seat to it, I now use frame members, which only become a complete structure when parts of them are spanned by the seat." The seat was mortise & tenoned into the supporting frame.

Luthers made the plywood seats, but the laminated birch frames with a choice of facing veneers were made by London craftsmen Harry Mansell and G Pfeifer. The frames were made from the 1.5mm-thick veneers salvaged from Luthers' packing cases by a thrifty Pritchard.

Mansell, an established part of the East End of London furniture industry, also designed and made sideboards for Isokon. At 1,420 x 620 x 840mm, the Long Chair was big, but its light weight and sled runners made it easy to move. Prices ranged from £3 15s in birch with no upholstery to £8 7s in walnut, fully upholstered and covered in Isokon's special fabric.

Isokon furniture is still made today under the brand name Isokon Plus and the basic model Long Chair will set you back £1,650.

Ply was the key, but according to McCourt it was Pritchard's knowledge of the capabilities of ply that set the company apart. "When he was younger, Jack worked for the Venesta Plywood Company whose factories were run by the Luther family. They specialised in ply – making things like ply hatboxes and furniture." The ply, however, was being used as a substitute for solid wood and not for its lightness, strength and ability to be bent into curves.

Working for Venesta had seen Pritchard becoming steeped in the innovative work of Le Corbusier in Paris and Gropius and Bauhaus in Germany. Indeed he managed to persuade Le Corbusier to design a stand for Venesta at the Building Trades Exhibition in Olympia in 1930. A year earlier Pritchard had announced proudly that he had designed a desk made entirely of plywood – which according to Grieve's book *Isokon For Ease, For Ever* – was a 'positive statement



Egon Riss got together with Pritchard...

against the prevailing Arts and Crafts aesthetic' that dominated the Design and Industries Association – the influential organisation of designers, businessmen and industrialists set up in 1915 to promote good design.

McCourt, who worked with Pritchard, was an adept scavenger. "He was such a cheapskate," says McCourt, even making the Isokon Experimental Chair No.2 from a section of Venesta tram car seat of 6mm plywood mounted on a tubular metal support that was finished in black or red synthetic baked enamel.

Penguin Donkey

Another refugee from Nazi Germany, architect Egon Riss, stayed at Lawn Road from 1938 and collaborated with Pritchard on what Grieve calls "a series of witty, modest and delightful pieces of furniture", a small bookstand called the Gull, the Bottleship, the Pocket Bottleship and the Penguin Donkey – which could hold 90 of the new Penguin paperbacks and came about as another bit of networking by Pritchard." He had



... to design the Bottleship

become friendly with Alan Lane who had just launched Penguin Books. "In the Arts and Crafts world a donkey was always the name for a small bookcase – so it was an inspired partnership."

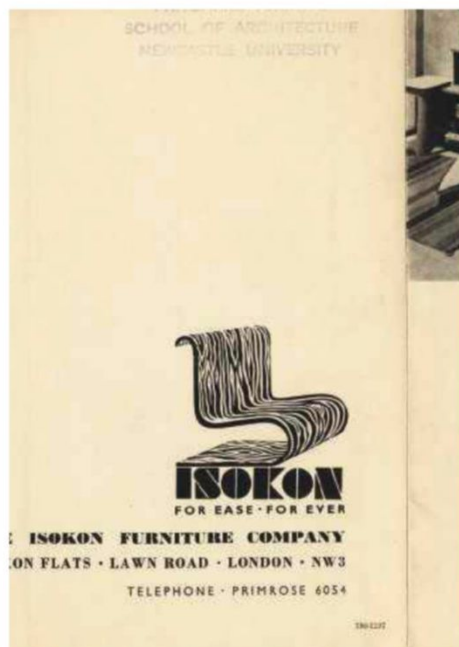
The company sold direct or through a small range of stockists in London and the south east such as Heals, Maples and Dunns in Bromley, but it never sold in large quantities and the outbreak of the Second World War cut off its supply of ply and severed links with Tallinn.

Jack Pritchard revived Isokon in 1963 and hired another fledgling genius, Ernest Race, to redesign the range to take account of new developments in ply. In 1968, Pritchard licensed John Alan Designs to produce the Long Chair, Nesting Tables and the Penguin Donkey 2, which the company made until 1980.

Jack and Molly retired to their Modernist home at Blytheburgh on the Suffolk coast, designed by Jack's daughter Jennifer Jones and her husband Colin, in 1966.

Isokon lives on

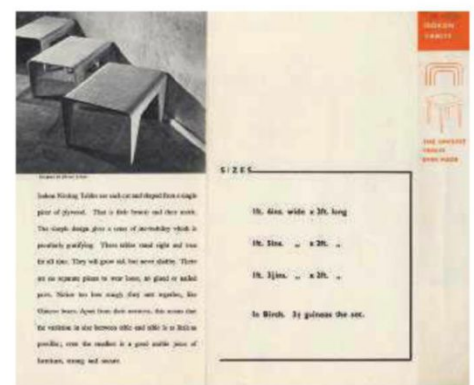
In 1982 Pritchard finally convinced McCourt to take over the licence to manufacture Isokon pieces from his studios in Chiswick, West London and in 1996 McCourt recruited Edward Barber and Jay Osgerby, recent graduates of the Royal College of Art, to design the Loop Table – the first of several new pieces of furniture to be added to the Isokon portfolio in more than 50 years. Long live ply; long live Isokon Plus. **WW**



Isokon's plywood chair logo



Isokon marketed its furniture to top retailers



DOUGHNUT CHUCK DIVERSITY

Colin Simpson takes you through the steps for turning a doughnut chuck and uses it to create a simple offcentre platter, which he then decorates



1 The setup for removing the chucking point



2 Wall plaques can be moved around between the two ply discs to any centre you want



3 Cut two discs from 18mm ply on the bandsaw



4 You will need four coach bolts and a faceplate

This month I am going to show you how to make a doughnut chuck and then turn a simple offcentre platter using it. A doughnut chuck is a useful accessory that can also be used to remove the chucking points of your bowls (**photo 1**) and I also use it to make multi-centred wall plaques from slabs of wood (**photo 2**).

Making the doughnut chuck

I made mine to fit my large VB36 lathe, but you can scale yours to fit your lathe. You will need suitably sized 18mm ply – I cut two 600mm diameter discs (**photo 3**). You will also need four coach bolts – mine were M8 and 120mm long – washers, nuts and a faceplate (**photo 4**). The faceplate for the VB36 is unusual inasmuch as it doesn't have the usual screw thread. Instead

it has three bolts that fit through three keyhole slots on the headstock spindle. I needed to replace these with bolts that were 18mm longer so they could go through the 18mm ply.

I used a faceplate rather than a four-jaw chuck to attach the doughnut chuck because I felt that a recess or a spigot cut into ply would not be secure enough due to the laminations in the ply. If you want to use a four-jaw chuck, I would recommend gluing and screwing a hardwood block to the ply and cutting the chucking point on this.

I wanted to remove my faceplate for use elsewhere when I wasn't using the doughnut chuck; however, it can never be screwed back on in exactly the same place. Besides which, screwing into the same holes every time is not a good idea. I needed something more permanent and accurate and decided to use 'T' nuts (see foreground of

photo 4) to refit the faceplate more accurately. Place the faceplate in the centre of one of the plywood discs and mark the location through the screw holes for the 'T' nuts (**photo 5**). Use a spade bit to cut the countersink for the top of the 'T' nuts and then drill through the ply to fit them (**photo 6**). I used epoxy resin to glue the nut in place.

Next, bolt your faceplate to the 'T' nuts and mount it on the lathe. Temporarily screw the second disc of ply to the first (**photo 7**), true up the edges of both discs using a spindle gouge, then mark a circle on the second disc approximately 30mm in from the circumference (**photo 8**). Use the lathe's indexing system to mark 30° steps around this circle and then drill 9mm holes through both plywood discs at these locations (**photo 9**). Why so many holes when I am only going to use four? It simply gives me a greater



5 Mark the location for the 'T' nuts...



6 ... and countersink so that they sit flush to the ply



7 Mount on the lathe and temporarily screw the two discs together

choice when I am using the chuck for offcentre work. Before removing the temporary screws that hold the two discs together, make reference marks on both plywood discs so that they can be re-aligned later.

Insert the four M8 bolts into four of the holes and add the washers and nuts, then remove the temporary screws. Separate the two plywood discs and insert scrap wood of the same thickness in between them – I used the offcuts of 18mm ply. Tighten the nuts to sandwich the scrap wood between the two sheets and then use a parting tool to cut a hole through the front disc (**photo 10**). Next, carefully soften the inside edge of the hole with coarse abrasive (**photo 11**), then disassemble the doughnut chuck and line the two inside faces with router mat before cutting the router mat around the hole (**photo 12**).



8 Draw a circle about 30mm in from the edge

Reassemble the chuck, remembering to align the reference marks, then it's ready to go.

Putting the chuck to use

I am going to turn a simple offcentre ash platter. Mount the blank on the lathe and turn the back of the platter in the normal way, using a bowl gouge (**photo 13**). I am not going to turn the platter around in the normal way by mounting it on a recess or spigot, so I also need to shape the rim while it is in this orientation (**photo 14**). I cut my rim to a very gentle curve. You can then sand and polish the back and the rim – I used Danish oil (**photo 15**).

Next, remove the platter from the lathe and remove the faceplate. Use a pair of compasses or dividers to scribe the circumference of the bowl part of the platter (**photo 16**). In my case

I offset the bowl from the true centre by about 50mm. Then, mark the centre of this circle. Mount the doughnut chuck on the lathe and sandwich the platter between the two plywood discs, then bring up the tailstock to the centre of the scribed circle (**photo 17**). Now tighten the four coach bolts of the chuck to firmly clamp the platter between the two plywood discs.

Because the platter is offset, it will be out of balance, so reduce the speed of the lathe accordingly. It may also be necessary to screw a weight securely to the back of the doughnut chuck to bring the whole thing back into balance.

The rest of the project is simple bowl turning, starting to hollow near the centre (**photo 18**), and working towards the rim of the bowl (**photo 19**). Sand and polish as you did with the outside and you're finished...



9 Drill holes through both discs around the circumference of the drawn circle



10 Remount on the lathe, sandwich spacers between the two discs and cut a circle out of one disc



11 Soften the inside corner of the hole with abrasive



12 Stick non-slip router mat to the inside surfaces of both discs



13 Mount your platter blank on the lathe and turn the back...



14 ... and the rim from this same chucking



15 Sand and polish the back and the rim



16 Scribe a circle for the bowl part, and clearly mark the centre of this circle



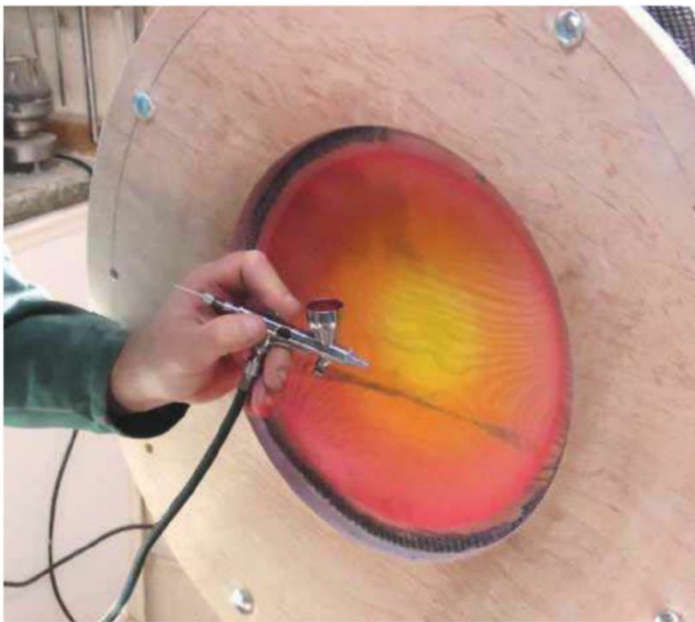
17 Sandwich the platter in the doughnut chuck and bring the tailstock up to the centre of the scribed circle. Tighten the four coach bolts



18 Begin to hollow the bowl from the centre...



19 ... moving towards the rim



20 Blend the three colours together so you can't see where one colour starts or another finishes



21 I used a random orbital sander to remove the paint overspray...

... unless you want to use colour. Yes, I know I said I was going to turn a simple platter, but I just could not resist colouring the bowl part. I have said in the past that if you intend to colour, texture or otherwise enhance your turnings, then this should be planned from the outset and not considered as an add-on at the end of the project. Here I am breaking my own rule and I knew that I would have a lot of hand sanding to do to clean up any overspray of paint. However, I also knew that the oil I applied to the back and rim of the bowl would stop any paint penetrating the wood, therefore making it easier to clean up.

I used acrylic paint to air brush the inside of the bowl area (**photo 20**), blending yellow, orange and red Golden paints. When dry I used acrylic sanding sealer spray to seal the paint.

Finally, I removed the platter from the doughnut chuck and cleaned up the overspill of paint on the rim of the platter using a random orbital sander (**photo 21**), then gave the piece a couple of coats of Danish oil. **Photo 22** shows the finished piece. **ww**



22 ... and here's the finished result

Drop us a line on paper or via screen and keyboard to add your voice to the woodworking crowd; you might be one of the lucky few who will manage to get their hands on a coveted *Woodworker* badge! You can write to us at *The Woodworker*, MyTimeMedia Ltd, Suite 25, Eden House, Enterprise Way, Edenbridge, Kent TN8 6HF or send an email to editor.ww@mytimemedia.com

★ STAR LETTER

Smooth mover

Dear Mark,

Responding to your request in the Archive section of *The Woodworker*, I am sending in a photo of a smoothing plane I made last year – from the March 1948 edition. I enjoy looking through old volumes and this plane really hit the challenge button for me, as I've never made a tool before. I had some offcuts from a kitchen worktop (laminated beech), and before I knew it, I was sketching the plane onto the blocks of wood. It's not exactly the same: no strike button, and the handle inside curve does not correspond exactly with the curve of the plane body, but it works! After getting the iron, etc. off eBay, sharpening it and setting it, it planes beautifully.

Alex Porwal, Bristol

Great stuff, Alex – a really nice job; so nice in fact that we're going to feature it in our next issue



Mark

Alex's smoothing plane, the design for which was taken from the March 1948 edition of *The Woodworker*

Carry on routing

Hi Mark,

Having read your article on the Stanley H264 router in the November issue, I thought it may interest you to enclose a photo of my router. While not the H264, mine is the 267 model which must have been a little later, but unfortunately I don't have a data sheet. It is still in use today and will go on working for some years to come.

With regards to the price of tools, I always advocate buying the best you can afford and looking after them. When Marples brought out their Selambre (yellow) handled wood chisels around 1960, I purchased a set (seven chisels) and I still have five in use today.

Regards, Ken Mullins

Hi Ken, well that one's seen some action, hasn't it? It's a positive advert for the brand, and testament to its design and manufacture 50 odd years ago. And yes, those Marples chisels are great aren't they? I've three mortise chisels in that design; the handles catch the light very nicely in my tool-rack window. Glad you're enjoying the magazine; it's getting a bit like a labour of love these days. Cheers!

Mark



Ken's Stanley 267 router is still going strong after many years of service

The Golden Proportion

Dear Mark,

Many thanks to Bob Chapman for his essay on design (*WW* Autumn), which was helpful, thought-provoking and admonitory (work it out in your head, on paper or computer and, if appropriate, with models or mock-ups before you start to seriously chop wood!)

It is surprising how much good design – proportion – depends on simple ratios of whole numbers and I used this principle (together with the Golden Proportion – G) in my table design, which made me 'Woodworker of the Year – 2002'; and recently I have very deliberately and extensively used G in designing another table of five-fold symmetry.

So, I have to take issue with Bob about his dislike of G! As Bob remarks, G is a fascinating number. It is irrational (cannot be expressed as the ratio of any whole numbers) and, like π and e , the base of Napierian logs, transcendental (i.e. in its decimal form is an infinite string of digits, which have no repeats). I prefer to use the value of G less than unity (given by $[\sqrt{5} - 1]/2$) than the one Bob uses, though they are related as reciprocals!

The main reason for writing is that I recently turned a large number of candle holders, which sold well (for charity) and attracted many favourable comments about their elegance. They were of a simple waisted design, with the bottom, top and waist diameters as 1:G:G², with the waist placed at the (upper) Golden point. The heights were also related to these measurements, so that there was variation from extremely dumpy (to take church candles) to very tall and slim (to take tapers).

I suspect the reason they looked well is that the eye 'sees' them as two interpenetrating cones: one with an apex at the top surface, the other inverted with an apex at the foot. Indeed, a version turned as two cones also looked good. Generally the pieces were turned with a smooth curve joining the key measurement points – a practiced hand and perceptive eye required – for it is surprising what little deviation from the required measurements makes the piece look 'wrong'. So, ultimately, Bob is right – what looks good is good.

Philosophically speaking, the Golden Proportion can be regarded as a Platonic ideal to which nature and artifice aspire. Deviations arising from incompetence or forces majeures do not detract from the aspiration. Wilful deviations can be viewed as attempts to express individual identity. Sincerely, John Dickinson

I agree, John, proportion is everything in design, but sometimes you just have to go with your own (trusted) eye... Mark



John's elegant candle holders feature a simple design with the bottom, top and waist diameters as 1:G:G²

GET IN TOUCH! Don't forget, we're always keen to see your photos, so please don't hesitate to send them in if you've snapped something of interest recently.

Email me on the usual address: editor.ww@mytimemedia.com

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ME AND MY WORKSHOP

This month, we step inside the workshop of London-based furniture restorer, Linda Kemp

Linda Kemp

1. What is it – and where is it?

A 5 x 5m studio space, in a converted industrial unit in South London. I share it with a musical instrument maker.

2. What's the best thing about it?

I'm surrounded by lots of creative and like-minded individuals.

3. And what's the worst?

No natural light!

4. How important is it to you?

Very. The price is reasonable for London, it's close to home and I run my business from there – LJ Conservation & Restoration.

5. What do you make in it?

I restore furniture, focusing mainly on seat weaving, repairs and re-finishing.

6. What is your favourite workshop tip?

Keep it tidy and organised. Always clear up at the end of the day, and if something's going wrong, walk away and come back.

7. What's your best piece of kit?

My Japanese saws!

8. If your workshop caught fire, what one thing would you rescue?

My Chair Nerd Box, which contains all my seat weaving tools. Oh, and my Japanese saws.

9. What's your biggest workshop mistake?

Forgetting to put the top back on a bottle of spirit dye and knocking it over – it went everywhere!

10. What's the best thing you've ever made?

My best job was restoring four chairs for an elderly couple. The lady had dementia and wanted them to look like she remembered them. I removed the later upholstery, repaired the joints, re-finished the frames and renewed the Danish cord. They looked like new and my clients were over the moon. Very rewarding.

11. And what's the worst?

An antique French chair that literally fell apart as I removed the upholstery – the only thing holding it together.



Linda in her studio space, working on one of her restoration projects

12. What's the best lesson you've learned?

Listen to the client, make sure you know exactly what they're expecting, keep in touch, and communicate.

13. If you won the lottery, what would you buy for your workshop?

A bigger workshop with lots of natural light. **ww**

NEXT MONTH

In the next issue, we step inside the workshop of boatbuilder Andy Voysey. We'd love to hear about your workshops too, so do send in a photo of your beloved workspace and feel free to share a few words – we look forward to hearing from you

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FULL BLOOM

With its fuchsia pattern and black veneering, Ian Hawthorne's box is a real challenge

TOOLS & MATERIALS REQUIRED

12mm birch plywood for the main carcass
6mm birch plywood for lid and base
3mm & 18mm MDF for tray base and pressure block
6mm foam/thick card/material offcuts for padding
Fuchsia marquetry
Nickel hardware – my 'neat' hinges, lock and key
Red suede
Native sycamore
Shellac, baby oil, cotton cloth and cotton wool
Low-tack masking tape
Scalpel/scissors



Fuchsia flowers symbolise confiding love, and I certainly found myself completely captivated during the making of this jewellery box! The intricate detail involved was really exciting, and to have the fuchsia pattern trailing over the lid top to halfway down the front demanded precise veneering work. What's more, black can be tricky to finish to a high standard and this added another layer of complexity to the project.

The marquetry was made to dimensions of precisely 378 × 220 × 120mm, and I used SketchUp to produce a model to use as my main

reference. For stability I opted for birch plywood throughout, cutting it with the face grain running vertically as the finishing veneers would be running horizontally. The box sides, front and back, were cut approximately 10mm larger all over than their final size.

This particular box was to have a predominantly black exterior with inner box edges, and a contrasting sycamore interior. As the base and visible edges were to be black I only added solid wood to the base to give the impression that the box was solid wood throughout (**photo 1**).



1 Substrate sandwich: sycamore was added to birch plywood to create the base edge

TIP

My method for producing the perfect joint is to have a piece of MDF approximately 600 x 300 x 25mm as my sanding board. Clamp the MDF at the ends with the concave side face up, onto a reasonably flat surface. This will force the higher ends down and result in a flat surface (you'll need to check this with a straightedge).

Attach a strip of 120 grit abrasive paper 100mm wide using double-sided tape. Clamp your veneers between two pieces of 25mm MDF with the veneer protruding from the bottom very slightly. Using a side-to-side motion, sand the veneer until it is level with the MDF (**photo 5**)

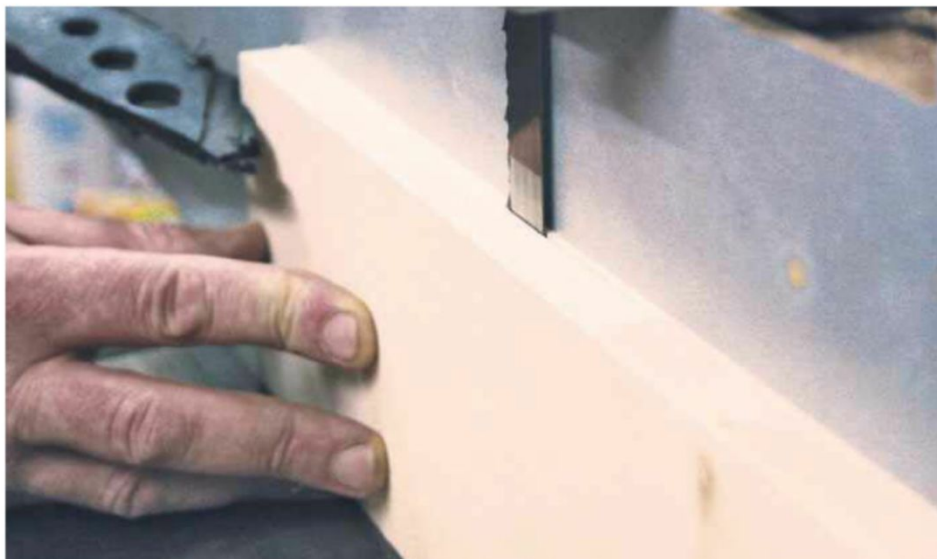


5 Using a side-to-side motion, sand the veneer until it is level with the MDF

Interior veneers

Once the plywood is cut for the carcass sides, front and back, and the sycamore added to create the base edges, set them aside to dry and start work on the veneers for the box interior.

This is finished using native sycamore bandsawn veneers. I started with a plank 25mm thick, 150mm wide, and long enough to ensure that one slice off the side of the plank would create enough veneer to cover the inside carcass. I cut this wood to a thickness of 1.2mm, then put it through the drum sander and took it down to 0.8mm. My intention was to bookmatch the inside of the lid so I cut two consecutive pieces for this



2 Use a bandsaw to cut the bookmatch interior veneers

purpose and marked them appropriately (A and B) to prevent any mix-up (**photo 2**).

While the bandsaw is set up, cut the veneers for the main base and the tray base.

When the plywood sycamore sandwiches are dry, use a cabinet scraper to get rid of the excess glue and bring the sycamore down to the same level as the plywood. Placing the 1mm sycamore veneer down on your cutting mat, arrange the box parts on top of it and cut round them with a scalpel knife (**photo 3**).

Add yellow glue to the ply using a gloss roller, then press the veneer pieces down onto the glued-up parts and place into the veneering press under pressure for about one hour.

Out of the press

Take the carcass pieces out of the veneering press and give each veneered side a sanding with a random orbital sander through to 320 grit, in preparation for being cut to size.

Remove the tape from the glued lid, base and tray veneers, scraping off any excess glue. Now glue the veneers onto the appropriate substrates (two pieces of 6mm birch plywood for the base

and lid with the grain running vertically, and a single piece of 3mm MDF for the tray base) and place into the veneering press for about one hour.

Back to carcass

Now it's time to cut the carcass pieces to their final dimensions. Prior to cutting the rabbets I added low-tack masking tape to the veneered sides for protection. Although the rabbets could have all been cut on the router table using a series of light passes, I decided for the sake of accuracy to use a combination of table saw, bandsaw and the mill for this procedure (**photos 6 & 7**).

Getting groovy

Cutting the grooves for the lid and base is fairly straightforward. Sand the outside of the base, fit a 6mm downcut spiral into the router and, using some scrap, make a light pass 5mm from the bottom edge and then several more passes until a depth of 6mm is reached, then widen this until a good fit is achieved.

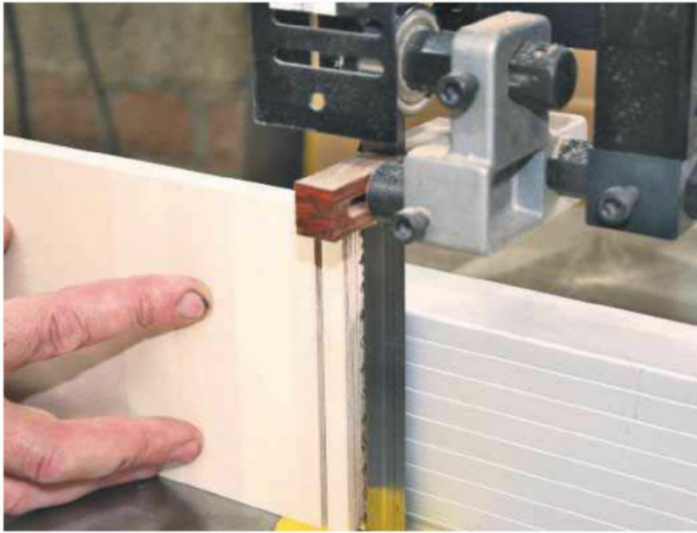
Cut the groove for the lid just enough to ensure it sits below the surface and deep enough for a 3mm border all around. Fit a V-groove bit and cut



3 Arrange the box parts on top of the sycamore veneer and cut round with a scalpel



4 Tape up one side of the veneers, turn them over and open up the seam to add glue



6 Instead of cutting the rabbets on the router table, I used a combination of table saw, bandsaw and the mill

a small chamfer to both the outside of the base groove and the inside of the lid groove.

Base time

Cut the base to size with the sanded side facing upward to protect it, raising any small dents with a damp cloth. Next, sand with 400 grit to remove the raised grain from the dampened areas and apply several coats of shellac, leaving 30 minutes between coats and de-nibbing with 1,000 grit after the first coat and 1,200 grit between the rest. After the last coat and sanding, follow up with very fine wire wool until all is matt, then apply some wax, leaving it on for a few minutes before buffing off.

Base & lid glue-up

To reduce my stress levels I always prepare for the box glue-up stage with a dry practice run. Once satisfied with the box fit I added a small amount of glue to the base groove, taking care to avoid the lower part, and added some more glue to the rebates before clamping up.

Leave the box to dry overnight, then remove the clamps and any squeeze-out using a scalpel,

sand the inside of the lid to 320 grit and measure from the box rim to ensure that when the lid top is cut it will be a neat fit (**photo 8**). Since the lid top interior was a bookmatch, I took extra care to keep the lid bookmatch centred.

Before dry-fitting the lid I initially added some fine ribbon into the grooves so that it could be easily removed. After masking off the glue area on the lid (**photo 9**), I added several coats of shellac and followed the same procedure as already used for the inside.

After waxing, remove the masking tape, then make a pressure block out of 18mm MDF, just slightly smaller than the lid, and add some 3mm thick x 8mm wide MDF to the underside of the 18mm MDF with double-sided tape.

After a dry run I added some glue to the inside corner of the lid groove and put the lid in place, adding the pressure block and a few clamps (**photo 10**), before leaving to dry for a few hours. Once dry, remove the clamps and clean the upper edges with a scraper.

Lid separation

Bandsaw the lid from the base (**photo 11**),

then sand the separation on a sanding board until the bandsaw marks are removed and the lid sits on the base with a nice join (**photo 12**). To prevent telegraphing, I double veneered the lid using a piece of black veneer with the grain running vertically (**photo 13**).

Cut two pieces of MDF to fit inside the lid to raise it off the bench, and place foam inside the lid to protect the surface from damage and keep the area free from debris. After cutting a piece of 18mm MDF and a piece of foam the same size as the lid, apply some glue to the lid of the box with a gloss roller and put the veneer down on it, pressing firmly to help it grab, before adding the foam and 18mm MDF and clamping up (**photo 14**).

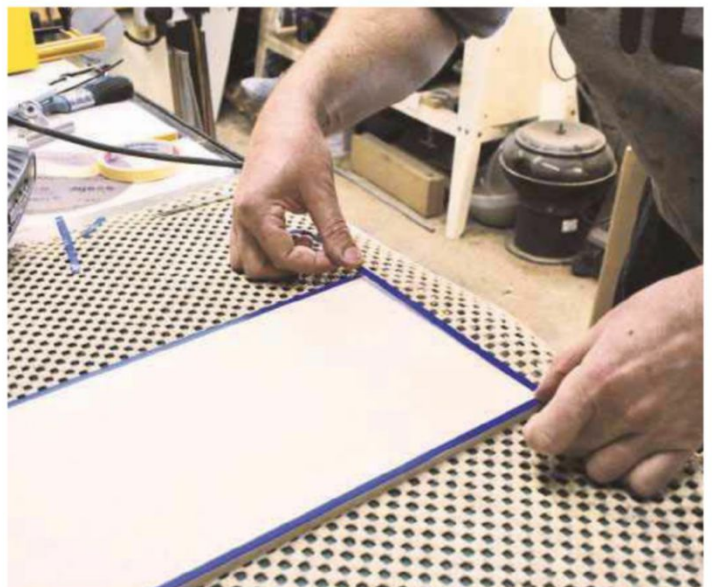
When dry, trim flush with a scalpel and lightly sand the top with 180 grit abrasive.

TIP

When cutting the carcass to final dimensions, keep the veneered sides facing upwards to avoid any scrapes from the saw table



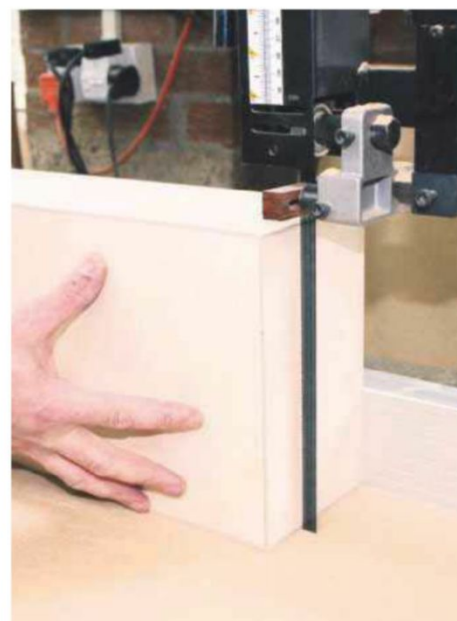
8 Measure from the box rim to make sure that the lid top will be a good fit



9 Mask off the glue area on the lid and add several coats of shellac



10 With glue on the inside corner of the lid, groove the lid and place under a pressure block held with clamps



11 Use the bandsaw to separate the lid from the base

Putting the lid down on the base, check for misalignment by straightening up the front and adding some standard masking tape along the seam and repeating for the sides.

Using a sanding board covered in 100 grit, sand the back until the lid and base are flush, then add masking tape to this seam and remove the tape from one of the sides to sand flush. Repeat for the other side and front.

Cut the box inner lips with black veneer to about 0.5mm wider than the box thickness and 20mm longer than the length (photo 15).

Glue the front in place and hold there with low-tack tape. Add a board of 18mm MDF

to the top using two clamps – I used the lid pressure block – and leave for 20 minutes. Repeat for the back.

When dry, trim the mitres using ply the same width as the strips with a 45° cut at the end. The side strips are cut using the plywood template and glued in place using the same method. Once dry, the strips are sanded flush on a flat board covered in 400 grit. Lightly sand the interior at a 45° angle with a block covered in 400 grit, this producing a fine chamfer.

Now for the marquetry

Start working on the back of the box first, roughly trimming the marquetry for the back and leaving about 0.5mm all around for precision trimming later on. I had already prepared some pressure blocks from 18mm MDF with the face covered in 6mm foam, and planned to use them to help distribute the pressure evenly. I also made a

block for the inside covered in foam – you can use any material such as card or cotton – to help protect the inside surfaces.

After a dry run (photo 16), roll on some yellow glue and position the marquetry, applying hand pressure to help the glue grab and minimise slippage.

Quickly place the blocks on the inside and outside and attach four clamps (photo 17). Use the same method to add the lid back marquetry and leave to dry for about two hours. Once dry, gently sand both back parts with the sanding block covered in 180 grit abrasive until flush.

Hinge fitting & lid marquetry

Fit an 8mm spiral bit in the router table and set it offcentre by the thickness of the veneer, which still has to be added to the side. Set the depth of cut to slightly less than half the barrel thickness of 3mm, to 2.95mm.

TIP
When de-nibbing use some talc to prevent clogging



12 Remove the bandsaw marks using a sanding board. The lid should sit on the base with a nice join



13 Double veneering the lid using a piece of black veneer with the grain running vertically prevents telegraphing



14 Roll some glue onto the lid and press the veneer firmly before adding the foam, 18mm MDF and clamping up

Cut the mortises, then screw the hardware into place. Remove and mark it so that the hinges go back to the same mortise.

The lid marquetry is cut leaving 0.5mm all around for trimming later. Lay the edge that lines up with the front down onto it and mark it with a pencil to indicate where the joint will be cut later.

Tape down the lid along the front edge to help prevent slippage (**photo 18**), and apply glue and hand pressure. Clamp the lid in place using the pressure block and the block for the inside lid.

When dry, sand the edges with a 180 grit sanding block, and trim the marked front edge to 0.5mm larger.

I carefully laid it down on the lid front and took my time lining up the marquetry. When satisfied with the alignment I taped it in place (**photo 19**) to prevent slippage, applied glue and pressure with my hands, then added the blocks and clamped up (**photo 20**). When dry, unclamp and attach



15 Cut the box inner lips with black veneer to about 0.5mm wider than the box thickness and 20mm longer than the length

the hinges to ensure alignment of the lower front. Tape, glue and clamp the marquetry for the box lower front, then add the plain black box side veneers and gently scrape flush.

Add the nickel lock and cut the keyhole before sanding the whole box to 320 grit and using compressed air to blow out all the dust.

The trays

I calculated the tray dimensions by measuring the inside of the box and subtracting one millimetre from each side, veneered a piece of 3mm MDF for the base, and by the time it was dry, I had cut the rebate joints for the tray using the table saw and my bandsaw, employing the mill for the final clean-up.

Sand the base on the show side and cut the base groove on the router table fitted with a 3mm spiral bit. A 2mm dado in the front and back holds the divider.

MAGNIFICENT MARQUETRY

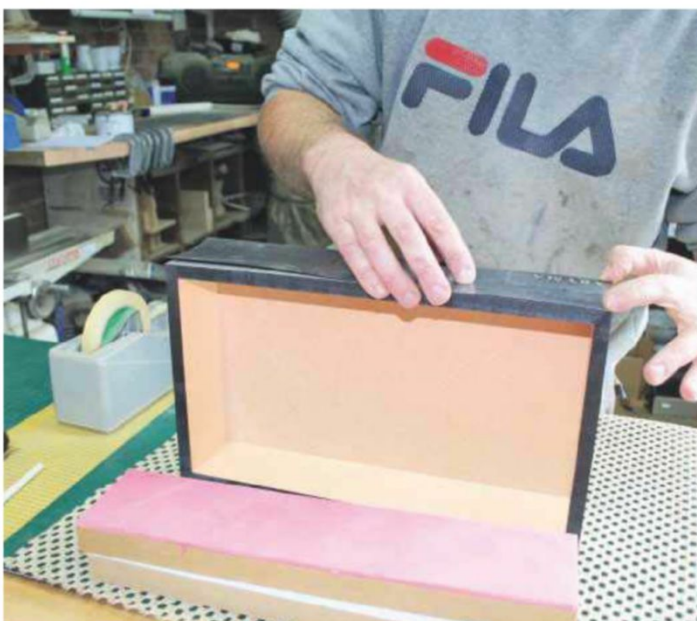
The brief given to Anne Harrison, designer and maker of the marquetry at Aryma, was to create a design incorporating fuchsias, which would effectively use the visible areas of the box surface. Serious thought was given to the veneer choices as she wanted to ensure exceptional colour balance and to use interesting grain characteristics.

The veneers had to be as flat as possible to minimise any gaps that might appear after pressing. The fuchsia shapes were carefully cut from the veneer selection and then placed into a prepared sticky-faced template to keep all the veneer pieces in place. To enhance the sense of depth, the veneers were sand-shaded to create the illusion of shadows. Sand shading involves dipping the veneer edges into very hot sand to scorch and darken them.

If you have any questions about the marquetry or need a design produced to the highest standards, contact Howard at Aryma: howard@aryma.co.uk



Anne created the marquetry as a complete overlay ready for pressing



16 Before gluing, the marquetry has a dry run



17 Attach four clamps to the positioned marquetry

WOODWORK Fuchsia box

Finish the inside of the tray and base with three coats of shellac, following that up with wax.

After gluing up the tray and letting it sit overnight, unclamp and cut a piece of sycamore for the divider, then glue in place. Once dry, trim the rebates flush and add a brass pin to each corner to reinforce the joint, then plug it with sycamore.

Next up, sand everything and give the exterior several coats of shellac, again followed by wax. The tray will soon rest upon sycamore-veneered steps placed at each side in the base.

Finishing

To achieve an open-grain polished look, mix 20g of blonde shellac flakes to 250ml of alcohol, applying several coats with a folded piece of cotton T-shirt fabric. Fill any small gaps with z-poxy finishing epoxy, which dries rock hard and sands very easily.

Once all gaps are filled and sanded, apply several more coats to achieve an even finish. Sand the box exterior with 1,200 grit until there's a matt finish.

Make a rubber from a small ball of cotton wool wrapped up in clean cotton cloth (**photo 21**) and use it to build up to an excellent finish over several days.

Lining the interior

To complement the fuchsia design, I chose rich red suede to line the box and tray bases.



18 Using standard tape, hold down the lid along the front edge to help prevent slippage



19 When satisfied with the alignment, tape the lid into place...



20 ... then add blocks and clamp up



21 The finish is down to shellac and hard work with a rubber over several days

Cut three pieces of card to size for the three base areas (two trays, one box) and then reduce by 1mm all around before adding double-sided tape to one of their sides and placing sticky side down on the back of the suede.

Using a scalpel or scissors, cut the suede slightly oversize by 1mm all the way round and try for size, taking fine skims until the suede pieces slot perfectly into place. Use latex glue to stick the pieces to the bases.

The only chance

Creating a fully veneered box with intricate marquetry requiring precision alignment probably sounds like an extremely pressurised job, and so it was. But I was in my element with this project, to be honest, completely absorbed as I was in matching up the blossoms on the lid top to the front. You only get one chance to get this right, so I took a great deal of time to think everything through and tremendous care of the marquetry until I was ready to incorporate it.

Thus a standard shell was transformed into a beautiful, breathtaking oriental-style jewellery box that would forever touch the heart of its owner. As for me, I now have a 'blooming' great interest in veneering and similar projects are already taking shape – to find out more, see my contact details in the sidebar below. **WW**



FURTHER INFORMATION

Hardware for this project can be purchased directly from www.hawthornecrafts.com

If you have any questions on the above project, contact Ian on ian@hawthornecrafts.com

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NEXT MONTH

Coming up in
the next issue...

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SOAPBOX RACER

Peter Vivian shares the story of the making of his 1930s 'Indycar' style Chassis Number 4 soapbox racer



ARCHITECTURAL MIRROR

A nice project for classical architecture fans everywhere, as Niall Yates looks to the city streets for inspiration for his elegant mirror frame

RING VASE

Colin Simpson demonstrates a number of different turning techniques in the making of this charming vase, which uses three contrasting timbers



PLUS ■ Ditty box – part 2 ■ Adding colour
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PROS

- Confident control
- Easy to handle

CONS

- Blade guard dust cover a tricky fit

RATING: 4.5 out of 5

Makita JV102D 10.8V cordless CXT brushless jigsaw

Comfortable, efficient and powerful, this new cordless offering from Makita certainly ticks all the boxes

With continuing advances in engineering technology, 10.8V cordless tools are fast taking over the ground that was once the domain of the 14.4V stable, and showing every sign of holding it. New Li-ion batteries, in Makita's case the CXT slide-on multi-contact range, have enabled the development of the compact but fully formed professional power tool; factor in brushless motor technology and the result is a solid, well-built machine like the JV102D jigsaw.

A multitude of features

Available in either body (as shown here) or handle grip, this jigsaw provides the sort of features we're coming to take for granted with an almost effortless style. New for me is the lack of a trigger; in its place we have a lock/unlock button and a similar on/off control. Once unlocked, the saw switches on its worklight, and the tool stays 'live' for eight seconds before locking itself off again. Both buttons are readily reachable with a comfortable thumb, and offer instant control. Blade speed can be set before or during a cut via the knurled dial in the handle and remains constant from the on to the off.

In use

Blade changing is quick and easy, twisting the blade holder ejects the incumbent allowing the replacement to be simply clicked into place. I found cutting to be steady and controllable, and even 50mm oak proved to be little problem for this saw; and with the three-stage pendulum set to maximum all remained fine and dandy. There's a removable base cover plate to protect delicate surfaces, and one of the best clip-in dust extractor nozzles I've yet to see. This operates most efficiently once the clear plastic dust cover is attached to the blade guard.

Versatile & accurate

Batteries slide on and off in a positive manner and, as well as possessing protection overload circuitry, each one has a battery level indicator – always a useful feature and fast becoming a 'must have' on cordless kit. It's easy to forget just how versatile a jigsaw can be; just like earlier jigsaws of 30 years ago, the base will pivot to offer bevel cuts of up to 45°, and can be as accurate as you take the trouble to make it.

In summary

Comfortable, efficient and powerful; it ticks all the boxes here. **MC**



Starting is a two-step operation; unlock, then go



The base pivots for bevels – note on-board hex key



New blades are simply pushed into place with a click...



... and old ones ejected with a twist of the holder



Bosch GHO 12V-20 Professional compact planer

This new addition to the Bosch compact club delivers impressive results and is handily compatible with the rest of their 12V battery tools

Hot on the heels of their 12V mini router comes the latest Bosch addition to the compact kit club; a very handy planer – in actual fact it could be considered a one-handed planer, such is its small size. Light, with a body length of approximately 220mm and a 56mm blade, you could practically put it in your pocket, but it will still do a job and one which in some circumstances a bigger planer might struggle to match.

Neat & compact

Featuring a winning combination of proven Bosch technology in the lithium-ion battery department and the latest of their brushless motors, this mini planer could well prove to be the star of the current small power tool show. I found it to be neat and compact (as you'd expect) but nicely balanced and with something of a precision feel about it. Depth control is via the leading knob, which twists from zero through a whisper shaving, then progressively thicker up to the first stop at 1mm; it's a gradual adjustment with no increments. At the stop point it's possible to go further by depressing the red button and maxing out at a hefty 2mm – actually quite an achievement for such a diminutive tool. I think the physical barrier at 1mm reminds the user to take it easy, not something every enthusiastic woodworker is always capable of.

A system which delivers

Following the Bosch tradition, chip exhaust can be set to either side with the removal and insertion of the exhaust valve; this can also be hooked up to an extraction unit or dustbag with the addition of an adaptor (not supplied). The design of this planer makes it a natural for either hand operation; left or right it felt equally capable to me. If you're faced with shooting in a couple

of doors you might want to reach for a corded planer, but for small adjustment work on site, it's a great piece of kit.

There's a spare blade onboard in the rear of the base and, together with a hex key tucked away nearby, you'll always be assured of accurate and efficient planing. As most users will probably know, Bosch have long used a single blade system on their planers, and judging by the results I achieved on a variety of timbers, it's a system which continues to deliver. There's a battery level indicator just by the trigger so that you can keep an eye on things, but I've been pleasantly surprised at just how long one charge will last on this new 12V kit.

In summary

Fully compatible with the rest of their 12V battery tools, this compact planer is a positive addition to an expanding range. If you're looking for big results from a small tool, then look no further. **MC**

Specification

Battery voltage: 12V (10.8V)
No load speed: 14,500rpm
Planing width: 56mm
Planing depth: 0-2mm
Width of rebate: 0-17mm
Weight (excluding battery): 1.5kg
Brushless motor: Yes

Price: From £226.80

Web: www.bosch-professional.com

PROS

- Light and easy to handle

CONS

- You'll need a spare battery for a full-day's work

RATING: 4.5 out of 5



One-handed operation is the norm for this planer



A spare blade can always be available – note hex key above in battery compartment



1st stop; depressing the 'Maximum' button will gain you an additional millimetre of cut



Accurate milling on the aluminium base ensures consistent accuracy



The battery indicator enables the user to know at a glance just how much working power remains

Specification

Stone size: 203 × 75mm
 Grades: 300 & 1,000 grit (50 & 15 micron)
 Bar size: 100 × 35 × 18mm
 Max blade width: 58mm
 Min width: 10mm
 Max blade thickness: 7mm

Typical price: **£151.21**
 Web: www.trend-uk.com

PROS

- Quality stone
- Fast, repeatable results
- Easy to set guide

CONS

- Polishing compound is hard and chalky
- Stone is better with a holder, which allows you to position it higher for chisels

RATING: 4.5 out of 5

Trend DWS/KIT/B diamond honing/polishing kit

This kit has everything you need to sharpen, hone and polish your tools while delivering fast and repeatable results every time

Diamonds are not only a girl's best friend, but also my favourite medium for honing, and Trend have long held my gaze in this area with their premium double-sided bench stone, which has been my firm favourite for a decade. For anyone new to the diamond honing arena, it can be easy to get sucked in to buying a cheap inferior stone and encounter the pitfalls therein, including a lack of flatness, and also the diamonds either working loose from the plate, or if cheaper polycrystalline diamonds are used, premature failure in its ability to cut and hone.

So while a quality stone is a bigger investment, the long-term benefits tend to speak for themselves. My own Trend stone still performs flawlessly after being worked hard over its life span.

This particular set from Trend also addresses the thorny issue of honing in general by including a full kit to allow anyone, from novice to pro, to achieve consistent and keen edges on standard flat-backed and square-edged tools.

Alongside the 203 × 75mm double-sided stone, there is a honing guide, a piece of stropping leather, honing compound

and cutting fluid for the stone itself as well as a non-slip mat for the stone.

The mat works well, but with the plate of the stone only 8mm-thick, you have to use this near the edge of the bench to back off chisels without the handles hitting the bench and keeping the blades from sitting flat.

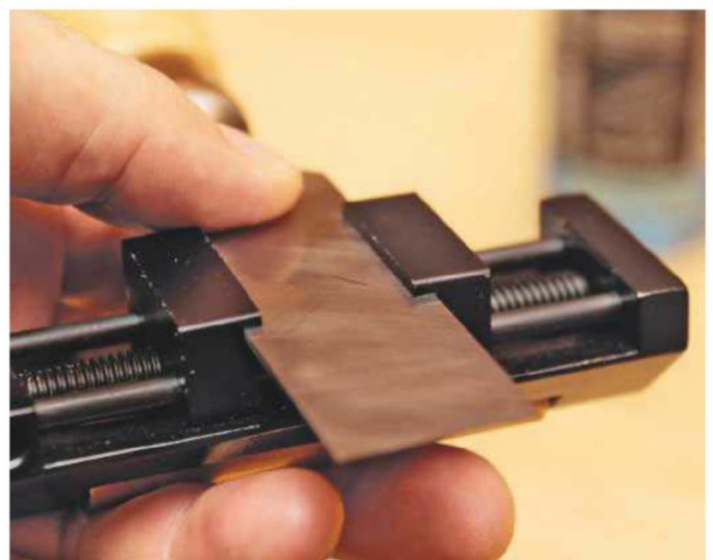
It would be prudent to invest in a dedicated holder to lift the stone high enough to prevent this for ease of use in any situation.

The stone

The stone itself is excellent. It's super-flat at +/- 0.0005in over its surface, with the 1,000 grit finer side in a continuous solid style while flipping to the 300 grit coarse side reveals a diamond checker pattern on the reverse. These checkers are designed to clear heavier swarf deposits that can quickly build up, as the cut is pretty aggressive. This side is ideally suited to initial flattening of new chisels or irons and removing small nicks, with the finer side kept for the honing stage.



You slide the blade through until it rests against the ridge of the required hone angle



As the guide is tightened, the blade is lifted until it is secured against the side tabs



The wide roller on the guide keeps things very stable as you work on the stone



Blade projection is sufficient to allow easy backing off while still in the guide

Honing guide

The honing guide is well constructed and very simple to use. It has a couple of drawbacks, however: it won't close down to hold a 6mm or under chisel – 10mm is its smallest capacity according to the packaging, but I found it will just about grab an 8mm one.

The design also secures the blades by lifting them up against the top shoulders to ensure a parallel hone by means of sloping lower shoulders that automatically lift the blades to the correct position as it is tightened.

This method of gripping the blades may be slightly limiting for some as it means that only dovetail chisels, plane irons or blades with a thickness of less than 7mm will slide under the shoulders to secure them, but that should cover most general day-to-day tools. The overall width capacity is 58mm, so unless you own a No.8 jointer with a 2 $\frac{3}{4}$ in blade, it covers a wide range.

The side clamping method holds the blades well with the jaws always sitting central to the jig for balanced honing. You can also add an extra nip on the brass knob with a screwdriver if needed.

Sitting the guide with a blade on the setting plate, it's simply a matter of projecting it enough until it registers against the ridged profile to any of the five common angles, and then you're ready to go.

The 64mm brass roller keeps the guide stable as you work it over the stone, and being diamond the cut is very quick and requires little pressure. Although the raised burr is flat, I found that by applying side pressure as you work, the guide allows you to achieve a camber on a plane iron if needed.

Blade projection is more than enough to allow the wire edge to be backed off with plenty of support on the stone while still in the jig – a definite plus point. From here you can also strop on the leather and this can be done on the bench top, but I'd bond the leather to a flat board to give an easier and more consistent performance.

The supplied polishing compound does a good job but I found it a little hard and chalky; I prefer a softer, waxier compound for this task, but in general it does its job as it should and lifts the edge that bit more if needed.

In summary

The cost of the kit might seem a bit high, especially if you compare it to others, but it's great value. You get a large double-sided, ultra-flat premium stone, a decent, easy to use honing guide and a few other very useful bits and pieces, all of which makes it ideal for anyone who struggles to get consistent, keen edges on the traditional square-edged and flat-backed tools we rely on the most. **AK**



The honing compound is quite hard and chalky when applied to the leather



It does work well enough but the leather is best bonded to a board

Specification

Spiralling wheels supplied: 17 & 27 tooth
Indexing markings: 180° in 15° increments

Typical price: **£52.36**; 17-tooth texturing wheel – **£23.26**

Web: www.axminster.co.uk

PROS

- Allows you to add a unique look to your turnings
- Great for trying out and experimenting with different texturing effects

CONS

- Wheel retaining screw can work loose

RATING: 4 out of 5

Crown mini spiralling tool



This clever tool from Crown allows you to add a unique textured appearance to your turnings – so go on, experiment away!

Over the last few months I've done a bit of lathe demo work, turning a few pen kits and the like at a few shows to demonstrate that, as an amateur, you can achieve some decent results, but I didn't think I was ready to attempt any real woodturning – at least, not in public!

I have been experimenting at home, though, and also watched the real turners at shows whenever I got the chance to try and pick up some tips. Spying a really nice little textured turning by Chris Pouncy, I asked what was involved and after a quick demo, it looked so simple that I put it on my 'to try' list!

Texturing

This particular texturing tool from Crown is quite short, so it's better suited to smaller or shallow work. There is also a longer handled version available for bigger work, which also allows you to impart texture into a deeper turning where the short handle version doesn't give enough cantilever at the handle end to afford good control.

The clever part of this texturing tool comes both in the profile of the wheel as well as the angle it addresses the work, and simply altering these makes a difference in terms of the pattern that is imparted onto the work.

The thick sleeve, secured with a couple of hex screws, can be rotated as well as slid along the tool shaft to alter the overhang

and has a large flat that sits on the toolrest to give maximum support in use.

A set of indexing marks on the sleeve of the tool allows you to set the angle of the wheel consistently to gain identical patterns, as well as reversing the angle for cross knurled and chevron effects.

In this particular area I did find that when the wheel ran in one direction it was fine, but swinging the position to give a reverse to the first angle, the small brass retaining screw for the wheel could unscrew under load as the wheel runs in the opposite direction.

I found that in this situation, it needed additional nipping with a pair of grips as the screw is too small to gain adequate pressure from fingers alone. Simple enough, but I would guess a hex wrench fitting would be the better option here.

In use

Before I got too involved, I experimented in order to get to grips with it, opting for a flat face platter-type piece as well as an outside edge on a simple cylinder turning. It's certainly a wise move as it does require a bit of work to get the tool addressing the work correctly in order to achieve a clean and consistent cut. Also, speed is important and I found a slower speed worked well for me.



The sleeve rotates to register against the cursor mark on the tool shaft



A flat on the sleeve sits on the toolrest, which delivers support and retains the correct angle



Simple dimpling can be made...



Altering the angle...



... allows a chevron style to be introduced



Working the face on this softer sapele gives fast results

After starting off at around 1,000rpm, I was initially finding the tool difficult to engage and it was skidding, but simply slowing the lathe speed to around 600-700rpm altered it dramatically, and allowed me to address the work and get the cut started very easily.

Doing practice cuts is definitely advisable when you first start out, and if things do go wrong, it's very easy to simply turn the wonky bit away and have another go, which is far better than spending time on a nice piece only to ruin it by getting the texturing wrong! It's also worth experimenting on different timbers as well. I found a harder close-grained timber such as maple worked well for a crisper definition. Sapele worked reasonably well and being that bit softer, it was easier to get the tool to cut in, but trying it on a spiral on the dished centre of the platter face where the grain pattern goes from long to cross, the shorter grain and softer timber stripped the profile – a good testimony to practice and timber selection before starting the final piece!

In summary

With two spiralling wheels supplied, there's also an additional wheel available for other texturing, which is more than enough to experiment with and alter the designs and patterns on many pieces to make your mark. **AK**



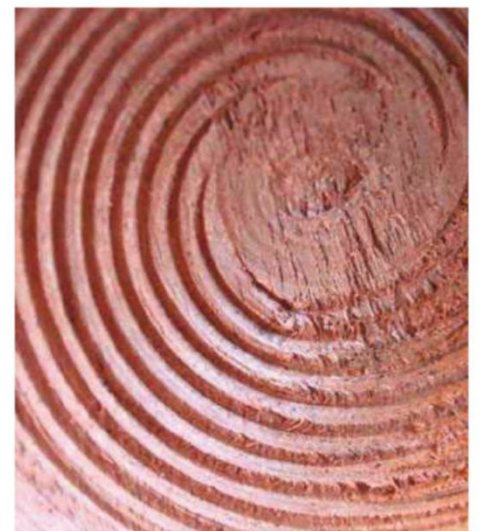
Experimenting with texture and colour is all part of the fun!



... with the wheel positioned upright



Deeper profiles are well defined if they aren't too close to each other



This spiral attempt shows the problem of crumbling short grain on softer timbers

Specification

Capacity: 0.9 litre
Brush: 25mm

Typical price: **£9.90**

Web: www.toolovation.co.uk

PROS

- A brilliant way to keep glue ready to use
- Very durable

CONS

- The brush is cheap and cheerful, although easily replaced

RATING: 5 out of 5

Toolovation Magic Glue Dispenser



If your workshop is home to regular glue-ups then this clever device will prove invaluable – every workbench should have one!

I guess I can't be the only one who glues up by making do with bits of stick or a finger to spread the adhesive over the joints? I've also tried the brush route as well. The latter works really well, but by the time I've got everything glued up and clamped, I've invariably forgotten to clean the brush and it's rock hard the next time I need it... sound familiar?

So having recently been shown this clever glue pot, it seems to be the answer to my problems: no more bits of stick, hard brushes or wiping the excess glue on my jeans!

Nifty design

Made from a polypropylene type plastic it is durable, and while a rigid container, it has a composition that isn't brittle so will take plenty of knocks and scrapes.

Its simplicity belies its effectiveness in not only storing glue and keeping it readily to hand, but also keeping it fresh

and ready to go while also stopping the brush from going hard and therefore unusable.

It does this by having a large container with a 0.9 litre capacity. The lower reservoir maintains the glue at a set level within it, and within this the glue brush is dipped, with any excess wiped away on the crescent lip before moving it to the work.

After the glue-up is complete, the conical lid is placed over the top of the brush within the reservoir, sealing it from any air so that it remains fresh and fluid ready for the next time you use it.

In summary

If there is a long period of inactivity, then the brush should be cleaned but in a 'shop that does regular glue-ups, this is a cracking little accessory and a bargain to boot. **AK**



The glue container is tipped on its end to allow the glue to be poured in



In its normal position, any excess glue can be wiped off on the lip



After use, the conical lid can be placed over the reservoir with the brush inside



With the lid securely in place the glue stays fresh, ready for the next use

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combined to bring the best and the worst
to Stan Clark's precarious ladder world

Towards the end of my time with Ward's the ladder industry started to get very busy, and looking back on it later it was just like an electric light bulb glowing very bright before it goes and packs up. One of the new men who joined the firm at that time was Bill Kingston who had worked for the Humphrey brothers – they had a ladder making factory nearby and were well known for producing very high class ladders; their order books were always full with customers like The Telegraph Company, as well as The Northampton Electric Light Company.

Learning new skills

While working alongside of Bill, he showed me many ladder making skills that I'd never seen before. This was due to the demand for ladders from Mr Ward, who could not make them fast enough, resulting in many corners being cut to save time. Drilling the rung holes was often done hastily and meant that holes were not always where they should be and all manner of breaking and splitting out was left behind, which needed planing by hand to make right.

Bill told me that he was taught by the Humphrey brothers to do each and every hole very methodically by making sure that the drill was in the correct position before drilling, and not to go right through the pole, but to turn it over and drill out the rest from the other side, to avoid splitting any timber off, not going right through as they did in Ward's workshop.

He also said at Humphrey's the holes were tapered out by the use of a hand-held taper auger with stops fitted to get the correct taper – not like they did here with a hand-held brace – so each tapered hole was done more or less by guesswork with no stop fitted.

Mr Ward had already purchased very powerful electric drills to do away with the heavy work of manual drilling and tapering, but as things got busier he had a man come into the workshop to see what could be



done for the tapers. He designed a three-bladed auger with adjustable stop, which enabled any workman to do the same job that had to be done by hand in less than a quarter of the normal time taken.

New machinery & methods

Engineers from Wadkins also visited, and watched how pole halves were prepared by hand. They came up with a spindle moulder and wooden jig, which had the pole half nailed onto it and pushed through the cutters. This did away with all the planing by hand and when two automatic drives were fitted either side of the spindle moulder, they pushed and pulled the pole halves through. If you were careful, one could hardly see any marks on the timber from the rotating blades.

Wadkins also brought along an adjustable flat planer to put the pole halves through to prepare them for the spindle moulder. With these new machines it only took minutes to prepare a pair of ladder sides, instead of an hour or more. The only problem was the noise and dust they produced, for if both were running at the same time, even with all the doors and windows open, you could not see from one end of the shop to the other due to the sheer amount of dust.

Sometimes when nearly everyone was out the workshop on a funeral, I would work alongside of Bill, and we would fetch two pole halves into the workshop, drill the hole the required distance from the bottom, fit it onto the plank flat side up and take any twist off it first, followed by putting both halves through the flat planer, but very slowly leaving a lovely finish on the timber. This was followed by putting them through the spindle moulder as slowly as possible, and then drilling the holes from both sides like Bill was taught. He'd set up the auger for the tapers, then we'd cut the rungs carefully so there was little to no planing up the sides. It proved to be quicker to make

a ladder if one took one's time, especially with none of the gut mauling work to do; a ladder could be made from start to finish in less than half an hour with the new machinery and new methods.

The beginning of the end

Different types of ladders were also being requested, with variations on tie rods and wire reinforcements. The last lot of ladders I helped to make was an order from the GPO, and they had to be fitted with a wire rung on the top, so that they sat stable against any pole. At the time, I did not realise these were to be the very last ladders I would make, as aluminium ladders came in and that was the end of it for Mr Ward. **ww**



Mr Ward senior turning rungs; later they were bought in



The short lived new workshop

NEXT MONTH

Well, sorry to say that this is the last of Stan's stories, but we're going to try and put a few online at www.getwoodworking.com as they're worth a look. Next month we'll have something else in the entertainment line for you – but you'll just have to wait to find out more... And if any other readers have a story to tell, we'd be glad to listen. Just write to editor.ww@mytimemedia.com and we'll see how we get on



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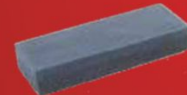
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