

Issue 322 • September 2017

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- Inside the extraordinary world of chairmaker Michael Brown
- A bespoke corner shelving project to brighten up any room
- Removing broken screws: what to do when things get stuck!

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Don't delay, get looking inside
the September issue of GW today!



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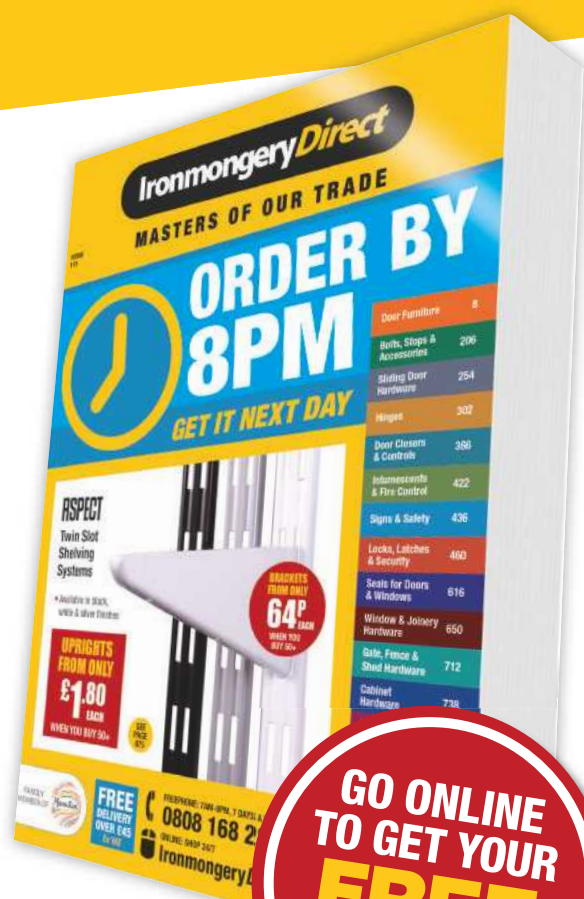
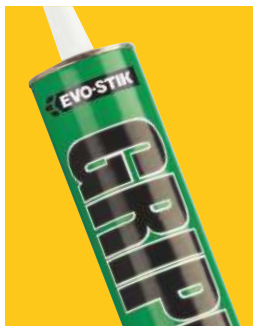
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Welcome

Some of my favourite things from this issue

Summer holidays surely have to be one of the most exciting times for many a hardworking adult, and I for one am relishing the thought of getting away for 10 days and hopefully coming back somewhat refreshed and raring to go. I'm not sure about you but I'm often struck with writer's block, especially if I've been sat in front of my computer for too long, and the feature that I've been planning on writing for a good few months now is looming and still untouched. Yes, it's sitting there on my desktop as I write this, staring at me expectantly, and I keep telling myself that next week the mood will take me and I'll be able to produce a piece that not only I'm proud of, but that everyone will love. I'm not going to give any clues as to what the feature entails, but all being well, it's due to appear in a few issues' time. The subject matter of the piece isn't a problem: I have a whole raft of interesting information with which to work, and stunning photos to accompany it, but I just can't seem to fathom the words to make it all come together as a cohesive whole. In an ideal world, writing the feature before the holiday would surely be a better idea, then I could truly relax in the knowledge it was tackled, but deep down I'm hoping that some Cornish sea air and lovely country walks will somehow help to unlock my hidden potential – watch this space!

The importance of planning

So that's the quandary I'm currently faced with, but how about you? Do these same feelings of a lack of inspiration and drive also plague woodworkers? When it comes to mounting a piece of wood on the lathe or formulating ideas for an interesting quirk to incorporate into your latest wooden creation, do you suffer with a lack

or flow of ideas? I know a lot of you take advantage of forward planning by either jotting down some ideas on the back of an envelope, or perhaps going one step further and making a full 3D drawing using SketchUp or similar. This is indeed a great idea and one that usually minimises the likelihood of error creeping in. Of course, there's nothing wrong with straying from the path and adding a little twist to your design, or perhaps realising the detail you were thinking of adding won't actually work after all, but I do believe that everything really does come down to successful forethought, no matter what your preferred creative pursuit. I think there's a lesson to be learned for all of us here.

Proud achievements

So if you've made something recently that went according to plan, or maybe you went off piste and ended up creating something even better than you originally expected, we'd love to see it. Send in some photos and a few words about your piece and we'll certainly feature it for you in the magazine. It doesn't necessarily have to be your most recent project, either. Perhaps the elm sideboard you made 10 years ago still remains your proudest achievement, and in which case we'd be thrilled to hear your story, or why not nominate a friend or loved one who could do with a bit of a boost? Get in touch and share your experiences around, and don't forget that taking a well-deserved break can often do us all the world of good. Cheers to that!

Enjoy!

Tegan

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We endeavour to ensure all techniques shown in Good Woodworking 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



52

A TRULY BLESSED MAN

Sailing over from England in 1985 and upon landing on America's shores, Michael Brown went about building his own timber-framed house before setting up a business making stunning bespoke hand-crafted chairs and furniture, which he continues to do to this day



WIN!

To be in with a chance of winning a 2.5l tin of Rainbow Chalk's new Shabby Chic Decking Paint, in a colour of your choice, worth £29.99, see our competition on page 21 – good luck!

Good Woodworking

September 322

• TOOLS • PROJECTS • TECHNIQUES • ADVICE

PROJECTS

38 Say cheese!

Andy Smith makes a wonderful wooden camera for his niece using scrap pieces of walnut and maple

52 Great oaks from little acorns grow

Annemarie Adams' lovely acorn pendant is quick and easy to make, gives you a good opportunity to use up scrap pieces of wood, and no will doubt become a firm favourite

60 Corner shelving reinvented

Liven and brighten up a corner of any room with this clever shelving solution from Noah Weinstein

72 Hands on deck

Phil Davy's decking is perfect for al fresco woodworking

80 Man V bowl

Les Thorne decides to do battle with a piece of brown burr oak and the end result is certainly striking, not to mention functional



TECHNICAL



24 What the Dickens

Dave Roberts finds that keeping up with the times isn't always the same as making progress

28 Extracting broken screws: what to do when things get stuck!

As Mike McCrory says, if you've ever used small brass screws in hardwood, you have undoubtedly run into issues. Here he offers his advice on dealing with the problem as well as how to avoid this happening the first time around

32 Finishing touches

In the final article of the series, John Bullar looks at preparing and treating the wooden surfaces of furniture

42 Converting logs to lumber

Moving on from his last article, which saw him discussing methods of harvesting, Peter Bishop now makes the natural leap to looking at the processes used for converting logs to lumber

48 Escaping the chaos: how to design your ideal workshop

John McMahon shows how it's possible to design your ideal workshop for less than the price of a takeaway meal (depending on how you look at it!)



PEOPLE & PLACES

46 Centrefold

This console table from Sam Carter's 'Arching Collection' was designed to be in keeping with the room it sat in, the entrance of which incorporated a Gothic arch

90 Errorism – or how to fail safe

While we all make them, to be a woodworker at ease you must not beat yourself up for your errors

TESTS

Andy King tests...

14 Triton TJS001 jigsaw

16 Ernst Socket Boss

18 Bosch GLI 18V-1900 worklight

19 Peter Sefton Fine Furniture Making DVDs

20 Shabby Chic Garden & Decking Paints

Phil Davy tests...

75 Batavia MaxxSharp sharpener

76 UJK digital height gauge

YOUR FAVOURITES

8 News

12 Courses

13 Readers' ads

68 Letters & Makers

71 Around the House

89 Next month



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MODEL	MOTOR (W)	PLUNGE (mm)	EXC.VAT	INC.VAT
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CBG6RSC	HD	150mm	£54.99	£65.99
CBG6SB	PRO	150mm	£54.99	£65.99
CBG6RWC	HD	150mm	£59.98	£71.98
CBG8W*	(wet)	HD 150/200mm	£56.99	£68.39

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Finn James' 'Brompton' coffee table



Chris Cooper's 'Manuell-Coates' cabinet



Freya Whamond's 'Bud' chair

The Alan Peters Award for Excellence

Every year Celebration of Craftsmanship & Design, which this year takes place from 19–28 August, offers up to three of the year's brightest young fine furniture designer-makers the opportunity to exhibit their entry alongside the best in the business at their prestigious exhibition in Cheltenham. Over the award's six-year history this has resulted in several sales that have boosted fledgling careers while also allowing winners to gain valuable experience and contacts within their chosen industry.

This year's winners, Christopher Cooper, Freya Whamond and Finn James, are every bit as impressive as those who have gone before them, while also having the added accolade of being placed at the front of the largest ever number of applicants that the award has attracted. They do great credit to their respective tutors at Rowden Atelier Woodworking School, Rycotewood Furniture Centre and Williams and Cleal Furniture School.

"The judges were particularly impressed this year by three very different pieces," says award judge and director of Celebration of Craftsmanship & Design, Jason Heap. "We felt that each, in their own way, showed good ambition, offered interest both visually and in their construction, indicated a good understanding of the materials used, and demonstrated accomplished workmanship," he finishes.

The Alan Peters Award for Excellence is a competition designed to commemorate Alan Peters OBE, an internationally respected designer-maker who dedicated his life to the furniture industry in the workshop, through writing and also by teaching. The award continues Peters' legacy by encouraging and supporting the next generation of furniture designer-makers at the start of their new careers.

Celebration of Craftsmanship & Design

CCD is a popular annual selling exhibition that hosts many of the finest furniture designer-makers and studio workshops in the UK alongside selected artisans from other disciplines such as jewellery and art.

Housed in the beautiful neoclassical setting of Cheltenham College's Thirlestaine Long Gallery, a stunning array of around 300 unique, contemporary, meticulously crafted exhibits await your delectation. There is no better place in which to discover an exquisite addition to your home or to discover a skilled craftsman to create that special piece that you would never otherwise find. To find out more and to book tickets, see the website – www.celebrationofcraftsmanship.com. Be sure to make a date in your diary for this exciting upcoming event, which promises to be a real feast for the eyes.

Trend Flexible Curve Routing Guide

Trend has recently launched a new accessory, which is ideal for creating your own templates or jigs. The 8mm-thick mini curve enables you to repeatedly cut a shape with precision. Simply bend to the required curve (minimum radius of 30mm) then fix in place onto the template material (maximum thickness 10mm) with the supplied screws. It can be used in conjunction with a self-guided cutter and a router or router table. Alternatively, a standard cutter can be used if guided by a suitable guidebush. Available in two different lengths, the CURV/8X500 is 500mm long and priced at £32.40 inc VAT, and the CURV/8X1000 is 1,000mm long and priced at £62.40 inc VAT. Available from all Trend Routing Centres and stockists across the UK, see www.trend-uk.com for more info.





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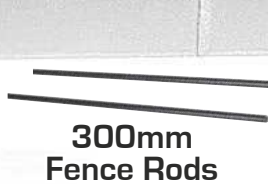
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IRWIN Tools says thanks to tradespeople up & down the country

IRWIN Tools is celebrating the UK and Ireland's trade professionals with the return of its National Trade Appreciation Day. For the seventh year, IRWIN is bringing back this special event to salute the country's real working hands, and inspire the nation to show more gratitude for our skilled workers. On Friday 15 September, the company will encourage people all across the UK to join in and celebrate the trade, even if it's just with a simple 'thanks' to a trade professional.

Darren Barber, Marketing Director UK and ROI at Stanley Black & Decker, said: "Trade professionals are the backbone of our nation; they don't just put a roof over our heads, they build this country and keep it running strong. To all these men and women who work tirelessly throughout the year, this day is our chance to give thanks and recognise them for their efforts. We want everyone to embrace National Trade Appreciation Day so that we can raise the profile of our hardworking tradespeople, the work they do, and more importantly, give them the recognition they deserve."

Since IRWIN first set out to champion the vital role of tradespeople, its employees and retail partners have personally thanked thousands of tradespeople and celebrated their contributions



across the country, and to further celebrate the nation's skilled workers, IRWIN will be hitting the road from September to November, hosting events at over 60 selected retail locations across the UK.

Plus, from 1 September to 30 November 2017, they will also be giving away thousands of gifts including tools and branded apparel to every tradesperson up and down the country through its 'Rewards for Real Working Hands' consumer promotion. One lucky and deserving tradesperson will also win a Mercedes-Benz Van. For more information about IRWIN Tools' National Trade Appreciation Day, promotions, and to see how you can get involved, visit www.irwintradeappreciation.co.uk.



Carpenters at risk due to lack of health & safety knowledge

A new survey has revealed that 26% of carpenters have had an accident at work, putting themselves at risk of serious injury and missed earnings due to a lack of health and safety knowledge when on site.

The survey from IronmongeryDirect, of nearly 700 tradespeople from across the UK, revealed that 70% of tradespeople who've had an accident at work have ended up in A&E as a result. One in six also admitted that they've never attended a health and safety course, despite 91% thinking they are important and 70% considering they should be mandatory.

The results also revealed that younger tradespeople are more health and safety savvy than older generations, with just 13% of 31-40 year olds having had an accident at work compared to almost a quarter (23%) of 51-60 year old tradespeople. This is hardly surprising considering that nearly a quarter confirmed they last attended a health and safety course more than five years ago.

Even more worrying, one third (31%) of the respondents who are sole traders have no specific work insurance and only 15% have accident and sickness insurance, not only putting their health and wellbeing at risk but potentially their financial security should an accident put them out of work for a prolonged period of time.

Back injuries (25%) and muscle strains (32%) were two of the most commonly reported problems for tradespeople, with 41% confirming they don't use any specialist safety equipment at work beyond the essentials – i.e. hard hats and steel toe cap boots.

Wayne Lysaght-Mason, Managing Director at IronmongeryDirect, commented: "This survey shows that there needs to be a change in attitude to health and safety including more training for tradespeople, to ensure they are as safe on their respective jobs as they can be. We all know that there are risks involved in most trade professions and with more and more young people going into a trade, it's vital they are given the opportunity to attend health and safety courses and know all of the ways to safeguard themselves and others when on site." To find out more, see www.ironmongerydirect.co.uk/research/how-safe-are-tradespeople.

Multi-Sharp Wetstone Water-cooled Chisel/Plane Blade Sharpener



Now available from Multi-Sharp is this unique water-cooled sharpening system that is able to resharpen even badly damaged chisels/plane blades quickly, as it uses the high power/torque of an electrical drill. The clamp accurately holds the blade at the selected angle (25-40°) for a precision ground edge. It also sharpens chisels and plane blades 10-60mm wide, including firmer, bevel edge and rebate chisels to the following angles: 25, 30, 35 and 40°. The traditional leather strop also removes any burr, for a razor-sharp edge.

The wetstone system uses recirculating water to eliminate over-heating of the blade

edge and loss of steel temper – 'bluing'. Simply fill the built-in reservoir with water, turn on the power drill and a continuous film of water covers the face of the grinding wheel.

The sharpener re-points and re-edges many small tools including gouges, cold chisels, bradawls, screwdrivers, centre punches, etc. Marked angles on the toolset indicate tip angles. Also included with the system are guides to sharpen both knives and scissors at the correct angle. This clever device fits any domestic power drill, including cordless versions. Priced at £19.95 (plus £4 P&P), see www.multi-sharp.com to find out more.

Phil Irons in action with Woodcut Tools at Axminster stores



Good news for woodturning enthusiasts: Phil Irons will be demonstrating tools from Woodcut at all the Axminster stores over the next 12 months – see details below.

Phil is now well established on both the UK and international woodturning scene, but it was as a teenager that he first became interested in turning, when his father was given a child's treadle lathe, which he and his brothers played around on. Turning became a serious hobby in Phil's late 20s and early 30s while working in the travel industry, then in 1994 he made the decision to become a full-time turner. Today he has a thriving business, supplying several top galleries, but readily admits he has done his fair share of production turning.

Turning expertise

According to Phil, he gets most pleasure and satisfaction from turning hollow forms and lidded vessels, and has developed a range of surface decoration techniques. Phil also enjoys teaching and offers a number of courses at his workshop in Welford-on-Avon, Warwickshire. Courses range from beginners' hobby level classes to the more advanced master classes on the lathe.

New Zealand-based company Woodcut Tools and Phil have a long association spanning over 25 years. Woodcut manufactures a unique range of woodturning products offering innovation, quality and value.

The company is best known for its lathe-mounted Bowlsaver bowl coring system (original Bowlsaver and the MAX3), Tru-Grind sharpening jigs and Pro-Forme hollowing tools.

Demo dates

Phil will be demonstrating tools from Woodcut at all Axminster stores over the next 12 months:

2017

19 August – Warrington
30 September – Axminster
11 November – Basingstoke

2018

13 January – Nuneaton
10 March – North Shields
28 April – Cardiff
2 June – Sittingbourne
21 July – High Wycombe

All demos will run from 10am-4pm. This is a great opportunity to see a master of his craft at work; to find out more about Phil, visit his website: www.philirons.com.

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 Tel: 01768 891445. Fax: 01768 891443. email: info@toolsandtimber.co.uk

COURSE DIARY

Summer may be drawing to a close, but there's still plenty of courses to get your teeth into!

SEPTEMBER

- 1 Sharpening
- 2 Introduction to wood finishes
- 4 Bird, bee and bat boxes
- 4 Scrollsaw course
- 4–8 Beginners' woodturning (5 days)
- 5 Festool demonstration day
- 5–6 Machining for restoration
- 6–7* & 20–21 Beginners' woodturning
- 11–12 Introduction to the small lathe
- 12* Fine-tuning hand tools
- 14–15 Introduction to milling
- 15* Introduction to Leigh Jigs
- 18 Pen making
- 19* Sharpening with Tormek Hand Tools
- 21–22* Beginners' routing
- 25–29 Windsor Chair
- * 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

- 3–8 Beginners' small blanket chest
- 11–15 Understanding veneering
– making an inlaid tray
- 15–17 Woodworking skills
– portable bookcase project
- 15–17 Woodcarving for beginners
- 17–21 Picture framing
- 19 Woodturning – make a small bowl

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

- 22–24 Steam-bent and inlaid tray

John Lloyd Fine Furniture
Bankside Farm, Ditchling Common
Burgess Hill, East Sussex RH15 0SJ
Tel: 01444 480 388
Web: www.johnlloydfinefurniture.co.uk

- 22–25 Beginners' four-day course

Chris Tribe, The Commill, Railway Road
Ilkley, West Yorkshire LS29 8HT
Tel: 01943 602 836
Web: www.christribefurniturecourses.com

- 30–1 Greenwood stool making
- 30–1 Square basket making

Greenwood Days, Ferrers Centre
Staunton Harol LE65 1RU
Tel: 01332 864 529
Web: www.greenwooddays.co.uk

Australian designer wins Student of the Year at Chippendale School

Four furniture design students have won top honours at the Chippendale International School of Furniture. Anselm Fraser, principal of the school, said that "this year has been exceptional, with our students showing real craftsmanship and design vision. Our top prizes could therefore have also been made to several other students."



Nigel Goodwin with his award-winning valet and table

Student of the Year: Nigel Goodwin

Nigel Goodwin, from Australia, won the 2017 top award, and is taking a piece of Australia back home with him. Nigel created a parquetry side table and clothes valet, both incorporating red gum that came from flooring from an old squash court near the school. Examining it more closely, the red gum pieces were clearly marked 'made in Australia', which gave Nigel the idea to make something from his home country. He is now planning to open a B&B and workshop to teach others what he has learned in Scotland. "I am thrilled to have won this honour, particularly since it is so unexpected. I have thoroughly enjoyed my year at the school," he said.



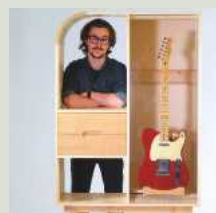
Robert Vowles with his clever drinks cabinet

Best Design Award: Robert Vowles

The former tree surgeon from London has worked in several countries and continents, including Canada, Sweden and in parts of Africa.

His fiendishly-clever drinks cabinet, made from a variety of woods including elm, red gum, oak and ash, is his signature piece from the furniture course. Opening the cabinet is the clever part, because to do so involves solving a series of puzzles that are designed to baffle even the most sober. Based on ideas from Japanese puzzle boxes, the drinks cabinet has a sliding door mechanism that, when several

elements are aligned correctly, reveals a secret puzzle door – and an even more secret lock and separate key to open it. Inside, the drinks cabinet is just as stunning, with elaborate marquetry panels and a mirrored back. Rob also had the singular honour of having his drinks cabinet displayed at the Scottish parliament, as one of five student pieces chosen by Professor Christopher Breward, principal of the Edinburgh College of Art. On graduation, Rob intends to set up in business in London.



Andrew Cockerill with his guitar cabinet

Best Portfolio Award: Andrew Cockerill

When creativity and a passion for the guitar come together, the result can be both beautiful and practical. Andrew Cockerill from York, who has played guitar for over 10 years, designed and crafted a guitar cabinet in oak and sycamore, with an innovative opening mechanism, which is both a functional storage space and a beautiful display cabinet.

He has set up Northern Woodwright Furniture, based in East Lothian, to make bespoke hand-crafted furniture.



Colin Bate's tree-themed drinks cabinet

Student's Choice Student of the Year: Colin Bate

Colin Bate is an outdoors sort of person who is also a member of his local mountain rescue team. He moved north from Birmingham to work in outdoor education but, over the years, found himself less and less outside and more and more behind a desk. Hence his decision to change track and enrol at the Chippendale school and, after graduation, to set up Highwood Furniture to make and design furniture and bespoke kitchens.

One of his signature pieces is a drinks cabinet that perfectly reflects his love of nature and the outdoors, with an oak frame, elm top and a free-form tree design in spalted beech running across the front.

"I love the precision of furniture making, and the disciplines involved in turning a design idea into a practical piece of furniture, but I also enjoy the creativity that goes into making a desk or cabinet into something absolutely unique."

To find out more about the school and the courses on offer, see www.chippendaleschool.com.

NEWS IN BRIEF

Södra Wood Ltd, formerly Crown Timber, is relocating its UK and Irish operations to a new flagship HQ in Cirencester, Glos. "The UK is our biggest market and our team is second to none for service, knowledge and support," said Jörgen Lindquist, Södra President. "It is fantastic to see the complete supply chain flourish from planting to finished timber, delivered to customers across the United Kingdom and Ireland." To find out more, see www.sodra.com/wooduk

The American Hardwood Export Council (AHEC) has launched a new website featuring innovative interactive tools designed to put architects and designers in the drivers' seat when it comes to specifying American hardwood. A new interactive forest map shows the distribution, growth and removal of American hardwood species from the whole of the United States down to individual counties. This technology presents accurate information in fantastic detail and visually demonstrates the true sustainability of American hardwoods. There is also a new easy-to-use illustrated species guide offering information on the appearance, machining properties, main uses, sustainability and availability of more than 20 American hardwood species. Users can select two species for a helpful, detailed side-by-side comparison, and the online content library, which includes images, videos and downloadable publications, offers a rich photographic resource for visual inspiration and practical references. To find out more, see www.americanhardwood.org

The International Woodworking Fair 2018 is set to be one of the top woodworking trade shows in the world for the furniture manufacturing, architectural woodworking, custom and general woodworking industries. Taking place from 22–25 August at the Georgia World Congress Center in Atlanta, over 600 exhibitors will be present, including the Felder Group; see www.iwfatlanta.com



Yandles Autumn Woodworking Show 2017

One of the country's favourite woodworking shows returns again this year – from 8–9 September – and promises the usual mix of demonstrations, trade stands, show offers and discounted timber from the dedicated Timber Self Selection Centre. One of the longest running events in the UK, the Yandles Autumn Woodworking Show is always a great day out and there's also free entry and parking to boot. More details can be found on Yandles' website; see www.yandles.co.uk

FREE READER ADS

FOR SALE

Stanley No.66 hand beading plane – in good condition, but no blades included; £20
01612 208 511

Kity best combi doweller/thicknesser, planer/spindle moulder – in good condition; £25 ONO – buyer collects
01858 545 429 (Leics)

5 × prepared oak boards – 1³/₈ × 11 × 73in; £400
01621 779 236 (Essex)

Selling due to retirement – hand-held tools, cramps,

etc. Electric bench saw, cross-cut saw, plus many hand-held electrical items – call for details
01992 308 951 (Herts)

12ft Belizean (Honduran) mahogany, rosewood, ziricota and purpleheart planks – under cover for over 30 years – call for details
01647 252 642 (Devon)

Proxxon DSH2 speed scrollsaw; £120 ONO
01440 709 507 (Suffolk)

SCM invincible Mini 30 – seven main operations Universal

Woodworker; in good working order; suitable for small joineries and where all basic woodworking operations are required to be carried out on one machine; seven machines in one: saw; surfacer; spindle moulder; thicknesser; mortiser; cross-cutter and grinder; £750, collection only
07984 717 106 (West Sussex)

Tormek T4 with woodturner's accessory kit – stone grader, diamond stone turning wheel, knife jig, square-edge jig, turning tool setter and honing compound; £450 – buyer collects
01233 638 039 (Kent)

A collection of 128 issues of GW. Issue 4 – Feb 1993 to issue 174 – May 2006 (not a continuous set); free to collector
01606 551 747 (Cheshire)

Harrison Graduate bowl lathe – single phase; £375
01702 512 185 (Essex)

WANTED
Woodworking bench by Sjöbergs or similar
07541 409 835 (Leeds)

Startrite K260 Universal combination machine or similar
07541 409 835 (Leeds)

New Axminster Trade sawhorses



The new Axminster Trade sawhorses are true workhorses of the workshop. Capable of supporting a weight of 590kg per trestle, a pair will support an impressive 1,180kg equalling the very highest capacities for trestles.

They are easy to set up, with quick-release legs that fold up effortlessly, creating a compact design for problem-free transportation. Each one folds into a neat package measuring just 84 × 150 × 895mm and can either be stowed away or thrown into the back of a van.

Height adjustable legs make it simple to bring the work up to your level for better positioning, which saves you having to bend down. Also, you can adjust each leg individually to set the right height if you are working on uneven ground. Each sawhorse rises to a height of 826mm. Although, if, for example, you are cutting with a handsaw, a lower position may be more comfortable, with the lowest height setting being 648mm.

You can be assured of safe working with these sawhorses. The advantage of having support arms means you can quickly create a table using 45 × 95mm timber. Alternatively, you can trim thicker pieces to size. Having the frame makes for a much safer cut as you have support all the way through while you are cutting. This is a real benefit especially when working with MDF sheets, as without the joists the danger is that the sheet could collapse through the middle during this process.

These sawhorses are built to take a battering, featuring an all-steel construction for added strength. The outer layer has a powder coating and zinc plating to prevent corrosion. On the tops of these sawhorses is a hard wearing, protective plastic, which prevents damage to the saw blade by stopping the blade coming into contact with the metal when making a cut at the top of the trestle.

Many sawhorses on the market are sold as singles but you will invariably need two. Axminster is currently offering them at £89.96 per pair. Note that this price includes VAT and may be subject to change without notice.



Pendulum action performer

This budget-priced jigsaw from Triton features a powerful three-stage 750W motor and the pendulum action provides impressive cutting performance

It seems that Triton has had a look at the rival jigsaws on the market, cherry-picked the bits that make them desirable and based their own machine around these, and no bad thing in doing so.

Tool-free blade change is a given on most machines nowadays and no different here, with the hinged smoked plastic dust guard doubling up as the release lever to hold the blade.

Plastic components

Although other manufacturers use a similar style, I'm unsure about the durability of plastic for a component that plays such an integral part,



A three-stage pendulum controls the speed and finish of the cut and is also used for working different materials



A plastic lever is used to release the blade clamp

but you'd assume the system has been subjected to the necessary laboratory test rigs before making it to the manufacturing stage. It does the job well enough and blades are held very securely once in position, and with a standard bayonet blade shank fitting there is a huge range of blades that are suitable.

Capacity in timber is good at 110mm but deeper cuts are prone to drifting on curves, but again, this is common on such types of work with many jigsaws unless you start to look at the more specialised guides that are available on some models.

Good blade selection also plays its part in minimising drift, so it's essential to choose the right one for the job and paying for decent quality blades will also make a big difference.

Tight curves

When carrying out deeper work, I did find that when turning a tighter curve where the blade can get slightly twisted and while also easing off the pressure to gain better control, the blade did have a tendency to slip out of the guide roller and move to the side.

The tightness of the curve plays a part here, as does easing off the pressure in order to keep control, which brings me on to speed function.



The variable-speed is controlled via the rear-positioned dial

A hoop handle jigsaw has the option of a variable-speed trigger and these are priceless in controlling curve cuts or fine control in general. It also allows the pressure to be held more constant, which would help prevent blades from jumping the guide roller.

However, body grip jigsaws all suffer from a lack of trigger speed control as they feature simple on/off sliders, so this has to be set with a roller, and on the Triton model the dial is placed at the rear of the body.

It works well, but controlling the speed of a cut on the fly is trickier to achieve on a body grip. Despite the negatives, however, and aside from the occasional roller jump, the Triton is no different from body grips in general and certainly finds favour in European hands as the Euro jigsawing fraternity tend to use them inverted so that the cut line is unobscured, and they are well designed for this type of grip.

Used in the 'correct' way – cutting by resting on the workpiece – the body grip is aided by the bulbous top handle, which assists any turning manoeuvres for curved work and dust is cleared away quite dramatically with a built-in blower.

Guide rail system

The aluminium shoe has a steel insert for durability and it also comes with a couple of clip-on plastic shoes: one is the standard type, which helps to keep more delicate surfaces protected as you cut, while the second allows the saw to be used with the Triton guide rail



A side-mounted on/off slider on the left makes the saw better suited for right-handed users



Two clip-on shoes are provided; this one for general cutting...



... while the other is designed to sit on the Triton guide rails



This lever releases the shoe and allows bevel cuts up to 45°

system, which is used by the plunge saw. It's a handy feature if you own the guide rails already, but this then assumes you have the plunge saw, and you'd surely make any straight cuts using this as the finish would be cleaner and far more accurate. However, it would come in useful for cutting out letterbox apertures and the like, and as an included accessory it's not a bad thing to have, especially if you own the rails.

Bevel cuts are also simple with the TJS001, via a tool-free action using the lever at the rear of the shoe. Once released, the shoe is slid to release it from the indents and turned to the desired setting with 45° left or right as maximum bevels. It secures well and with no wrench or screwdriver needed, it's a great feature and

despite the budget price, it's a well made saw that emulates more expensive models and certainly performs to a good standard.

Conclusion

The body grip style takes a little getting used to if you're more at home with the hoop handle

Specification:

- ▶ **Motor:** 750W
- ▶ **Speeds:** 800-2,900 strokes per minute
- ▶ **Capacities:** wood – 110mm; steel – 10mm
- ▶ **Stroke length:** 26mm

- ▶ **Typical price:** £75
- ▶ **Web:** www.tritontools.com

THE GW VERDICT

- ▶ **PROS:**
Great features at budget price; solid build quality
- ▶ **CONS:**
Plastic blade change lever; blade occasionally jumps the roller on some cuts
- ▶ **RATING:** 4 out of 5

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Socket to me

Similar to the systems mechanics use, these organisers are designed to keep sockets visible and accessible

If your workshop is anything like mine, two things will be evident: it's not always cutting tools that are needed in woodwork; you occasionally need to assemble things with nuts and bolts, so a socket set is handy; and secondly, the set is never where you thought it was when you need it!

Great value

When I do find it, my own set is decent enough, but like many, it's in a cheap blow-moulded case with poor latches to hold it closed and on mine, one has snapped off, the other is hanging on for dear life, and I've ended up with 50 odd sockets

all over the floor on numerous occasions because of it. Time for a change, then!

Spotting these socket holders on the Lee Valley website, I thought they would be an answer to my prayers and after a bit of Googling, I found a couple of UK suppliers selling similar products but at a higher price than I could get these shipped over from Canada!

To slip in a couple of North American phrases, it was a 'no brainer' so I sent 'a bunch of money' via their website and got a set of each of the rails sent over. My timing was good as there was an offer on free accessory holders with each set, which hold the ratchet handles and extension

bars. They only cost \$3.50 (£2.09) each so they're worth it even if the offer isn't running for long.

It was these holders that also swung it for me and convinced me to go shopping across the pond for them: the UK sellers don't seem to offer the holders, so it would mean the sockets being organised and easily accessible but the handles disappearing into the ether when I needed them.

A neat solution

The rails are terrific; each one slots into the tray for storage in a drawer or they can be hung up on their own for easy access. The rails lock in as well so if you're taking them to a job, they stay put. The same goes for the sockets themselves: the socket pegs slide on a toothed profile on the rails, which secures each one in a particular position, and the sockets themselves sit onto the pegs and are held there with a quick twist. You can invert the rails, shake them, drop them, but the sockets stay in place!

Equally neat is that the business end of the socket is outermost so you can see the size, slide a bolt in to check a size, and so forth, without having to remove it from the rail. If you have a mixture of metric and imperial sockets, then the rails come complete with stickers for marking these up for each socket.

Conclusion

At long last I now have a brilliant, fast access storage solution for my sockets and handles that I can keep readily to hand, and with the red and black livery, even if I forget where I've hung them they should be easy to spot! Superb! **GW**

Specification:

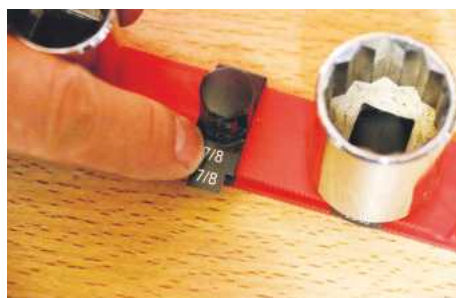
- ▶ **13in rails:**
 - 1/2in pegs × 22
 - 3/8in pegs × 28
 - 1/4in pegs × 30
- ▶ **18in rails:**
 - 1/2in pegs × 30
 - 3/8in pegs × 30
 - 1/4in pegs × 30

▶ **Typical prices:** \$16.50 (approx. £11 for 13in rails); \$19.50 (approx. £16 for 18in rails). Please note that prices given are in US dollars and the product ships from Canada

▶ **Web:** www.leevalley.com



The rails can be unclipped from the trays, which allows you to hang them up or take them with you



Supplied stickers are positioned on the socket pegs so they can be easily spotted and identified



The sockets are placed onto the pegs



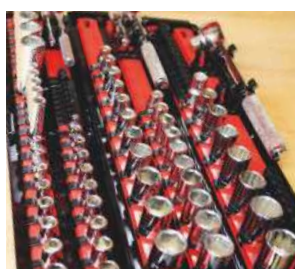
The socket on the right is secured; the one on the left can be removed



The rails feature a toothed profile, which allows the pegs to be held firmly in place



It's well worth buying the accessory holders for the ratchet handles



Perfect! All the sockets in order with their handles in place alongside

THE GW VERDICT

- ▶ **PROS:**
 - A great way to keep things organised; fast socket release
- ▶ **CONS:**
 - You have to send money to Canada to get the best deal!
- ▶ **RATING:** 5 out of 5

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FESTOOL

Tools for the toughest demands

Site work bright spark

Ideal for site work or in a small workshop, this handy worklight from Bosch will certainly make sure you're not kept in the dark

Back when I were a lad, if you needed a worklight you normally had to go to a hire shop and here you were given two choices: a halogen type that gave off lots of heat and ate electricity for a pastime, or a bulky fluorescent tube type. In the winter, it was great if your company wouldn't hire one as you could go home early, but not so good if you were self-employed!

Nowadays the technology has evolved to give us super-bright LEDs, which draw low power and with the availability of high AmpHour batteries, has made worklights easily accessible, long running and portable.

Bosch has come up with an incredibly bright worklight in this model: 1,900 Lumens, which is capable of illuminating an entire room at the touch of a rubber shrouded on/off button that is mounted on the robust support frame.

Multiple options

If you don't need such a bright light, then you can toggle the luminosity to a less intense setting by holding the button in for a couple of seconds. This will also increase the run time of the battery; each AmpHour of power is equivalent to around 50 minutes of light, so with 4Ah and above the norm, a couple of batteries will give you light for a whole working day if required.



The unit will take all current Li-ion batteries in the 18V platform, including the wireless charging ones, and it is also compatible with 14.4V batteries in the same style Li-ion slide-on pack.

If you are in an area where there is no available light – a roof space, for example – when the battery is about to run out it flashes three times before reducing the brightness, which allows you to safely get to it and swap the battery.

There are multiple options in which the light can be angled as needed, with the frame able to rotate through 180°, indenting to set the light at five different positions and with a secondary flip out leg to support it in its various different modes. It also has a 5/8th screw thread, which allows it to be fitted onto a tripod so it can light up any area as needed.

Site work

As it is designed primarily for site work, it has to be built to take the knocks and this is certainly the case here with a ribbed alloy housing for the light itself along with an impact resistant lens. The housing acts as a heatsink to help dissipate the heat, as it will get hot during use. There's no indication of how long it should be used for at a

Specification:

- ▶ **Power:** 18V or 14.4V Li-ion battery
- ▶ **Lumens:** 1,900

- ▶ **Typical price:** £90
- ▶ **Web:** www.bosch-pt.co.uk

THE GW VERDICT

- ▶ **PROS:**
Very bright; multiple angle settings; dual light intensity
- ▶ **CONS:**
Ideally needs to be placed high, lighting downwards to prevent shadow casts
- ▶ **RATING:** 4 out of 5

time, but if it does get too warm it has circuitry that will turn the light off to protect it until it cools down. This is a good addition and helps to protect the light from premature failure, but might be problematic if you are reliant on it as your only source of light and it trips out – if you're working in a loft space, for instance.

Conclusion

While perhaps not a bit of kit many of us would consider, if you are one of those people who work out of a small workshop and rely on leads from the house for your power, this would light up a decent-sized workshop with ease and would be ideal in winter months for this purpose alone.

But if you do go down this route, I would advise you to put it up high, so it fires the light down, which will also help to keep shadow casts to a minimum as well as preventing blinding yourself by looking into it. I made the mistake of accidentally doing so while placing it against a wall as I was trying to gauge how good the light coverage was, and I couldn't see properly for a few minutes! In this respect, it does the job well! **GW**



The light features a rotating stand, which allows the light to be fired in the direction required



It can also be used in a trestle-type configuration



There's also a screw point, so it can be fitted to a tripod



The power switch also toggles the light intensity



On its highest setting it brightly illuminates a wide area



On the lower setting it still gives good coverage, but note deep shadows on both settings

Fine furniture making – covered

These two volumes from Peter Sefton's new Fine Furniture Making DVD range are very well produced and the professional and authoritative delivery instils the viewer with confidence throughout

As part of a five volume series (Series 1), I selected these two as they cover similar areas to the David Charlesworth DVDs I reviewed back in GW320.

There are certain similarities within them, which I guess is to be expected as the areas of flattening and preparing stock as well as the hoary subject of sharpening are age old, and the principles are essentially the same. However, for me, Peter has a far more hands-on approach that makes the time fly by as you watch, accompanied by excellent little nuggets of information that explains the reasoning and methodology as you move on through.

Chisel & Plane Sharpening

The *Chisel & Plane Sharpening* DVD offers first-rate instruction on the subject of sharpening as well as covering preparation, without bogging you down with working to microscopic tolerances, and this is also replicated in the timber prep DVD I'll move on to shortly.

The explanation and coverage of the different types of honing options is very rational and follows along my own lines to some extent

in terms of gaining a keen edge in a speedy manner without faff, while the use of the Veritas honing guide shows just what a great piece of kit this is, not only if you struggle with freehand consistency, but also the whole range of angles and back bevels that can be achieved using it.

I particularly like Peter's explanation of a plane edge and how you can judge whether or not it's sharp by the shavings it makes; this offers a great method of being able to visually recognise when an edge is deteriorating and coming close to needing refreshing, and an excellent piece of useful information.

Timber Preparation

Moving on to the *Timber Preparation* DVD, it not only explains the pitfalls that can be encountered during timber selection, but also offers advice on how to get around these by altering the cut of the plane, the angle at which it addresses the work, and how moving to a more specialist plane can help to tame the problem areas.

Alongside, methods of checking for flatness, wind and square are well covered but without trying to achieve engineering tolerances in doing

Phil Davy will be reviewing the remaining titles in this series in a future issue



so. Woodwork can be as simple as deceiving either the hand or eye and a combination of both of these principles is often sufficient in achieving a piece that shows flat and true without working to microscopic amounts.

That said, Peter definitely works along the lines of 'it has to be right', but at the same time, it needs to be achievable and at a pace that will allow the students he teaches, or the DVD viewer, to be able to get things done so they can either enjoy woodworking at a hobby level, or be given the information required to take it to a professional level. At the same time, knowing when the work has achieved that mark is also equally important.

Conclusion

With Peter's wealth of knowledge from his own professional background as a furniture maker, and of course his successful furniture school, these two DVDs, as part of a set of five that cover timber and tool selection and preparation, will be essential viewing for anyone who is seeking instruction and guidance in the field.

The DVDs are very well produced and easily navigable, allowing you to quickly skip to a specific chapter or area that you may require more guidance or information on. Peter's style of delivery and great authority instils confidence throughout, and I'd definitely recommend looking at the other volumes in the series. **GW**

Specification:

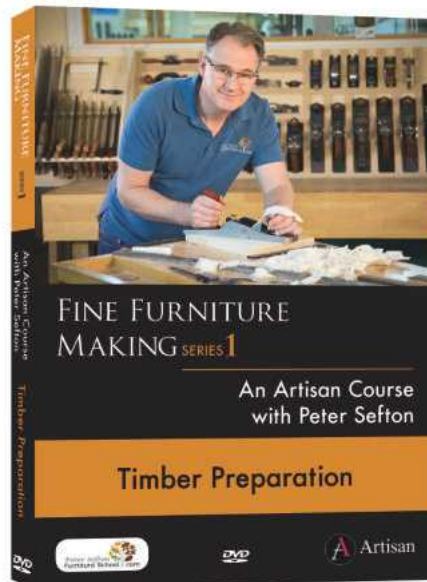
▶ **Running times:** DVD 2 (Series 1) – 1 hour 40 mins; DVD 4 (Series 1) – 2 hours 22 mins. There are five volumes in the series

▶ **Typical prices:** *Timber Preparation* – DVD 2 (Series 1); *Chisel & Plane Sharpening* – DVD 4 (Series 1) – £19.99 each; set of 5 DVDs (Series 1) – £90

▶ **Web:** www.woodworkersworkshop.co.uk



The reverse of the *Chisel & Plane Sharpening* DVD



The front cover of the *Timber Preparation* DVD

THE GW VERDICT

▶ **RATING:** 4.5 out of 5

Spruce up your garden

If you fancy giving your decked area and garden woodwork a splash of colour, then this range of easy-to-apply water-based paints will do an excellent job

I guess it's a given that as soon as a new year dawns it's not long before the garden is in line for a bit of work, and loathe as I am to do anything 'gardeny', a spruce up does work wonders!

Having built a bit of storage, seating and doing some planting a couple of years back to go alongside a gazebo I previously made, I thought it looked in pretty good nick colour-wise, but of course, Mrs. King knows different!

So having been sent in some samples of a few new Shabby Chic chalk-based Garden Paints, I was under orders to clean off any debris and dirt on the areas to be painted, break out the paintbrushes, and get to work.

Great colour spectrum

There's a great spectrum of 30 colours available in the Rainbow Chalk Shabby Chic Garden range for items such as fence panels, trellis and seating, and for decked walking areas, there's also a specialised anti-slip paint range available in six more muted, deeper colours.

The garden paint is available in tins as small as 125ml as well so you can really go to town on your colours if you want to create a rainbow effect garden without having to buy bigger quantities.



The original area ready for work (I thought it looked OK!)



Looking back the other way – on second thoughts, I guess it is a little tired and weather worn...



Coverage is quick and easy – it pays not to paint the back of your head green, though!



A quick rinse

The paints are all water-based acrylic, which is a big bonus for me as the clean up of brushes is a big bugbear of mine. All that's required is a quick rinse under the tap to clean them, which gets my vote every time.

The paints themselves are quite thin as well so it's advisable to cover up any areas that may get splashed, but again, a damp cloth will deal with any spots and drips of wayward paint. It does make it very easy to apply as well – you don't have to laboriously brush the finish in as is the case with thicker products.

Excellent coverage

Despite the thinness of the paint, coverage is excellent: one coat covered over the original colours well enough to bring a bright and vibrant look to the area while blocking out the old finish completely. Lighter finishes over a darker base may need further coats, and I will be giving mine a second going over just to impart that extra zing, which will hopefully see it through the winter months and next year beyond.

The garden paint isn't just limited to wooden structures, however; it can also be used directly on masonry metal and plastics as long as the

surfaces are free from contaminants, as well as being smooth and dry, which gives you the opportunity to transform your entire garden at the stroke of a brush.

Conclusion

I particularly like how the slate coloured decking paint works with the vibrant blue and green. I was a bit apprehensive when I opened the can and started painting it on, but now it's dry it enhances the bright colours all the more and as it can be used directly over old stains, sealants and varnishes, prep time is next to nothing – that's my kind of painting! I also get brownie points from Mrs. King for sprucing up the garden very early in the year! **GW**



The colours really stand out against the old decking

Specification:

- **Paint type:** Acrylic
- **Sizes available:** Garden Paint: 125ml, 1l, 2.5l; Decking Paint: 2.5l, 5l
- **Colours available:** Garden Paint – 30; Decking Paint – 6
- **Typical prices:** Garden Paint – £4.99 for a 125ml tin; Decking Paint – £29.99 for a 2.5l tin
- **Web:** www.shabbychicpaints.co.uk

THE GW VERDICT

- **PROS:** Water-based; great colour range; easy application; good coverage
- **CONS:** I don't like painting!
- **RATING:** 5 out of 5

Be in with a chance of winning a 2.5l tin of Rainbow Chalk's new Shabby Chic Decking Paint, in a colour of your choice, worth £29.99

Rainbow Chalk's new Shabby Chic Decking Paint is perfect for transforming tired decking areas and creating a stylish extension of your home. Available in a palette of six traditional exterior colours (Moss Green, Midnight Black, Autumn Brown, Slate Grey, Truffle Brown and Woodland Brown), this chalk-based decking paint will revive, colour, protect and create a beautiful smooth matt finish.

Specially formulated

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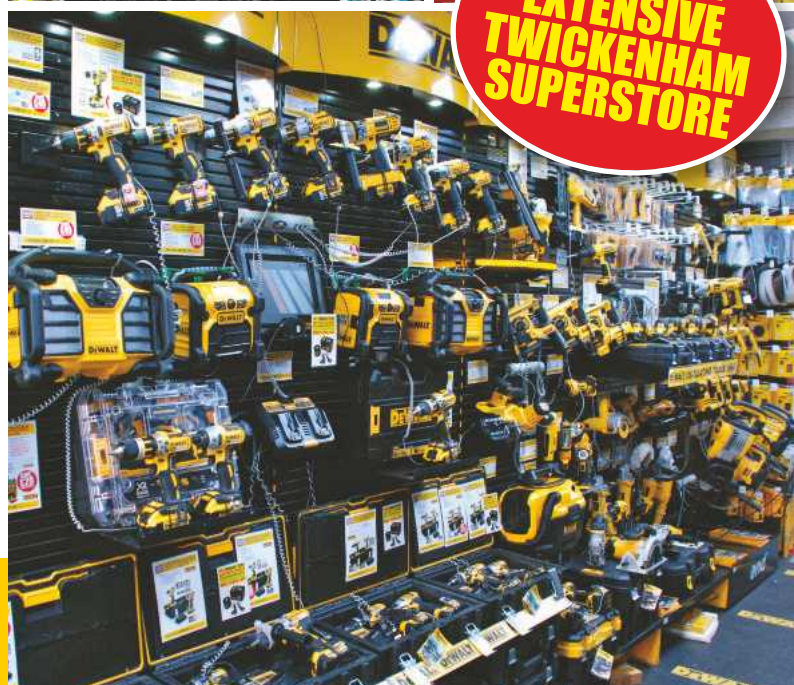
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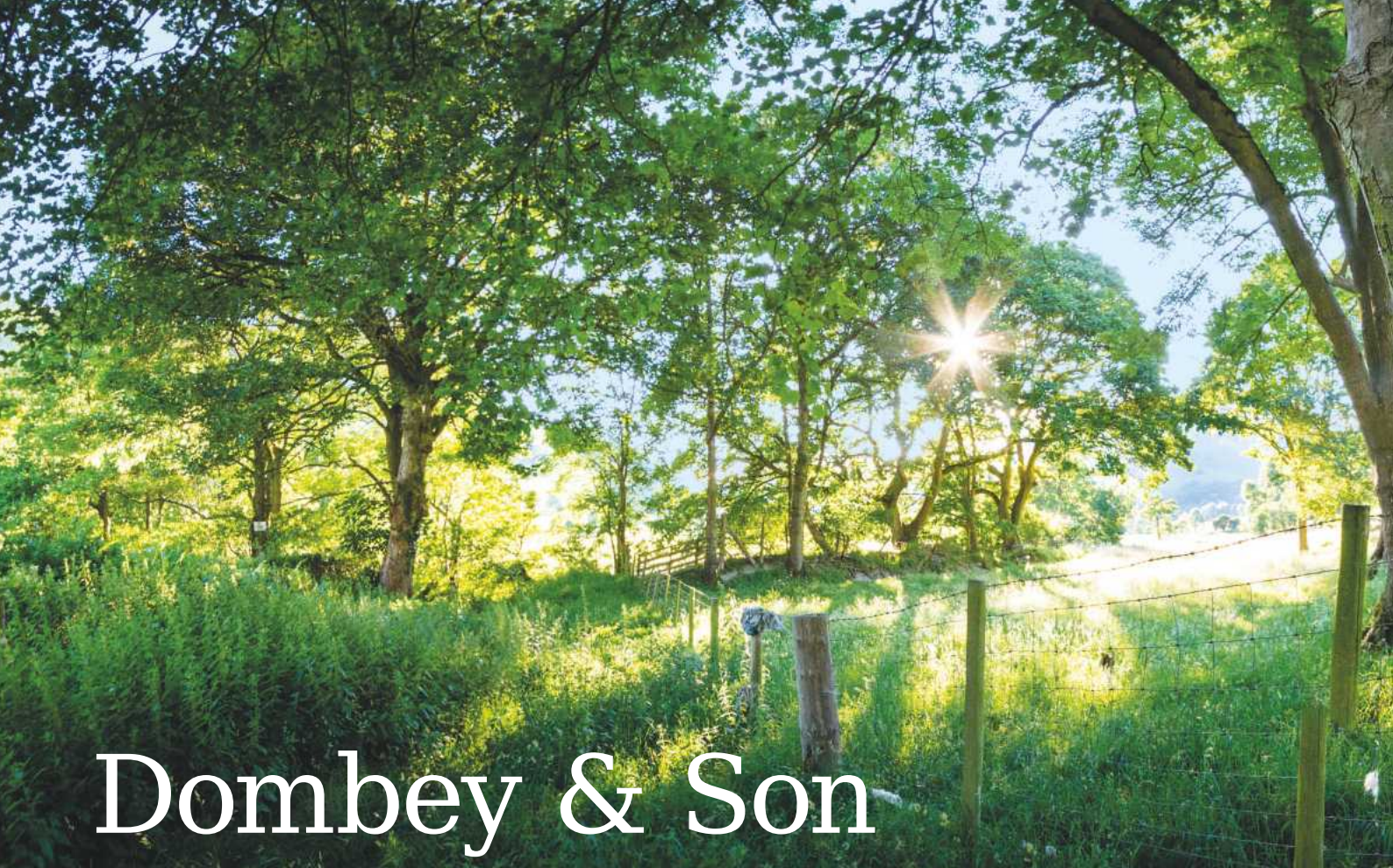
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Dombey & Son

ABOVE: All change: the railway embankment, whose tracks once ruled straight lines between the natural bends on the river behind The Old Vic', is slowly being reclaimed by trees, as the post on the right shows

Dave Roberts finds that keeping up with the times isn't always the same as making progress

"The world has gone past me," laments Solomon Gills in *Dombey & Son*, "I don't blame it; but I no longer understand it. Tradesmen are not the same as they used to be, apprentices are not the same... I have fallen behind the time, and am too old to catch it again." It's easy to empathise with Sol'; times change. In the 1840s, *Dombey & Son's* themes reflected, in part, a concern regarding the railways' effect upon traditional life, and their unnatural speed only underscored their role in the wider social change wrought by an era of industrialisation (see 'Impressionist painting' sidebar). Today, the extension of that same industrialisation continues to cause environmental concerns, which have in turn become agents for change – as I'm often reminded when trying to strike a balance between the means by which things were done and the materials

that were used when The Old Vic' was built, and how they might be done now. Walking this line often involves a stroll, sometimes figurative, at other times literal, around the problems and possible solutions – a habit that Dickens, who regarded as vital the freedom to walk abroad and collect fresh impressions, described as 'amateur vagrancy'. And as a fully paid-up amateur, I find that time spent in the company of the new or unfamiliar is often well spent, if only because it helps to reveal what I hadn't realised I didn't know, if you follow me. One such walk recently took me out around the glue pot via a decision over paint for exterior woodwork...

A brush with change

In 2010, I'm told, EU legislation regarding paint and varnishes began to put the tin lid on coverings using volatile organic compounds (VOCs) such as white spirit: manufacturers were obliged to reformulate their paints, with the result that – almost overnight – the solvent in the majority of today's paints is water (see 'Paint: how it works' sidebar). As Sol' might say, "paints are not the same as they used to be," and though I have no particular desire – regardless of The Old Vic's listing – to live in a white lead-painted yesteryear, neither have I been able to shake a lingering doubt about these new, 'environmentally friendlier' coverings and their ability to match the flexibility of old oil-based paints, especially when it comes to exterior woodwork. This is the sort of then-and-now dichotomy to which I was referring – and it also reminds me of an episode in the books of architect Harry Creswell. Anyone – but in particular Rory Summers, who wrote a very kind letter last month – who'd like to share this detour can go by way of 'All that's novel' opposite; I think you'll enjoy the view, Rory.

If you'd rather save yourself this circumambulation, however, walk right this way to where, by an editorial sleight of hand, we'll all arrive together at the elegantly

ALL THAT'S NOVEL

If you aren't familiar with *The Honeywood File* (1929) and *The Honeywood Settlement* (1930), you've a treat in store: the books chart the progress of architect Creswell's literary alter ego, James Spinlove, his client Sir Leslie Brash, and the building of Honeywood Grange. However, like *Dombey & Son* – which is framed by commerce but concerns people – the Honeywood books are, "more concerned with the fabric of life," as Creswell put it, "than with the fabric of houses." One of their most memorable strands involves Riddoppo, 'a new novelty super-paint', which Brash insists is used instead of the (then) traditional linseed paint. It isn't long before Grigblay, the sage old builder engaged by Spinlove, finds his doubts about Riddoppo being realised: "If you ask me," Grigblay writes to Spinlove in confidence, "this new novelty super-paint is a bit too new, a lot too much of a novelty and, if you will pardon me, a damned sight too super"



painted door of Farrow & Ball (www.farrow-ball.com), a well-known brand whose subtle colours combine tradition and modernity in water-based formulations – the ideal place, in fact, to inquire about the chemistry and performance of such paints.

My knock on the door is answered by Gareth Hayfield, F&B's head of research & technical development, who explains that, in response to the 2010 legislation, F&B conducted, "four years of development and extensive in-house testing, comparing the performance of new generation water-based paints... our existing oil-based paints, and the new oil-based VOC-compliant solutions. This testing proved that water-based paints met or exceeded the quality of our old paints, and were superior to the new oil-based VOC-compliant systems." Testing by the Paint Research Association (PRA) also suggested that F&B's water-based formulations performed as well and at times better than the previous oil-based paints. "Our Exterior Eggshell, for example" – and here my ears pricked up, as this is what I'm currently using at The Old Vic – "is four times more flexible," says Gareth, "than the previous solvent-based equivalent." Flexibility, of course, is a quality essential for long-term durability on exterior wood, as are water resistance and vapour permeability, areas where F&B's Exterior Eggshell and Masonry paint have the 'best classification', according to Gareth.

But what about linseed oil, a natural and traditional paint binder that I'm sure would once have been used in The Old Vic? "It takes a long time to dry and harden," says Gareth, "and we found that... alkyd and acrylic resins gave the performance our customers expect," as well as the convenience of being easy to use, re-coatable in a matter of hours, and the washing out of brushes in water.

It's only right to point out, of course, that linseed-based paints are available – Edward Bulmer paints

(www.edwardbulmerpaint.co.uk) springs to mind – and make some attractive claims not only for their environmental benefits but their performance, too. Allback paint, for instance (www.allback.aannemer-nijland.nl), claims to 'meet all our needs when it comes to technical properties'. I'll be coming back to these when choosing interior paints; in the meantime, I'm keen to dabble with some home-brewed finishes and natural colours of my own, perhaps even trying some shock-colouring after the fashion of Out of The Dark.

Food, glorious food... or not

There are two sides to every dichotomy, of course, and I suspect that there'll be many times when the answer to my then-and-now dilemma favours the old school approach – and in woodwork, things probably don't come more old-school than hide glue, which has been in continuous use for millennia. Regardless of this distinction, I'm told that the Aga hot plate is not the place for my experiments with Axminster's hide glue. Instead, then, I contrapted a set-up using my ancient cast-iron double-boiler and an inexpensive electrical hot plate, and began by steeping the dried 'pearls' overnight in three to four times their volume of water. This produced a stiffish, lumpy jelly but none of the excess water to be drained off and replaced with fresh that the instructions mentioned. For good measure, then, I decided to add a drop of extra water, heated it gently – and produced something more akin to workhouse gruel than the single-cream consistency to which David Savage compared a properly prepared and heated batch of hide glue. Instead of forming a steady thread as it dripped from my brush, the glue dripped, but all that was needed to remedy this situation was to reduce it as you would when cooking stock – by heating and stirring until the excess water has evaporated and the desired consistency is achieved (in general, I think it'd be better to start too thick and then add hot water >

ABOVE LEFT: Part of the clutter left behind in The Old Vic', this beech kitchen chair will come in handy for practice with hide glue, and perhaps experiments with linseed or home-brewed paints

ABOVE TOP & BOTTOM: Colour shock: Out of The Dark, the erstwhile social enterprise, was behind the colour-fuelled revival of furniture from the likes of Ercol, G Plan, Parker Knoll, and Danson – pieces that were until recently considered old-fashioned but which are now regarded as classics of Mid-Century Modern. "Some people can't see past the surface of brown furniture," said OotD leader, Jay Blades, "they don't see anything Modern in it; but if you apply colour and put some different fabric on the seat, it's Modern"

PAINT: HOW IT WORKS



Out with the old: Farrow & Ball found modern water-based formulations out-perform its previous oil-based paints

Broadly speaking, a paint consists of pigments, binders, and a solvent. "The pigment," F&B's Gareth Hayfield explains, "gives colour and opacity; the binder is the film-forming element, and provides the strength and adhesion of the paint." In addition, a paint may also contain minerals, such as calcium carbonate, which are used to control its sheen: the more minerals, the lower the gloss, and the flatter the paint. A number of other additives – "sometimes called the 'salt and pepper' of a paint formulation," says Gareth – play a part in determining the stability, drying, and other characteristics of a paint."

To make these ingredients sufficiently fluid to be applied and leave a good finish, a liquid carrier (or solvent) is added – white spirit, for example, in the case of 'oil-based' paint, and water in a water-based paint. Whether oil- or water-based, "paints can contain exactly the same resins, pigments and minerals – F&B's Estate Eggshell and Full Gloss, for example, are based on the same alkyd resins as our old oil-based systems – and will dry in the same way. Once the carrier solvent [has evaporated], the... resin reacts with oxygen in the air to harden." Just how they harden depends upon the resin binder: "Acrylic resin systems have a quicker initial cure compared to alkyds [resins], and once they have reached full performance will remain stable; an alkyd resin will continue to harden over time." The drawback to alkyd resins, however, is that their hardening mechanism leads to brittleness and yellowing; the downside for acrylics is that they can't produce a high-gloss finish – which is why, says Gareth, F&B chose alkyd resins for its Full Gloss, but acrylic resins for its Exterior Eggshell

NEXT MONTH

"Don't be afraid!" Mr. Brownlow told Oliver Twist, "we won't make an author of you while there's an honest trade to be learnt"

as required). When I came to make a test with a simple rubbed joint, the glue was perhaps still a touch on the thin side, though thick enough to wet the timber and form a stable film without running off. The joint produced that 'stiction' when assembled, felt firm within minutes as the glue cooled, and was absolutely solid the following morning. Though it dries hard, and can be sanded to leave a clean surface that will take a stain or finish – unlike faces contaminated with PVA – I think any squeeze-out is best removed when the glue is at its tacky stage, and can be either scraped off with a chisel, or rolled off with a thumb.

In the course of a short walk, then, we've answered a few questions with regard to the tangible benefits that progress and plastics have delivered in terms of paint (while also raising a whole lot more with regard to more natural alternatives); in the matter of glue, meanwhile, the traditional method has persuaded me to explore ways to exchange, where practical, the plastics of modern adhesives for the natural glue that is collagen. Old and new are in workable balance, which is as they should be in *The Old Vic*. After all, living next to a church clock that strikes at anywhere between 10 to and 12 minutes past the hour, it probably doesn't do to worry too much about time... **GW**



ABOVE: Cheap but effective: the inexpensive hot plate has enough oomph for warming glue; the cast-iron double-boiler has enough mass to avoid hot spots

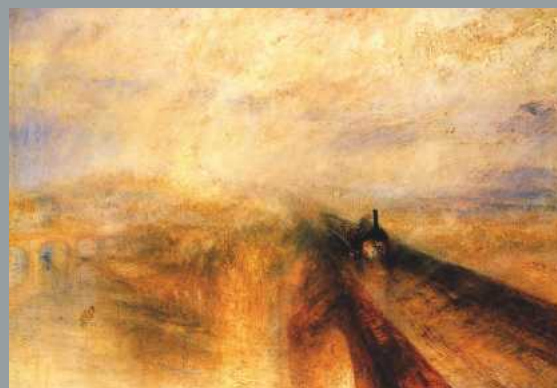
HIDE GLUE REFINEMENTS

I've read (courtesy of Craig Deller via www.vanedwards.co.uk) that hide glue can be made waterproof by adding 0.5-1% aluminium sulphate, while the brittleness of hide glue's hard film can be tempered by adding 5% glycerine (by weight); adding more glycerine will further increase flexibility. Though this pliability isn't important in joints, it's a useful wrinkle to know if, as Craig says, you're gluing canvas to the back of a tambour door. The solubility of hide glue also means that you can use it to make sandable and stainable fillers by mixing in fine sawdust

IMPRESSIONIST PAINTING

At this distance of time, it's hard to imagine that the light in which railways were once seen meant that they could be cast almost as a villain in *Dombey & Son*. However, Turner's painting, *Rain, Steam & Speed*, which was a contemporary of Dickens' novel, captures something of the tension in its "plunging diagonal line," which, as Inigo Thomas put it, "cuts across the familiar location [in] an emphatic demonstration of how the new technologies of the age imposed a precise geometric order on the pastoral scene."

From the sublime to the, well... to Roberts, and the old kitchen, where I've finally made these blanks to cover the rotten, modern frames while I plan their replacements. My attempted trompe l'oeil is intended to avoid the look of dereliction that bare plywood imparts, but also serves as a quick sketch to test the general proportions of the proposed new frames



Unnatural speed: Turner's *Rain, Steam & Speed: The Great Western Railway* was a reflection of its times and the pace of change



Not RA standard, but a useful sketch of the proportions of the proposed replacements for the old kitchen's windows

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Extracting broken screws: what to do when things get stuck!

As **Mike McCrory** says, if you've ever used small brass screws in hardwood, you'll have undoubtedly run into issues. Here he offers his advice on dealing with the problem as well as advising how to avoid this happening the first time around

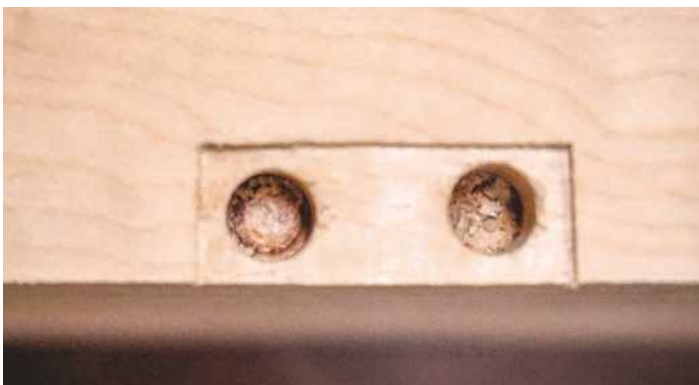
If you've ever used small brass screws in hardwood, you'll have undoubtedly run into issues. The metal in a brass screw is notoriously soft and this presents challenges when screwing into hardwood. I was recently working on the final touches of a jewellery box that I had made using bird's eye maple for the sides, and black walnut for the top

and bottom. As I was tightening the final brass screw in the hinge, the screw head sheared off. I was horrified! I had to find a solution after coming so far with this very special project.

Removing the hinges

I started by removing the hinges. Even unscrewing these was harder than expected, and I ended up shearing off another screw in the process (**Pic.1**). Both of these problematic screws were close to each other, so I suspect there was an exceptionally hard piece of maple in this spot.

After installing and subsequently removing the screws, the heads were marred, and I definitely did not want to have the appearance of stripped screw heads in a brand-new jewellery box, so I decided that I'd replace all of them.



PIC 1. A view of two screws whose heads are sheared off



PIC 2. A 6mm screw extractor from WoodRiver

Screw extractors

There are a lot of screw extractors on the market for extracting screws that have a stripped head, but this problem was different. These had no head remaining. If they had been larger, I may have been able to drill a hole into the screw and used one of these extractors, but the No.2 (2mm) screws were too small to be able to do that.

You might think that the brass is soft enough that you'd just be able to drill the screw out, but it's still hard enough that it would deflect the drill bit into the wood and you would never succeed.

I did some research online and found an inexpensive solution from WoodRiver (**Pic.2**). It's a hollow drill bit designed to bore a cylindrical hole around the screw that needs to be extracted. The bit has a standard 6mm outer diameter so that the hole it leaves can be filled with a standard sized dowel.

Removing the screw

You might think you could use a drill press with the extractor to give you good control over the hole that you're drilling. However, this bit is designed to be operated in an anti-clockwise direction, so my only option was to use a hand-held drill so that I could run it in reverse. It's important to make a guide out of wood so that the extractor bit doesn't skate across

the surface when it begins turning. For my guide, I used a scrap piece of 18mm plywood and drilled a 6mm hole through it so that the extractor would fit snugly into the hole (**Pic.3**).

I carefully positioned the guide so that it was directly over the screw to be extracted, with the screw aligned with the centre of the hole. Check to ensure the outer edge of the hole is not over the edge of the mortise as you want to retain a straight edge along this part. The guide needs to be clamped to the piece so that the extractor does not cause the guide to move when the bit begins to turn.

I then inserted the extractor bit with the drill set to turn in an anti-clockwise direction. The extractor bit is a little fragile since it is hollow, so I ran the drill on a slow speed to gently drill into the piece.

If you drill far enough into the wood, you will likely have the cylindrical piece of wood come out easily and be held in the end of the extractor. This is not always the case, however. If the cylinder and the screw remain in the piece that you've drilled into, you may have to pick it out using a small screwdriver and a small set of pliers. You can also try drilling just a little bit more with the extractor, and sometimes this will result in the cylinder coming out. It's easy to remove the cylinder of wood by inserting a screwdriver through the other end of the extractor to push the piece of wood out (**Pic.5**). >



PIC 3. Preparing the guide with a 6mm hole



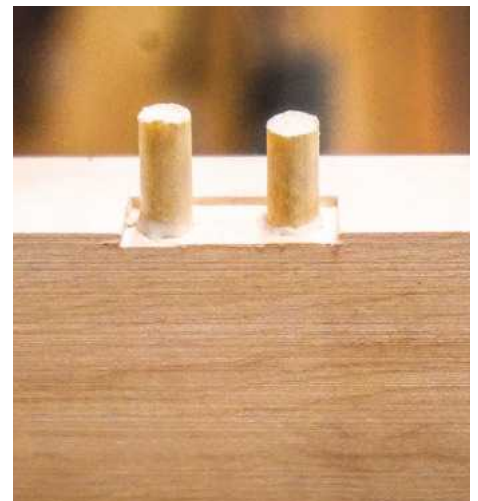
PIC 4. Drilling a cylinder around the screw



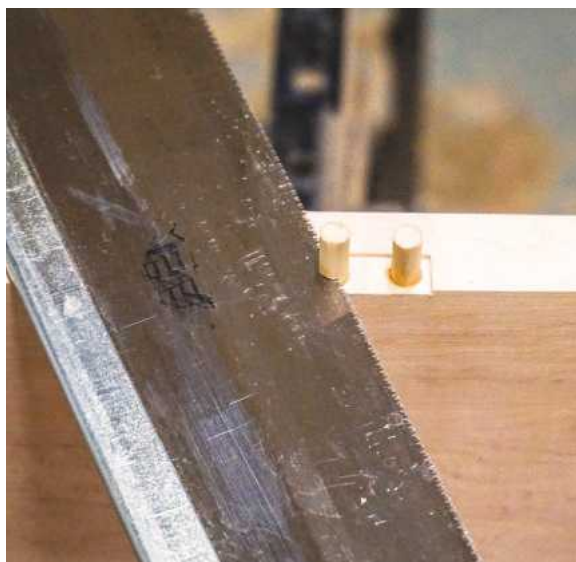
PIC 5. Removing the cylinder of wood with the embedded screw from the extractor



PIC 6. Cutting dowels to plug the holes



PIC 7. Gluing the dowels into the holes

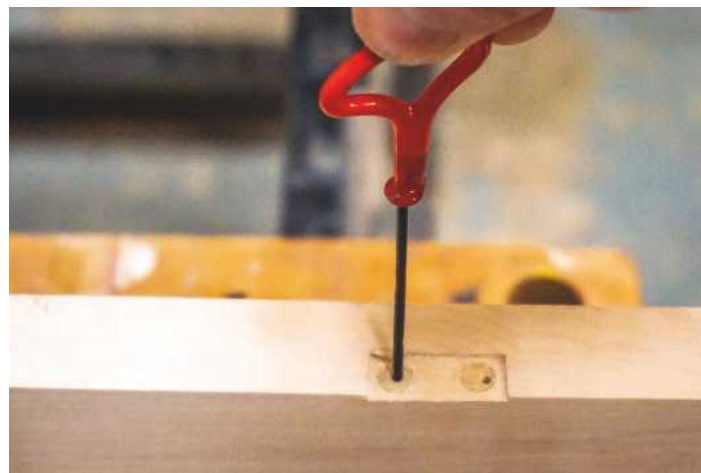


PIC 8. Trimming the dowels with a saw

In my case, I was left with two 6mm holes to fill, so I cut two short pieces of dowel that would fit perfectly into the holes left by the extractor (**Pic.6**). I put a small amount of glue into the holes, and then brushed glue onto the dowels before inserting them into the holes (**Pic.7**). Once the glue has dried, use a saw to trim the dowels (**Pic.8**) and then use a chisel to carefully trim the dowels so they are flush with the bottom of the mortise (**Pic.9**). After drilling new holes for the screws, use a gimlet to thread the holes so that



PIC 9. Chiselling the dowel to be flush



PIC 10. Using a gimlet to prepare the hole



PIC 11. Applying wax to the threads of the screw



PIC 12. Using the correct size screwdriver to tighten the screws

TIPS FOR SCREWING INTO HARDWOOD

1. Drill the appropriate sized hole to the correct depth
2. Use a gimlet to pre-thread the wood
3. Use high quality screws. The screws provided with hinges are not always the best quality
4. Apply a small amount of wax to the screw
5. Use the correct size of screwdriver
6. Turn the screw slowly without excessive force

If you follow these tips, you will likely achieve perfect results and avoid having to go through these steps to extract a broken screw

FURTHER INFO

You can find out more about Mike McCrory and some of his other work by visiting his website: www.woodumakeit.com

the screw will have to do less work when entering the hole (**Pic.10**). If you add a bit of wax to the threaded portion of the screw, it will reduce the friction and make it easier to tighten into the wood (**Pic.11**).

In the last step, be sure to choose a screwdriver that is the right size for the screw. If you choose one that is too large or too small, you will increase the chances of damaging or stripping the head. I replaced all of the screws with new brass ones so that the screw heads would look impeccable. **GW**

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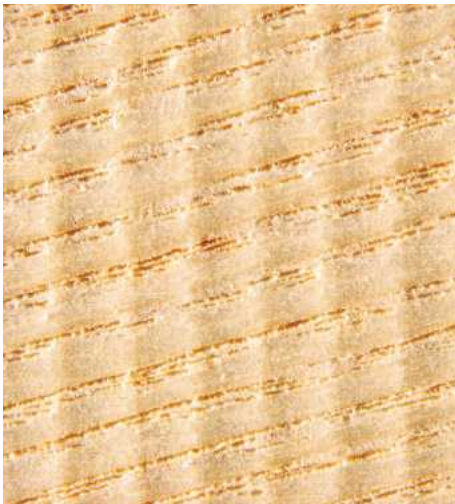
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PIC 1. Traditional French polish is a natural shellac lacquer worked into the surface in layers using a folded cloth and absorbent wadding known as a 'rubber'

Finishing touches

In the final article of this series, **John Bullar** looks at preparing and treating the wooden surfaces of furniture



PIC 2. Machine-planed wood appears flat to the naked eye, but with angled light and a magnifying lens we see a series of ripples across the surface

First impressions count in furniture as much as anything else. It might seem unfair after all the care you put into internal construction but the fact remains that people will judge your furniture first by the outside fraction of a millimetre – how it reflects light and how it feels to touch.

This is not to say that quality of construction is any less important. However, it is only when furniture looks good on the surface that people will take an interest in how it is made. After that they will think about giving it a place in

their home, finding out how robust it is and how well it functions. A good furniture maker with a lasting reputation has to pass all these tests.

While there are occasions when the wood is left bare, most furniture surfaces have some form of treatment, which improves light reflection, reduces oxidation, reduces moisture transmission and keeps them feeling smooth by preventing fibres furring up. This treatment can range from a quick lick of paint to a meticulously applied French polish (**Pic.1**) with many variations in between.

Planed surfaces

Ideally when furniture is assembled from hand-planed components with carefully chosen grain direction, then the amount of surface preparation on the finished piece can be minimal. A finely-tuned hand plane with a razor-sharp blade will slice through the surface fibres leaving them silky smooth. In practise, however, there are often parts that need sanding due to compromises in wood selection or working with less than ideal tools.

Machine-cut wood is a different story. By its very nature a powered saw or powered planer leaves a series of ripples on the surface (**Pic.2**). Because these are so fine they may not be obvious until a surface treatment is applied, which darkens the wood in varying degrees depending on the angle of fibres meeting the surface.

The results can then be blotchy and disappointing, so machine-cut surfaces always require further preparation.

Being prepared

Scraper blades are square-edged plates of steel used to remove the very minimum of thickness while opening up a fresh surface on the wood (**Pic.3**). The simplest scraper is a playing card-sized rectangular sheet, gripped between fingers and thumbs of both hands while the edge is pushed across the wooden surface. The scraper blade is angled away from the direction of movement so it does not catch and tools are available for holding scraper blades to make the task easier. Curve shaped scraper blades are used extensively on carved work by furniture makers and also by musical instrument makers.

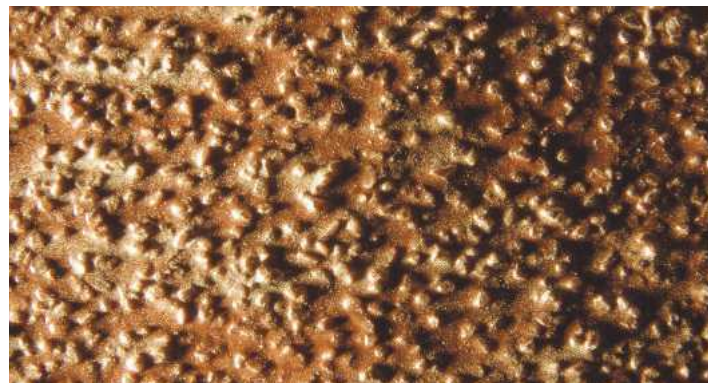
Abrasive sheets

An alternative to scraping the surface with a single edge is to rub the surface with a multitude of microscopic edges. Traditional cabinetmakers used to employ pieces of sharkskin as a fine abrasive sheet, which in time was replaced by sand and other fine grits glued to paper or fabric.

An ideal abrasive for wood surfaces will not clog up and the grit will flake off to produce new edges rather than rounding over (**Pic.4**). Nowadays aluminium oxide is most commonly used on wood with silicon carbide preferred for metals. >



PIC 3. One of the most basic tools for flattening a wooden surface is the scraper blade, here mounted in a cast handle to take strain off the thumb



PIC 4. Commonly known as 'sandpaper' seen here with a large magnification, abrasive sheets have a layer of wood-cutting grit glued to the surface



PIC 5. Although the belt sander is fast and powerful for removing wood, it is not widely used by fine furniture makers



PIC 6. A little hand-held sander produces spiral tracks on the surface as the paper oscillates in a circular motion while the tool is swept across the surface



PIC 7. The random orbit sander also produces spiral tracks but each one is different from the last so that no pattern builds up and the effect is smoother



PIC 8. A linear sander is ideal for following the wood grain pattern, especially on edges



PIC 9. Primer paint applied to bare wood soaks into the surface and provides a firm key for later coats



PIC 10. One of the most basic surface treatments is a water-based wood preserving stain

Powered sanders

Sanding by hand is great for small projects with fine details; one big advantage being you can follow the grain direction and you are unlikely to dig too deep. Hand sanding for larger pieces of furniture, however, is arm-aching work so electrically powered sanding tools are generally preferred. The belt sander (**Pic.5**) is the most powerful and fastest in the family of sanding tools although it can be a bit of a brute. Taking a belt sander to a piece of fine furniture would be a bit like driving a 4 × 4 across

a bowling green – yes, it lowers the surface but not in a good way!

Orbital sanders

Fine sandpapers are particularly suitable for use in orbital sanders where the abrasive moves in a spiral pattern, crossing the wood grain at all angles. Random orbit sanders use abrasive discs and avoid leaving swirl marks because the centre of rotation is continuously moving (**Pic.7**). This allows a faster and more powerful action together with a better finish.

Linear sanders

A linear oscillating sander moves the paper backwards and forwards in a straight line. The sanding heads can be replaced with shaped profiles especially suited to delicate work such as following the wood grain on edges (**Pic.8**). Linear sanders take a little time to get used to and are much more expensive than small orbital sanders but they do produce excellent results.

Basic finishes

One of the main purposes of wood surface treatment is to seal the outside of the wood, reducing pickup of dirt or moisture and preventing discolouration. Traditional paints and varnishes consisted of resins and dyes dissolved in turpentine or a volatile oil-derivative. Several coats are needed, starting with a primer that soaks into the surface followed by layers to provide colour and level out the coating, then a top layer to form a gloss or matt reflective properties (**Pic.9**).

Modern paints and varnishes take the form of an emulsion mixed in a water base (**Pic.10**), greatly reducing harmful effects on health and the environment.

Pure wax treatments

Pure and simple beeswax is one of the oldest treatments for coarse-grained woods such as oak and is extremely effective for sealing to reduce dirt and moisture uptake (**Pic.11**). The only limitation of beeswax is



PIC 11. Pure beeswax can be rubbed onto coarse-grained and carved surfaces then worked in with a brush



PIC 12. By warming the wood with a hot air blower the wax can be made to soak deep into end-grain and saturate between the wood fibres

that it requires frequent replenishment. In warm conditions you can simply rub the wax directly onto the wood then work it in vigorously with a stiff bristled brush. Warm air blown over the wood surface increases the uptake of wax making it more effective and longer lasting (**Pic.12**). We can see the effectiveness of beeswax on centuries old furniture and internal wall panels (**Pic.13**) in museums and historic buildings.

Wax pastes

Beeswax is often mixed with other oils, waxes and solvents making it easier to apply and helping it to soak in. Liquid wax polish in particular soaks deeply into a newly prepared wooden surface. However, on an old long established wax surface the solvent in the paste will soften lower layers and may reduce the depth of finish (**Pic.14**).

Steel wool is often used to apply wax paste where it is required to clean up an



PIC 13. Beeswax applied to oak over centuries produces a deep lustrous patina, as on these Elizabethan wainscot panels

old finish or indeed to remove some of it (**Pic.15**). It can also be used to apply different coloured wax pastes so as to give shading to furniture, mimicking the burnishing effects of centuries of handling. Use only fine steel wool graded '000' or ultra fine graded '0000' so as not to scratch the wooden surface and lift grain.

Oil finishes

Petroleum jelly or Vaseline can be used as an alternative to wax paste for producing a matt finish (**Pic.16**). Just like wax this will bring out the natural colour of the wood and will protect the surface from moisture and dirt but without the glossy finish. As with wax paste the petroleum jelly soaks in and needs replenishment for continued protection.

Danish oil is the name given to a type of oil finish traditionally used on Scandinavian furniture. Typically it is a mixture of plant oils such as tung oil and linseed oil together



PIC 14. Smooth flat surfaces like this walnut can be treated with beeswax polish either in the form of a liquid emulsion (upper right) or a paste (upper left)

with white spirit and other synthetic organic compounds that help it penetrate deeply and dry quickly to a hard semi-matt finish. Danish oil is applied generously to bare wood then the excess is wiped off the surface with a clean rag. After being given a day to dry the process is repeated twice building up a deep lasting semi-matt sheen (**Pic.17**). It can be used as a preparatory primer coat for wood then after curing it can be polished to a glossier finish with a wax paste polish. Alternatively, it can be cut to a matt finish using petroleum jelly and fine steel wool. >



PIC 15. Steel wool rubbed in beeswax polish can be used to burnish a surface and to shade the colouring with a stained paste



PIC 16. In place of wax, using petroleum jelly brings out the contrasting colours of this Welsh ash and oak box while producing a lustrous matt finish



PIC 17. Danish oil rubbed into bare wood such as this English walnut produces a tough semi-matt finish that can be improved with age



PIC 18. Ready-mixed shellac polish is supplied in a range of natural colours



PIC 19. To prevent shellac taking too high a gloss it can be rubbed with waxed fine steel wool

Shellac & lacquers

Shellac, a natural resin secreted by lac beetles in the forests of India and Thailand, is best known as the medium used in 'French polishing'. This is a lengthy process used to fill the grain and produce a high gloss reflective finish. Part of the traditional process is dissolving solid flakes in alcohol and clarifying the liquid, but ready-mixed shellac polish saves a lot of trouble. Mixtures come in a range of natural colours from clear 'white' to dark 'garnet' (Pic.18).

Apart from the option of producing a high gloss with many coats, shellac is an excellent sealant producing a long lasting shell-like coat on smoothed wooden surfaces (Pic.19). A shellac sealed surface can be rubbed with waxed fine steel wool to prevent taking too high a gloss. However, care must be taken not to spill alcohol onto shellac, as it will dissolve even a long established finish.

Synthetic lacquers copy the performance of shellac using a polymer resin dissolved in synthetic solvent. They can briefly resist moisture, alcohol or even boiling water, so are ideal for kitchen furniture (Pic.20).



PIC 20. Synthetic lacquers such as melamine can briefly resist wetness or even boiling water as demonstrated on the bottom corner of this board

Spray finishes

Varnishes come in many types and grades, some of which such as pre-cat lacquers and acid catalyst lacquers were traditionally used for spraying furniture in production workshops. Breathing masks were necessary to reduce the health hazard and filtered extraction to reduce environmental damage (Pic.21). Modern water-borne finishes considerably reduce these problems, although filtered breathing is still necessary (Pic.22).

Water-based finishes are diluted then best applied with a high volume low pressure (HVLP) spray system, which provides an even coating with the relatively large water droplets (Pic.23).

Conclusions

Don't be tempted to rush the final stage of making furniture. What type of finish is desirable depends on the wood that is used as well as practical considerations



PIC 21. Water-borne varnishes use small amounts of solvent (low VOC) by suspending the varnish as a fine emulsion in water

and of course the personal taste of the end user. My preference is for a semi-matt finish that doesn't clog up the grain, but brings out the best of the figuring and decoration (Pic.24). While there are many areas and details we've not yet covered, I hope this series has given you a few pointers towards making your own furniture or maybe even inspired you to give it a go. **GW**



PIC 22. Spraying with water-based finishes is much less hazardous than traditional solvent-based spraying



PIC 23. For spraying, water-based finishes are best applied with a high volume low pressure (HVLP) system, which provides an even coating with the relatively large water droplets



PIC 24. A clear fine semi-matt finish that does not clog up the grain brings out the best in wood figuring and decoration

NEXT TIME

John will be starting a new, shorter 12-part furniture making series from GW324, which will cover a whole range of interesting and useful topics

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MATERIALS & TOOLS REQUIRED

All of the tools mentioned are the ones I used, although the project is totally doable without them, just not as easy

MATERIALS

- A scrap of maple and walnut
- 10mm oak dowel
- 12mm oak dowel
- Small spring
- 25mm diameter hardwood pegs

TOOLS

- Drill press
- Bench sander
- Joiner
- Scrollsaw

Say cheese!

Andy Smith makes a wonderful wooden camera for his niece using scrap pieces of walnut and maple

I have two beautiful nieces whom I love very much. At the moment they are one- and three-years-old and they adore presents. The three-year-old is so excited to open all of her gifts no matter what they are, and she is still young enough to enjoy handmade presents, so I am going to take advantage of that while I can!

Unfortunately there will come a time when handmade toys will become less desirable than the cheap plastic ones, but I understand their fascination: these are not as flashy or loud and as you grow older, the stimulation you get from these kinds of toys is somewhat important.

But luckily for me they are still young enough to enjoy any toy, so I wanted to make something they could use their imagination to play with; something that would outlast those cheap plastic equivalents.



PIC 1. The scrap walnut and maple used to make the camera body



PIC 2. Running the pieces through the joiner



PIC 3. The maple body with the two walnut strips in place



PIC 4. The two dowels for the shutter button

strips, both about 25mm wide, and ran those through the joiner as well. I then dry fitted them to make sure the sides were flush before moving on to making the shutter button (Pic.3).

The shutter button

I wanted this button to be able to move up and down to simulate taking a photo. The first step was to take the 12mm and 10mm dowels, cut them to around 100mm long and then glue them together (Pic.5). The final button didn't need to be this long but I wanted to make sure I had enough length to play with. While the dowels were drying, I drilled the holes in the body of the camera (Pic.6). I used a 12mm Forstner bit to drill a hole 50mm deep into the maple. I then made sure that I reamed it out a little so the 12mm dowel would have room to move. >



PIC 5. The dowels glued together



PIC 6. The holes drilled in the pieces of maple and walnut



PIC 7. The glued-up dowels in place

My sister is a photographer and I thought it would be really great to make a camera so my niece could take photos with her mum.

Although I know that this toy camera will inevitably one day be demoted to the toy box or attic and not be seen for years, when it does come out again, hopefully it will look the same, work the same, and be more loved than it was the first time it was received.

I hope you enjoy this article and have a go at making this project yourself.

Making the body

I had some scrap walnut and maple lying around so decided to use these to make the camera (Pic.1). Both pieces were around 180mm and 100mm wide. I cut the maple down to 90mm and ran both ends through the joiner (Pic.2). I then took the walnut and cut two



PIC 9. Gluing up and clamping the pieces for the camera body



PIC 8. Putting the spring into position



PIC 10. The camera body, once run through the joiner to ensure all the surfaces were smooth



PIC 11. The piece of firewood used for the lens, before it was cut into slices



PIC 12. The lens sanded and glued in place



PIC 13. Drilling the hole for the viewer using a drill press fitted with a Forstner bit

Next I drilled a 10mm hole in the top walnut piece using the same method as before. The thought behind this was that the larger dowel would be in the bottom and not able to pass through the smaller top hole.

I slipped the spring in (**Pic.8**) and cut the bottom dowel so that there was a small amount of pressure on the spring when it was flush with the maple, then it was time for the glue up. I glued the walnut and maple together using a combination of wood glue and clamps (**Pic.9**). While the glue was drying, I made sure that the shutter button was still able to move at all times – I didn't want the glue to seep in and freeze up the action.

Smoothing it out

Now that I had everything glued up, I ran it over the joiner to ensure all the surfaces were nice and smooth (**Pic.10**). I could have ran the

individual pieces through the planer first, but I wanted to make sure the seams were perfect. Running the whole thing through afterwards was definitely the right decision.

The lens & viewer

I really didn't know what material I was going to use for the lens until the last minute. I had some walnut circles cut out and I was going to texture and layer them, but something didn't look quite right, so I ran out to the shed and grabbed a piece of firewood (**Pic.11**).

I have no idea what type of wood this is but it looks quite effective. I've had the piece for quite a few years and it's from a tree that was felled and destined for the wood-burner. It's very difficult to split, so in the past I've only cut large logs off, which could then be thrown into the fire. I've incorporated a few pieces into past projects, however, so thought I'd give it a

go again for this purpose. I cut a small section and sanded the face using a belt sander. Straight away I knew that I'd found the lens! The log was a little wide so I had to sand the edges down a little in order to achieve the correct proportions. I sanded the face and edges using 120 grit abrasives and it looked beautiful. I then glued it on and moved on to the next component (**Pic.12**).

I wanted a small viewer for my niece to look through, so first I used a 12mm Forstner bit and drilled halfway through the body. I then changed to a 10mm bit and finished going all the way through (**Pic.13**).

The grip & rewind lever

The body seemed to be missing something so I decided to add a grip to one side. I cut a piece of walnut and shaped it on the bench sander (**Pic.14**). Next is what I lovingly refer to as the



PIC 14. The grip added to the left-hand side of the camera body



PIC 15. The maple square used to make the rewind lever



PIC 16. The centre and the circle marked out



PIC 17. The indents cut on the maple square



PIC 18. Drilling the hole for the rewind lever



PIC 19. The rewind lever in place



PIC 20. The belt used for the neck strap



PIC 21. Cutting holes into the two leather ends using a Stanley knife



PIC 22. The hardwood peg in place, which the leather belt end will be placed onto

'spinner thingy', but the correct term for this is the rewind lever, and for this I used a small piece of maple (Pic.15).

The first step was to mark the centre, then the circle (Pic.16), followed by the teeth. I cut it out using a scrollsaw and to create the teeth, I held the piece up to the bench sander and used it to carve out the small indents (Pic.17).

When I drilled the hole it wasn't exactly in the centre. I told everyone that this gives the project a fun and whimsical feeling, but the truth is that this happened by accident. Hopefully the same won't happen when you make your version! The lesson is, never be afraid to make a mistake – it might just make your project better. To finish this off, I placed a hardwood peg in the hole as before, which held the maple disc in place (Pic.19).

The neck strap

To make this, I repurposed one of my wife's old belts, which was perfect for the job (Pic.20). I cut the ends off and then cut a small hole into each of the leather ends using a Stanley knife (Pic.21).

Next, I drilled a hole in each side of the camera body to take a 25mm diameter hardwood peg (Pic.22) – these can be purchased from any DIY store. I then glued the pegs into the holes and the small holes cut in the leather part of the belt easily fitted over the peg and were held securely in place.

Warning! When I drilled in the side with the

shutter button, I went too far and accidentally drilled into the dowel, and the button would no longer move. I corrected this by cutting the peg down, so it wouldn't hit the bottom of the dowel, and I made sure the button was once again functional before I glued the peg in place.

Adding a finish

As this toy was going to be used by a child, I needed to make sure I used a suitable finish, so I'd recommend using a natural one such as beeswax, tung oil, or linseed oil, which I decided to use. It really brings out the grain and makes it look great (Pic.23). I had a lot of fun with this toy and really enjoyed going over all the little details. I hope this will be something my niece can have a lot of fun with. It isn't going to be her flashiest toy but hopefully she knows that it was made just for her by her uncle Andy. **GW**



PIC 23. Boiled linseed oil really brings out the grain



PIC 24. The completed wooden camera – a perfect gift for any budding young photographer!

Converting logs to lumber

Moving on from his last article, which saw him discussing methods of harvesting, **Peter Bishop** now makes the natural leap to looking at the processes used for converting logs to lumber



A horizontal band mill, with some slab wood in the front



A bent log being converted

‘Conversion’ is the phrase used when turning roundish logs into usable, flat pieces of timber. Here we’ll take a look at what happens after the tree trunk has been felled, the equipment used and the best cuts.

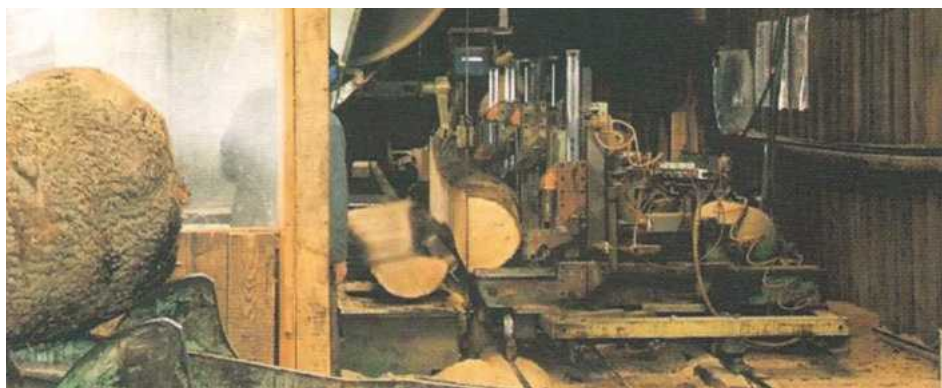
The yield

The primary objective of timber conversion is to get as much usable timber, planks, boards and scantlings from the log. The amount produced is called the ‘yield’. In high production mills, mainly softwood mills, this can be as high as 80%. In a temperate hardwood mill the yield will probably be no more than 50% at best with tropical timbers dropping somewhere in between. A secondary consideration, especially

with hardwoods, is to produce material of the best quality regardless of yield. By this we mean stuff that might be sawn to produce highly decorative boards, such as quartersawn figured oak.

Most softwood is produced with the yield factor in mind, with the possible exception of some top quality North American species. Everything is used. The bark is removed for fibre extraction or simply broken up for garden mulch. Unusable, small pieces of slab wood are chipped and collected along with the sawdust produced to go into particle board manufacture and pulp for paper.

For furniture and cabinet work hardwoods are of more interest, especially temperate species from North America and Europe. Because of this most of what is discussed



Further conversion using a resaw



here will relate to them. However, all conversion techniques are universally the same, whether for hardwoods or softwoods.

The head-rig saw

There are a number of different sawing sequences and rigs used in the conversion of logs, and most conversion mills will have what is called a ‘green line’ or ‘chain’. This is a linked set of bandsaws that process the raw materials; green/chain because the wood has not yet been seasoned.

The primary saw, called a ‘head-rig’ or ‘breaking down’ saw, is used for the first and subsequent cuts in large logs. Conversion mills in tropical countries can handle logs up to over 2m in diameter, although the conversion of temperate hardwoods does not often see the need for this size of equipment. Since the log conversion process has moved back to source, it is unlikely that many large capacity head-rigs remain in Europe. Conversely, in North America they are still quite widely found due to the size of the old growth softwood logs that are converted using them.



The head-rig saw may make further cuts in the log sections, breaking them down into smaller sizes. The initial cuts are crucial and determine the eventual yield from the log. Most head-rig sawyers are very experienced: they are able to look at a log and see the best possible cuts to make. They will have a good idea of the most popular sizes required by companies or customers, or will have selected a particular log from which to cut a specific order. Although some high production softwood conversion mills use computer scanning and programming technology to maximise yields, when it comes to a bent hardwood log it is difficult to replace the practised eye of the sawyer. Making the right choice of cut is an art that is learnt over many years.

There are many things that need to be taken into consideration, with shape being one, as well as where branches have been, damage or rot patches, and perhaps the heart or pith of the log, which will need to be cut out or round. A good sawyer can make a vast difference to the quality and, therefore, profitability of the sawmill operation.

The 'resaw'

Following on from the head-rig saw will be a band 'resaw'. These will all be linked into the green line with, in most cases, fully automated conveyor systems. These second, smaller saws will further break down the slabs of wood into commercial sizes. In green lines the log and smaller slabs are held in place on a sliding trolley with 'dogs'. The trolley provides a firm base upon which the section of wood can be positioned prior

to passing the cutting blade; the dogs are spiked in to hold it steady. If these dogs are pneumatically controlled they may well have a turning facility. This enables the operator to turn the log or slab being cut to the most beneficial point. The trolley and dog arrangement will probably have a facility to inch out the log to a predetermined point so that a cut can be made to produce a specific thickness of lumber. >



Using portable band mills



Saw doctors

To avoid undue waste the 'kerf' of the saw blades – the width of cut – is reduced to a minimum amount. Less sawdust equals less waste. It all depends upon the thickness of the steel in the blade and its size. In large log conversion mills these blades can be up to over 400mm wide, and may be 12m long. Out of necessity they need to be quite thick. Where the production is out of small softwood logs for, say, fencing panels, a series of bandsaws with thin blades will be set up to take the smallest amount of cut as possible, thus increasing the yield from the log.

There is one key operation that keeps the green line running, and that's the saw doctor who sharpens, sets and tensions the blades. This is a highly important role in any conversion mill. It is a very skilled job that takes time to master and most saw doctors are trained or apprenticed for several years.

Cutting on the quarter

The simplest way to cut a log is called 'through and through'. This produces lumber that has little quarter but a lot of plain-sawn material. This method is typically used on small- to medium-sized logs. A step up from this, to try and increase the amount of figured, decorative lumber, is called 'bastard quartersawn'. The cuts follow, as closely as is practical, the tangential or cleavage line of the log. The aim is to always maximise the yield from the log, for stock,

or matching end product requirements.

The decision to cut logs in either the plain or quartersawn fashion is not always directly related to the yield, especially for hardwoods. Plain-sawn is usually adequate for most jobs; however, because of the way in which it is cut, it's more likely to move, distort or shrink in width and thickness during the drying process. Some Australian species of eucalyptus are more prone to having a great deal of defects if plain-sawn. Therefore, to avoid high levels of downgrade, it is common practice to cut these on the quarter if at all possible. Other reasons for cutting on the quarter will include decorative features, quality and stability. True quartersawing is wasteful and expensive as a result. Generally, quartersawing has been modified to the bastard quarter cut, and providing the bulk of the material is cut with the growth rings showing at an angle of no less than 80° on the face of the boards, this is acceptable.

There can also be very good reasons for plain-sawing as opposed to quarter-cutting. Douglas fir, for example, shows a great deal more character if plain-sawn. Some other species are less likely to split when nailed. Plain-sawn logs will produce wider boards; they will also dry quicker and be easier to subsequently cut. On that basis we can see there are a number of issues and influencing factors involved in converting logs into lumber. **GW**



Oak lumber with both square and waney edges

GLOSSARY OF TERMS

Board: square edge lumber that is over 100mm wide and less than 50mm thick, but not a scantling as below

Lumber: a term, originally American, for wood converted from logs. This is where the 'lumber jack' name comes from

Old growth: timber tends to be harvested from plantations, trees specifically grown to produce lumber, and old growth forests that have been established for many years may be hundreds

Plank: we've forgotten to differentiate these names but a plank was defined as a piece of wood 50-150mm thick that is 280mm or more wide, all with square edges – SE

Sawyer: this is the name given to the operator in charge of each saw or sequence of saws

Scantling: these pieces of wood measure nothing over 100mm thick by a width of 150mm or less

Shorts & longs: shorts are anything under 1.8m long and, of course, longs are 1.8m and 'up' – i.e. longer

Slab wood: these are the pieces of wood produced from a log towards the outside. They contain too much sap and bark to be of any commercial use

Square edge (SE): when a piece is cut from a log it will have some residual bark and sap left on one or two edges – see below. When this is cut off, square to the face, it's called square-edged

Wane & waney-edged: wane on an edge is made up of the strip of sap and bark left on after it's cut from the log

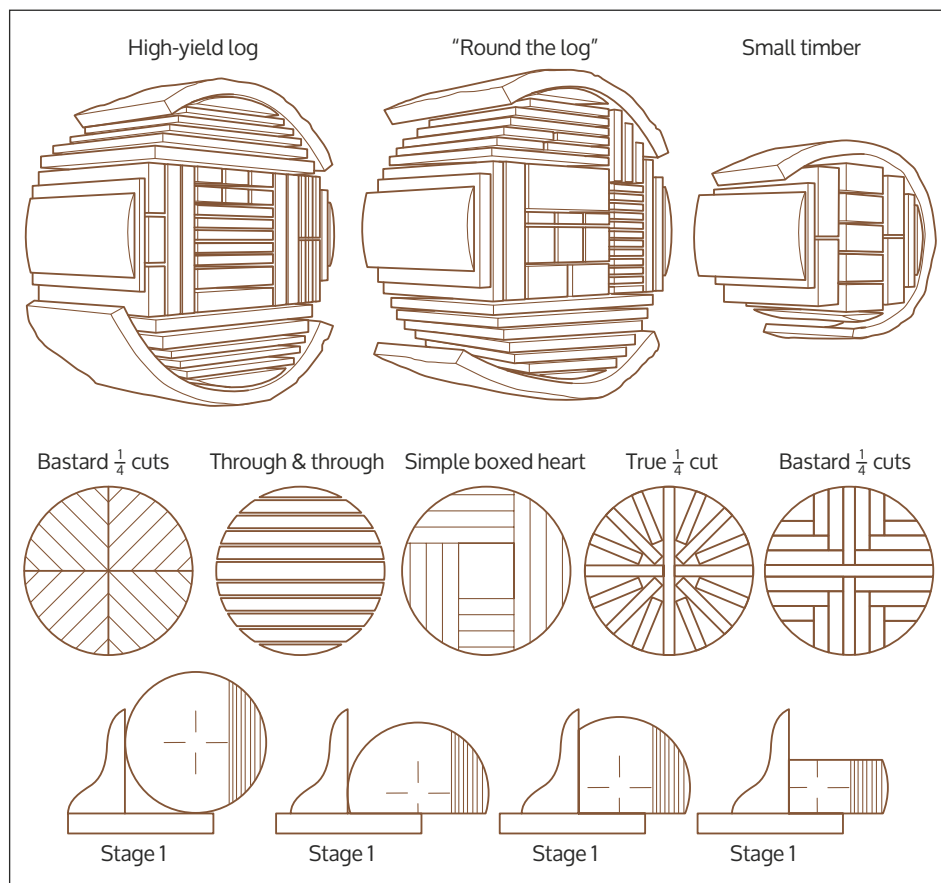


FIG 1. How lumber is made from logs

NEXT MONTH

In the next part of this series, Peter asks what 'drying' actually means and how we should be correctly drying and looking after our wood

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This console table from **Sam Carter's** 'Arching Collection' was designed to be in keeping with the room it sat in, the entrance of which incorporated a Gothic arch

'OVERARCHING II'

'Overarching II', by Sam Carter Furniture, is part of a trio of Gothic arched tables that can be found in the 'Arching Collection'. The original design for this particular collection started with a basic client brief in that a useful console table had to be in keeping with the room it sat in, the entrance of which incorporated a Gothic arch. Another must was the use of American black walnut to complement the cabinetry in the adjoining breakfast room. "With this basic brief and a few must haves," says Sam, "I came up with a design and created a three-dimensional drawing to which exacting detail was followed. Made of American black walnut with a burr walnut book-matched top to create a luxurious and interesting surface, the use of sycamore detailing adds clean line contrast to the darker species of wood."

Practical & beautiful

This console table contains two handmade saw-kerf dovetailed drawers, each of which is lined with English white oak, made for storing newspapers, keys, mobile phones and other low profile items used in daily life. Another interesting feature of the design is the two secret compartments that are hidden within the construction of the table. With the overall dimensions being 1,200 x 480mm and standing at 840mm high, 'Overarching II' fits as a centre piece in the recipient's hallway. The legs of the table are of a continuous radius, which emerge from different angles at the feet to form mitres at the top. The Gothic arches of the legs are then echoed in the laminated sycamore drawer pulls, which are made for ease of use and design. This table is both practical and beautiful.



SAM CARTER FURNITURE

Sam takes inspiration from architecture as well as nature's organic forms when responding to a client's brief. "When I am given a brief I make sure I constantly try to push boundaries so the recipient ends up with a truly one-of-a-kind piece that fits their needs," he comments. Sam likes the challenges that furniture designing and making throws at him, solving problems with a contemporary twist while keeping a classical feel to his pieces. "Ultimately I strive to create art that we live around," he finishes.

Sam will be exhibiting his work at this year's Celebration of Craftsmanship & Design (19-28 August), held in Cheltenham, and in 2015, was the deserving recipient of the Alan Peters award. To see more of his work, take a look at his website: www.samcarterfurniture.co.uk



Clamping the Gothic arch mitre



Using mirrors to choose the book-match of the veneers



Drawer apertures after routing



3D CAD design of the table



Testing the fit of the bottom leg joint



The legs with the radius templates





ESCAPING THE CHAOS:

how to design your ideal workshop

John McMahon shows how it's possible to design your ideal workshop for less than the price of a takeaway meal (depending on how you look at it!)

There are some woodworkers who can do great work sitting at the kitchen table, using a sharp spoon and a pair of mole-grips. While I admire such craftsmen, I am not one of them. I need the right tools around me and a well-arranged workspace or I soon find myself descending into chaos.



PIC1. OK, what if you do most of your woodworking after work when it's dark? Buy a boxful of these cheap angle-poise lamps and put them anywhere that requires more light

I am not alone: I have taught a couple of hundred students over the years and by week three every man-jack of them has worked out that they can't do good work on a wobbly bench in the corner of a messy garage. Perhaps you would agree, and if so keep reading...

Spending money wisely

My idea here is that we build a really good workshop that's within the reach of a keen but not yet fully equipped woodworker. I imagine a project like this would take around three years and I've made a few basic assumptions: this is aimed at someone who is pretty serious about woodwork, who has a basic toolkit, and some time and space to devote to the project.

Now we need to talk about money. I have based this build on a weekly spend of £34 over three years. That makes a total of £5,304. Can you afford it? Of course you can. The average UK family spends £68 a week on recreation and culture – surely half of that could go into a worthwhile project like this without rocking the family boat too much. (Maybe 'less than the price of a takeaway' is stretching things a bit but

it makes for a snappy title... it depends on where you get your takeaway from, I suppose!) OK, so let's work through this one year at a time...

Year 1: the basic hand tool workshop Clean-up & lighting

The first job is to clear the junk out. I'm guessing most of you will be using the garage for this project, so park the car on the drive (cars are waterproof, after all) and chuck away everything that you haven't used in the last year. A dark workshop is your enemy, so paint walls and ceilings white, fit 'daylight' tubes/bulbs and add extra light fittings wherever you can (**Pic.1**). If there is no window in your workshop, I suggest you fit one now (**Pic.2**). Making a simple window is a really good exercise for a developing woodworker and cutting a hole in a single-skin garage wall is no biggie.

Wooden floor

The next thing I would do is to fit a wooden floor. Most people ignore me when I suggest this and regret it when their feet are frozen blocks of ice in the winter or the first time



PIC 2. Not just atmospheric: natural daylight makes you a better woodworker



PIC 3. An afternoon's work and a couple of hundred quid can get you a solid, workable bench

they drop a plane on the concrete floor. Seriously, a timber floor greatly improves your workshop and needn't cost much. I would put a layer of insulation/damp-proofing down over the concrete and fit 11mm oriented strand board (OSB) over that.

Workbench

The heart of a good workshop is the bench, no question; you need a good bench to work comfortably and efficiently. So, the next challenge is to get a quality bench without spending your total budget all in one go. My go-to solution when I need more benches is to find a second-hand, ex-school bench on eBay or Gumtree. Most of these come with two good vices and you can usually pick one up for around £150 if you shop around. You will need to beg, borrow, steal or even hire a van to fetch it of course and then you need to deal with the fact that the top of the bench will be full of nails. As a quick fix to get you working, screw 18mm birch plywood to the top; it's not a perfect solution but it will do for now. Half a day with a sander and some grey paint and you will have a bench that

looks pretty good and would have cost a fortune new (Pic.3).

Storage

Storage is your next priority. I like a combination of a good tool chest (Pic.4), a tool rack on the bench and judicious use of nails in the walls. Your school-bench will probably have a cupboard underneath so that adds to your storage capacity, and I would also add some shelving at this stage.

Saw horses

To complete year one you need a couple of saw horses and a couple of trestles (Pic.5). IKEA make adjustable trestles that cost less than I would pay for the timber to make them. With a sheet of MDF on top they make a layout/glue-up table and in general use, they help you to keep your bench-top clear and ready for action (Pic.6).

Spend so far

That's about it for year 1. It might not seem like a lot of ground covered, but if you have a family and a day job, my guess is that you could do this lot AND keep the

rest of your life on track. By this stage you should have an efficient and comfortable hand tool workshop.

Spend so far

Paint	£40
Lighting	£150
Floor	£120
Bench	£250
Tool chest	£300
Shelves	£150
Trestles	£50
Timber, fixings and misc	£200
Total	£1,260
(Leaves £4,044 left to spend)	

Year 2: tooling up

By now you will have realised that the joy of planing timber by hand diminishes rapidly when you have, for example, 200ft of oak to flatten and dimension, so year two is mostly about getting your power tools and machinery up to spec.

Bandsaw Vs table saw

What do you need? I would prioritise a planer/thicknesser along with a portable chip extractor. Dimensioning stock is usually the most labour-intensive part of any project. You can buy prepared stock, but this makes it difficult to select the best boards and it takes a lot of the flexibility out of your work. Crucially, the guy at the sawmill is not going to take anything like the care you would in getting your sections just right. I would buy a bandsaw next and then a good mitre saw. You may have noticed that there is no table saw yet, the reason being that we have already spent around £2,500 this year and I am trying to economise. If I had to do without anything at this stage it would be the table saw; you can rip quite quickly by hand if you have to but even that's unnecessary if you have a decent bandsaw. Bandsaw trumps table saw because it will do almost everything >



PIC 4. Build or buy a tool chest and keep the lid shut when you're not working, which will help to keep the damp out



PIC 5. Trestles add flexibility to your workshop

a table saw can do, almost as well and then, asked nicely, it can do a lot more, such as cutting curves for instance. Just to nail the argument, the bandsaw is a heck of a lot safer, too. On reflection, this thinking definitely comes from the perspective of a solid-wood woodworker: if you have lots of wide sheet material to cut, then the bandsaw is not the answer and you should be looking at a good track saw.

Second-hand machinery

How do you get the right stuff? Proceed with caution on this, but I would buy a good second-hand planer and bandsaw. Why? My experience with modern budget equipment has been a bit like supporting Newcastle United: heart-breaking. It's just not very good, that's why it's cheap. On the other hand, you can find really good second-hand equipment at a decent price. This lunchtime my students looked online and were able to find a good planer and a bandsaw, both 240V and in good condition



PIC 6. With a good saw and a couple of saw benches, hand ripping your stock doesn't have to be a pain

for less than £1,000. It only took a few minutes over a cup of coffee. I mentioned caution: make sure that what you buy is fit for purpose and safe. Always ask if you can see it running before you buy and do your research. The HSE website is relatively easy to navigate and shows you what a safe woodworking machine should look like. It's a good idea to ask an experienced friend to go with you for a second opinion and moral support. Look for ex-school or college machines, as they will have been kept right up to current safety standards and serviced regularly.

Buy new where it counts

The dust extractor and mitre saw are tools with a limited life expectancy, so don't buy these second-hand. There is a difference between a dedicated chip extractor and a dust extractor – ask for something that can handle both requirements. If you can afford it, get a sliding mitre saw with an adjustable depth stop; it means you can do some joinery with the saw as well as cross-cuts and mitres. Don't buy the cheapest, but you probably don't need the most expensive, either.

Where does it all go? You would be hard pressed to move, let alone work with all of this kit bolted down in a standard garage, so fortunately the answer is simple and cheap: get wheel kits for your machines and roll them out of the way when not in use.

Spend so far

Planer/thicknesser	£650
Bandsaw	£350
Mitre saw	£400
Dust/chip extractor	£500
Transport	£200
Wheel kits	£200
Blades and tooling for machines	£200
Total	£2,500
(Leaves £1,544 left to spend)	

Year 3: fine-tuning

So you've only got a little over £1,500 left – what's next? By now you can probably answer the question yourself. If your workshop is truly freezing you might prioritise a wood-burner or if you just can't see what you're doing, then maybe it's time to get an electrician in and have some extra tubes fitted. If you like tools with a plug on one end, you might start thinking about a router table or a lathe.

My ideals

Me, I'd buy some nice yellow pine or ash, rip the old top off the bench and do a proper job on it (Pic.7). I would fit a tail vice and some bench dogs, square ones, and yes, I know round ones work better, but square ones are prettier.

I would buy or make a separate stand for my sharpening rig and shooting board (they are both in constant use and get in the way on the main bench).

Next would be a bench-top mortiser and pillar drill, both good, solid second-hand stuff. I would also get a new track saw, not typically found in the traditional workshop, but I admit it, I'm addicted: they do what they do so elegantly and efficiently that I wouldn't want to be without one anymore.

I would probably give in at this stage and spend £400 on a nice solid cast-iron table saw. I'm sitting here and trying to justify it and, honestly, it's as much habit as anything: the workshop just looks odd without one. They can handle wider stock and cut a shade faster and cleaner than the bandsaw and I suppose it also means that I can leave a fine blade on the bandsaw, saving it for curves and delicate stuff.

Main ingredients in place

So that's it, you have the main ingredients in place for a great workshop and many, many happy hours of woodwork. Don't bolt anything down for the first couple of years and you will find that with a tweak here and there, your setup will find its own harmony. What's left? Frankly, if you're anything like me, you will have overspent horribly by now, but then explaining why the kids can't have new shoes this year is all part of the art of fine woodworking! **GW**

Spend so far

Timber for bench etc.	£300
Mortiser	£250
Pillar drill	£150
Track saw	£400
Table saw	£400
Transport	£150
Tooling	£100
Misc	£200
Total	£1,950
(Leaves an embarrassing silence when your debit card is declined in Tesco!)	



PIC 7. Not perfect, but I love it anyway, my £40 bench with recycled pine top, 9in Parkinsons (genuinely) Perfect Vice and fickle but lovely square dogs

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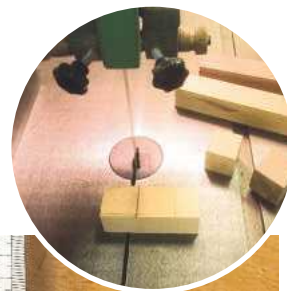


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Great oaks from little acorns grow



Annemarie Adams' lovely acorn pendant is quick and easy to make, gives you a good opportunity to use up scrap pieces of wood, and no will doubt become a firm favourite

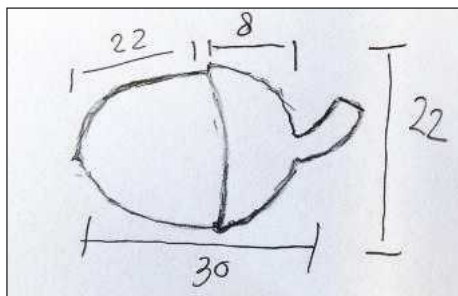


FIG 1. Rough drawing to show approximate dimensions of the acorn pendant

MATERIALS & TOOLS REQUIRED



I don't have a big stock of wood, but this acorn requires only a few small pieces. I used walnut and oak, but the acorn you can see in the lead photo is made using Indian rosewood. I wanted to make as many acorns as possible from the precious small pieces of walnut and oak I had available, so I decided to glue other materials in both ends.

What you'll need

- Small pieces of wood (oak, walnut, birch, Indian rosewood or whatever you have in stock)
- Lathe and woodturning tools
- Saw
- Wood glue
- Abrasives from 240-400 grit
- Silver wire and pliers
- Chain

FURTHER INFO

You can see more of Annemarie's projects by visiting her Instructables page – www.instructables.com/member/Amaries

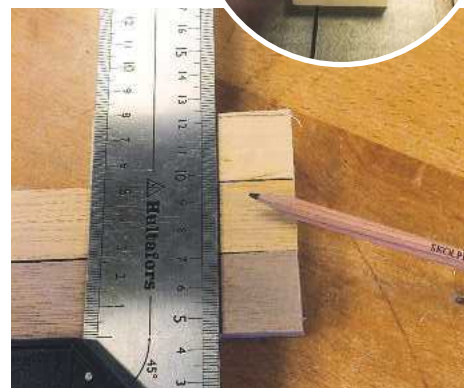
In this article I'm going to show you how to make a beautiful acorn pendant. I love the combination of walnut or other dark woods with oak, and this is my favourite necklace. I hope it will become yours, too.

Preparing & gluing the cubes

Cut the different pieces of wood into cubes that measure 25mm in each direction (Pic.1). Next, sand the surfaces to be glued together until they are smooth (Pic.2), then glue using wood glue (Pic.3). Now press and let the cube structure dry for at least two hours (Pic.4).

Turning the cube structure

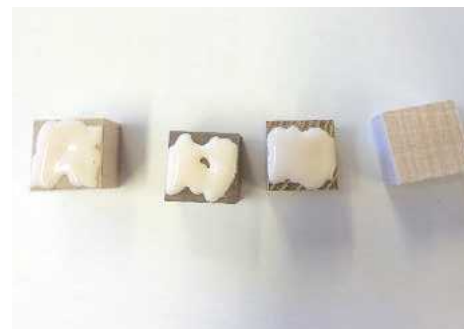
Mark the centre of the cube structure at both ends (Pic.5) and place between centres on your lathe (Pic.6). Next, turn it to the round using a wide gouge (Pic.7). Using a parting tool, mark the beginning and the end of the acorn (Pic.8) and start to create the desired shape, this time using a fingernail profile gouge (Pic.9). If required, sand the shape using abrasives before applying wax, then leave the acorn to dry.



PIC 1. The 25mm cubes, measured out and cut



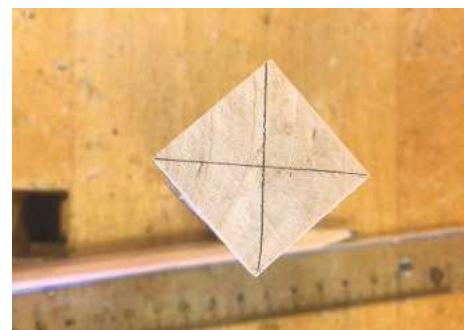
PIC 2. Sanding the cubes smooth on all sides using a disc sander



PIC 3. Apply glue to the surfaces that will be joined together



PIC 4. Once glued up, your cube structure should look like this



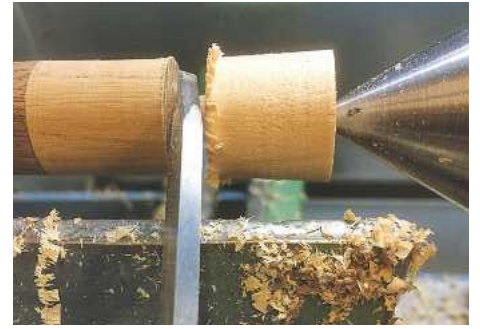
PIC 5. Mark the centre of the cube structure using a centre finder, or whatever method you prefer



PIC 6. The cube structure, mounted between centres



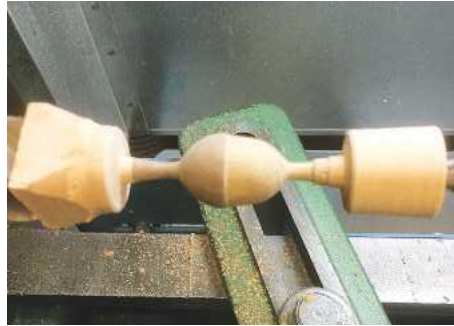
PIC 7. Begin to turn the glued-up blank to the round, using a suitable wide gouge



PIC 8. Using a parting tool, create the top and bottom of the acorn



PIC 9. Start to create the desired shape, using a fingernail profile gouge



PIC 10. At this stage, the turned acorn should look something like this



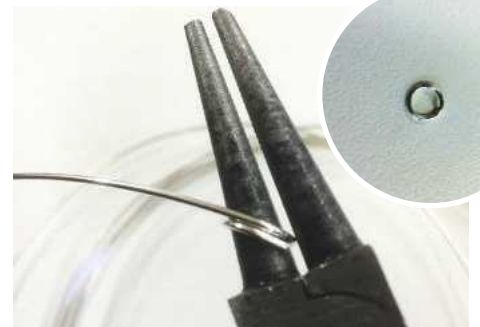
PIC 11. Remove the acorn from the spigot using a fine-bladed saw



PIC 12. Mark the location of the hole using a bradawl



PIC 13. Drill the hole with a 1.5mm drill bit fitted in an electric drill



PIC 14. Take your silver wire and bend it into a small ring using a pair of pliers



PIC 15. Thread the ring through the hole you've drilled in the top of the pendant...



PIC 16. ... before threading the chain through the ring, then fastening

A truly blessed man

Sailing over from England in 1985 and upon landing on America's shores, **Michael Brown** went about building his own timber-framed house before setting up a business making stunning bespoke hand-crafted chairs and furniture, which he continues to do to this day



ABOVE: The exterior of Michael's stunning house, which he made himself using traditional methods

The handmade wooden chair is an item steeped in history and one which is still as popular today as it was in the 18th century. While design has inevitably moved on to embrace current trends, it is reassuring to know that there are craftsmen remaining who are still working to these age-old designs (although moving with the times) and keeping the tradition alive. One such craftsman is Michael Brown, an Englishman who made the trip over to America back in 1985. This is quite a story in itself, as he made his way over on a 42ft fibreglass sailboat, stopping in Bermuda to repair hurricane damage, and here he also met his wife-to-be. Leaving Bermuda safe and well, with his future wife in tow, Michael then spent the next seven years in New York,



before the couple decided to buy some woodland on the edge of Beard Creek, North Carolina. "It wasn't long before I started to selectively cut down trees to build our home," Michael says. "I meticulously sawed the trees into posts and beams, following the finest practices of generations past. I raised a frame of pine, sycamore, oak, poplar and maple, connected with wooden pegs that glowed in the setting sun and cut right to my heart." When they designed the house, which technique-wise Michael refers to as "just mortise & tenon joinery on a bigger scale," the couple were living on their boat, so it ended up being bigger than they really needed, but as you can see from some of the photos shown here, the end result is truly amazing and includes a lot of fun details and quirky features.

A love of working wood

When asked about his background it seems that boatbuilding and woodworking were very much in the family, with Michael telling me how his father would renovate wooden boats in his spare time: "We would sail it for a while and then he would get a bigger one, before we started all over again. So he gave me the love of working wood." Michael says he chose chairmaking as it is the hardest and most complex of all the wood-based trades and therefore the least competitive, so the more likely it was for him to make a living and



RIGHT: The house interior, including staircases, beams, tables, chairs, and everything wooden you can see, was also made by Michael



be able to support his family. Fast forward some 20 years and Michael's business is very much going strong, as he continues to create his interpretation of the original Windsor chair, producing office, dining, rockers, stools, comfy-rondack and various other chair designs as well as pieces of custom furniture.

A preference for hand tools

Working from his functional workspace/studio – an unheated pole barn that is great to work in during the summer but freezing cold in the winter – Michael crafts chairs and furniture by hand using a selection of manual tools. While he does admit to using the odd power tool where necessary, he predominantly works with traditional hand tools, including spokeshave, cabinet scraper, frame saw, adze, planes and a homemade shaving horse, which happens to be his favourite tool: "You sit on this thing like a stallion and kick the foot bar, pull the 'shave and generally pretend you are on your childhood rocking horse," he says. "It is, of course, a handmade horse using whatever was lying around when I needed to make it, and I imagine one day I will improve its looks!"

Michael says, however, that his preference for hand tools is purely aesthetic: he likes the sound, speed and feel. He uses old wooden spokeshaves where the blade is (almost) parallel to the wood,

which makes them much easier to push or pull: "A tool designed for ease makes sense; adjustment is a mere knock on the shaving horse, no knobs, no bolts, just tapered metal tangs in wooden holes – simplicity itself."

Despite being influenced by traditional designs, Michael says that he is not tied to traditional methods – he believes in using what is available today to make the task as easy as possible.

Choosing to work exclusively with sustainably sourced wood and trying to source this from either his backyard or from eco-friendly sustainable logging and sawing enterprises, Michael uses a chainsaw to cut down the trees and then moves them to an on-site bandsaw mill for converting into usable pieces for his furniture and chairs. He also has his own wood drying kiln, so after sawing and air drying, all pieces are moved to the kiln, which helps ensure that this furniture maker is working in the most eco-friendly way possible, which is high on his list of priorities.

Traditional designs with modern elements

Michael's website allows you to browse through his portfolio and take a closer look at his designs, all of which are hand-crafted with an emphasis on custom design, aesthetics and sustainably sourced wood, to create exquisitely detailed chairs and furniture that fit the user perfectly. Despite the fact that Michael's chairs >

TOP: Bedside table in curly maple with cherry legs – 610mm wide × 610mm high

ABOVE: Dining chair in sustainable mahogany with ash spindles/legs. Seat – 432mm wide × 483mm dia. × 458mm high – 1,016mm high overall



ABOVE: Rocking chair with the 'Inspector' in cherry with ash spindles/legs – short rockers for apartment living – overall 813mm wide × 914mm dia. × 1,118mm high



MIDDLE: Sidechair in sustainable mahogany with ash spindles/legs – 508mm wide × 508mm dia. × 1,016mm high overall

RIGHT: Tripod stool in pecan with ash spindles/legs – 559mm dia. × 559mm wide × 1,016mm high – with seat at 660mm

BELOW: Live edge cherry desk – 610mm wide × 1,321mm long, with carved wood 'rocks' of walnut and cherry – one wide board mitred at the corner to give waterfall effect of grain

are based on the traditional Windsor design, it's interesting to see how he incorporates modern features, such as those shown in his office chair. He also talks about his design process, which has been painstakingly developed to create a chair that supports the sitter's whole body. Each piece is therefore custom-made according to the precise body measurements of the buyer. Speaking on this, Michael says that he incorporates the grain whenever he can: his chair spindles, split from the log, follow the grain, which is what gives them the flex that makes this delicate looking chair strong enough to support the human form.

When asked about commissions, Michael says that designs are generated in response to certain criteria: "My client will say I need to be able to seat 'X' number of people and my house is 'modern' or 'minimalist' etc., or I want live edge, or walnut slab, etc. From there I sketch ideas, price it, then email the client who replies saying they like "1 and 4" and now we have a point where I can generate a detailed design. Designing on commission is working within some parameters," he says, "but creating something functional and beautiful within this box is much harder than just making something beautiful."

At present, Michael tells me he is collaborating on a table commission with glass artist David Goldhagen, which has been designed with glass legs – David is currently in the process of blowing and moulding these. This collaboration was in response to a commission from a client, and Michael tells me that he's also worked with metalworkers in the past, who have also designed custom legs for him.

Telling me more about his design process, Michael says that he goes out before dawn and watches the sunrise, and that hour, either rowing on the creek or riding his bicycle, is when designs come forth. "How can you commune with nature and not want to put the curve of a dolphin's back cresting and blowing inches from you into the leg of a chair, or the reflection of the Southern yellow pines, straight and true, on the river's mirrored surface suddenly swaying like drunken sailors as the wake from my rowboat ripples through them, bringing to mind a piece of curly maple. You can stare at two boards for months not knowing what to do and then there it is given to you as the sun rises and the world wakes, the light changes, the day begins and I am hurrying back to my 'shop to create this dream. Life does not get much better than that; I am so, so lucky."

Chairman Brown & workshop companions

When asked who inspires him, Michael cites John Brown, a British chairmaker who actually used to write columns for *GW*, which were, according to Christopher Schwarz, "short epistles on topics philosophical, mundane or both. He might offer a recipe for bacon in one column, offer plans for a workbench in another, and in a third comment on the sad state of woodworking where we have traded skill for speed." He inspired thousands of woodworkers to attempt or even completely embrace hand woodworking, and he was certainly a colourful character who could be both cantankerous, charming and controversial. Brown sadly died back in 2008, but it is reassuring to see that his influence lives on in other chairmakers such as Michael.



ABOVE: Coffee table in curly redwood with curly maple butterflies, with the legs in the shape of a ballerina's foot on 'pointe' – 1,372mm wide × 508mm dia.



I'm sure John would very much approve of the way in which Michael works: staying true to the designs of old, using traditional methods in the main, and keeping the art of chairmaking alive for another generation, and doing so with such an appreciation for the natural beauty of the wood and all it has to offer.

Michael also seems to be a woodworker who embraces wildlife as well, which becomes apparent as I spot a photo of him at his workbench accompanied by a very content looking goat, and many of the photos also seem to feature a lovely little cat! Intrigued, I ask him to tell me more about his companions, as well as his workshop, which is a barn he built himself that is always open on two sides. There is no heating and no air conditioning, so working in it throughout the year can be a bit of a test. Situated right in the woods, and surrounded by 65ft trees, mixed soft- and hardwoods, Michael says that he left the woodland and built his barn in a space between them. Going back to the animals, he says that the workshop is home to a cat that wandered in and never left, and the free range goat actually belongs to a neighbour, as well as all sorts of other wildlife, including birds that often nest by his workbench on a shelf.

A recent project to leave his workbench was a table that utilises a wine bottle, as Michael says: "A good repeat client gave me a wine bottle from her daughter's wedding and asked me to make something. I had made a Shaker candle stand as my wife needed a table beside the TV (not traditional at all but I do sit and watch it in a Windsor rocker) and the stem of it looked like a wine bottle, so I quickly emptied a bottle (designing is hard

work) and tried gluing wooden legs to the glass, with some epoxy and a little jig to hold them to dry." In the morning, however, the glass had shattered, as the temperature changed and the glass moved more than the wood. Michael knew he had the design, he just had to hold the bottle without making it an integral part of the table, so he made a metal table support and drilled a hole in the bottom of the bottle to pass through a 16mm stainless steel rod and welded on some brackets that attached the legs.

The project that has just left his bench, however, is a walnut and curly maple dining table, with four chairs and a bench, and soon to be leaving is a chair that is one of his three annual 'Karma' designs, which he is making to donate to a local charity.

Evolving designs

Michael says there are quite a few very talented classic Windsor chairmakers around but he feels the need to make a chair to his own design as opposed to just copying a pattern: "Surely we can improve, or at least try? Does a design have to stop? Can it not evolve?" For example, he tells me how he's had to increase the dimensions of his spindles as his clients have become larger over the last 20 years.

Michael also acknowledges the work of some of the students he has taught who he says are very talented: "It will be interesting to see how their work progresses/ evolves, and how they express their ideas through their work." Could these students represent the future of chairmaking? With guidance and teaching from Michael, I'm sure they stand a very good chance. >

ABOVE LEFT: 'Lovebirds' rocker in cherry with ash spindles/legs – 1,219mm wide × 965mm dia. × 1,067mm high

MIDDLE: Comfy-rondack in sustainable mahogany – 965mm wide × 1,168mm dia. × 1,118mm high

ABOVE: Dining chair in mahogany and ash

BELOW LEFT: Chippendale reproductions in walnut

MIDDLE: Music set in cherry with walnut (legs) – guitar stand, music stand and music chair – 508mm wide × 610mm dia. × 1,016mm high

BELOW: Rocking chair in reclaimed chestnut and walnut with full length rockers – 813mm wide × 1,219mm dia. × 1,118mm high





ABOVE: 'Minstrel' chair in walnut and ash – 813mm wide × 610mm dia. × 1,067mm high

ABOVE RIGHT: 'Table of Memories' in sustainable mahogany – 457mm wide × 457mm dia. × 508mm high

BELOW: 'Valet Chair' in sustainable mahogany – 508mm wide × 559mm dia. × 1,016mm high

BELOW RIGHT: Sycamore and walnut rocker – 813mm wide × 1,168mm dia. × 1,067mm high

Despite Michael's immense skill, he appears to be a modest man, thanking nature for what it has gifted him and talking very humbly of his work, so while pride may be considered a sin, it is refreshing to hear how at the end of a long day, this maker sits in one of his rocking chairs and feels a sense of happiness in what he has created, and so he should! From speaking to him, it is also evident to hear the immense amount of pride he has for the home he's made using his bare hands, or as he calls it "his little bit of paradise." Few of us could ever hope to possess even half the skill that Michael has, and it's also great to hear that he shows no sign of giving up what he loves doing any time soon: "I hope to keep making chairs until I drop. Coming into my workshop every day is not just a way to support us, but a pleasure; we took four years off when we were younger and called that our retirement."

We do hope that Michael continues doing what he loves for many years to come, providing people far and wide with heirloom pieces that will no doubt be passed down through many generations, as well as continuing to be so generous in sharing his skills and advice with the craftsmen and women of tomorrow. **GW**

THE CHAIRMAKING PROCESS



Drawknifing bark off a cherry table top



Frame sawing a seat out of 50mm curly maple



Boring with a spoon bit



Hollowing the seat using a travisher



Adzing seat with blade from Pacific Northwest Natives



Bevelling the seat with a wooden spokeshave



Wedging spindles and driving in walnut wedges



Cutting the kerf for wedges



FURTHER INFO

Should you want to find out more about Michael, and see more examples of his work, do have a look at his website, which is regularly updated and also includes his humorous and enlightening studio blog: www.michaelbrownchairmaker.com

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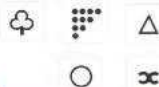


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Corner shelving reinvented

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MATERIALS & TOOLS REQUIRED

MATERIALS

- 100 × 100mm Douglas fir post
- 20mm maple boards
- Keyhole hangers
- Drywall plugs
- Strip of walnut
- Coloured yarn
- Wood glue
- White glue
- Danish oil
- Screws



TOOLS

- This project uses standard woodworking tools along with a Kreg Pocket Hole Drill Guide

These shelves are custom designed to be mounted in the corner of a room and hang on two adjacent walls. The shelves are medium duty, as they are supported by minimal amounts of blind hardware in order to give the appearance of being truly floating cantilevered shelves.

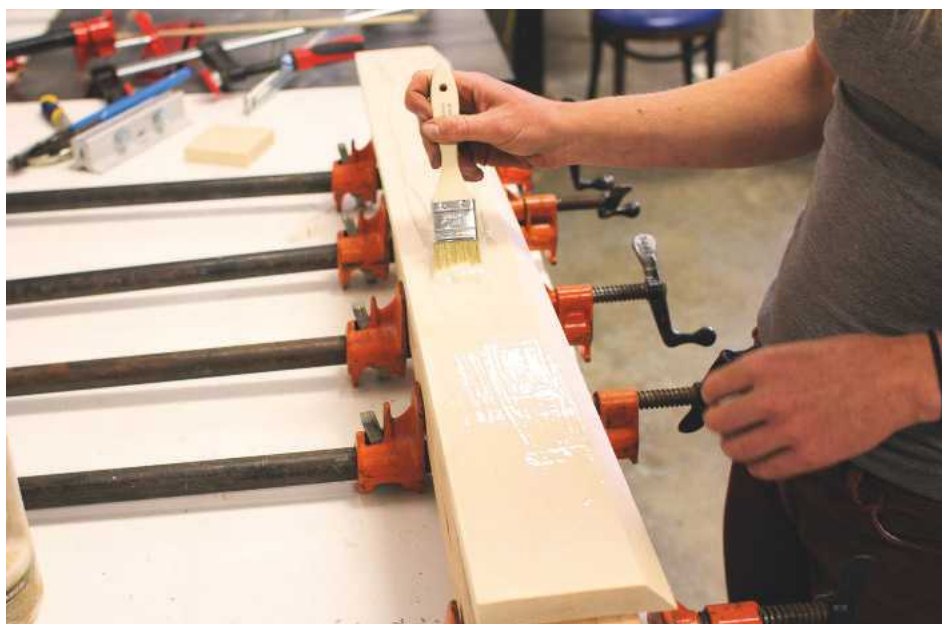
The shelves are made of maple and have two different kinds of inlays. The first is made

of walnut and is a corner inlay itself. Working out a way to do an inlay on the corner of a post was a first for me, but nothing to write home about. The second inlay is actually made from knitting yarn. It just so happens that many yarns fit perfectly inside the 3mm saw kerf from a table saw blade. The yarn is easy to inlay, flexible around corners and curves, and is limitless in terms of colour and texture options. This was something new that I wanted to try and share. In short – yarn inlays in wood: it's the future!

Creating a faux maple post

At the core of these shelves is a piece of 100 × 100mm post that's been clad with 20mm maple boards in order to look like a solid piece of maple. Sourcing a solid maple post of this dimension would be significantly more costly, and to be honest, a waste of good maple.

Start by cutting two lengths of maple the length of your 100 × 100mm piece and mitre the adjoining edge. Apply glue to the back of both of the boards (**Pic.1**) and glue, clamp or brad nail them into position (**Pic.2**). Next, cut two square caps that fit the top and bottom of the post, then glue and clamp those in place as well. I first glued one maple panel on, then the other as positioning two pieces of maple simultaneously seemed like a challenge. The 100 × 100mm piece needs only two of its faces to be covered with maple; the other two sides are up against the wall. >



PIC 1. Apply glue to the back of both boards...





PIC 2. ... then glue, clamp or brad nail them into position



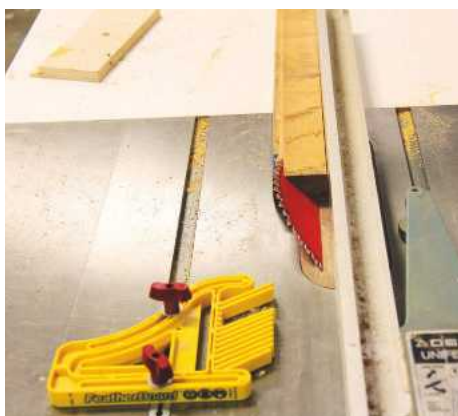
PIC 5. Use a brad gun to assemble the sled



PIC 6. Push the corner post and sled through the table saw, cutting a 3mm wide inlay groove that runs vertically along the entire post (**PLEASE NOTE BLADE GUARD HAS BEEN REMOVED FOR CLARITY**)



PIC 7. Put a long strip of walnut scrap through the planer several times to mill it down to the correct thickness



PIC 3. Cut a piece of scrap wood in half on the table saw with the blade set at 45° (**PLEASE NOTE BLADE GUARD HAS BEEN REMOVED FOR CLARITY**)

Build a sled

In order to create the cut for the inlay in the maple corner post, I first had to build a sled that would hold the maple post in the correct position. Cut a piece of scrap wood in half on the table saw with the blade set at 45°. The scrap wood's length should be 100mm longer than the corner post. Next, head over to the chop saw and cut two triangular pieces of 50 × 100mm (**Pic.4**) with the saw set at 45° as before. Use a brad gun to assemble the sled (**Pic.5**).

Cut groove for inlay

The sled should hold the corner post exactly on its edge above the table saw blade. Push the corner post and sled through the table saw, cutting a 3mm wide inlay groove that runs vertically along the entire post (**Pic.6**). The depth of cut is not very important – I cut mine to 6mm or so.

Note: I had to turn my table saw fence 90° into its 'low' position so that it would clear the top of the sled, which extends further to the side than the base of the sled does. If your table saw fence doesn't have a 'low' setting, simply cut these protruding pieces off when designing your sled.

Create inlay & glue

I sent a long strip of walnut scrap through the planer several times to mill it down to



PIC 8. Take the inlay and lightly tap it into position...



PIC 4. Use the chop saw to cut two triangular pieces of 50 × 100mm post with the saw set at 45° as before

the correct thickness so that it would fit tightly in the groove that I'd just cut on the table saw (**Pic.7**). The height of the inlay does not matter as much as the width, as any excess material will get trimmed off in the following steps. Take the inlay and lightly tap it into position (**Pic.8**), then glue it into place (**Pic.9**).

Plane & trim

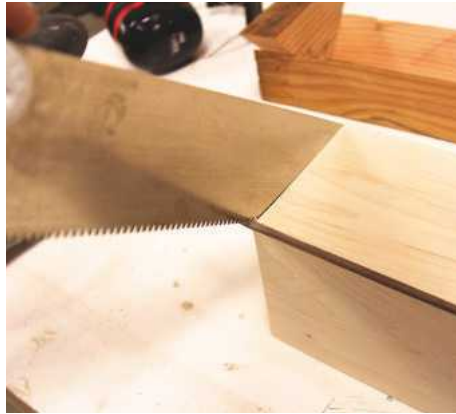
While there are many different ways to trim the inlay to size, I decided to send the entire post through the planer in order to flatten everything out and make the inlay perfectly flush with the adjacent maple boards (**Pic.10**). A hand planer would be a good tool to use here – much more appropriate and scaled to the task – but unfortunately I don't own one, so I had to make do. You can now plane the post on one side, rotate 90°, and send it through some more to dimension the inlay. I then trimmed the inlay to length using a flush cut pull saw (**Pic.11**).



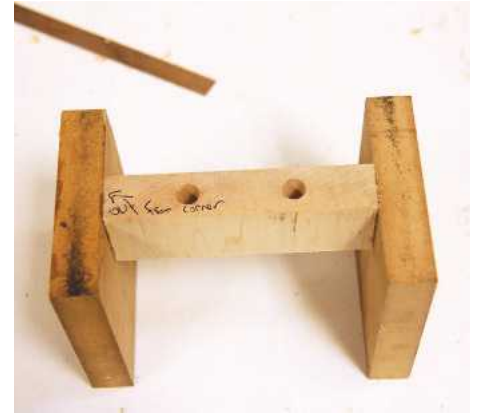
PIC 9. ... then glue it into place



PIC 10. Plane the entire post in order to flatten everything out and make the inlay perfectly flush with the adjacent maple boards



PIC 11. Trim the inlay to length using a flush cut pull saw



PIC 12. The drill guide jig will help you consistently drill the holes on all five shelves, and all five locations where they meet the post

Build a drill guide

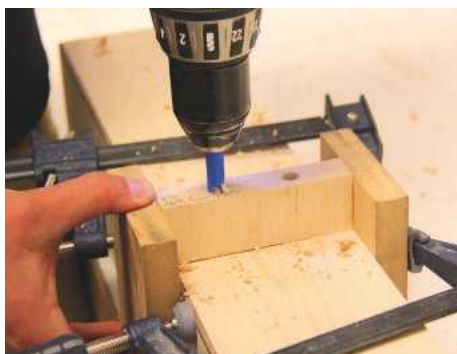
The shelves are attached to the corner post using wooden dowel pins. The holes that hold the pins need to be drilled in the exact same position and spacing on the shelves as on the post. That means making another jig that will help you consistently drill the holes on all five shelves, and all five locations where they meet the post (**Pic.12**).

To construct the jig, cut a piece of maple that's the same width as your post (this also needs to be the same as the depth of your shelf) and drill two holes in it that are the same diameter as your wooden pins. Drill these holes on the drill press to ensure they are straight and perpendicular to the piece of wood. Next, glue two pieces of scrap MDF onto the sides of this piece of maple that will hold it in place on the shelves and corner post – their size does not matter.

Mark the drill bit used to drill the holes



PIC 14. Mark the locations of where you want the shelves to go



PIC 15. Clamp the jig into position and drill the holes that will accept the wooden dowel pins

for the wooden dowel pins with tape, to correctly show the depth to which it should be inserted into the jig, ensuring you end up with holes that aren't too deep for the pins (**Pic.13**). I didn't put my two holes exactly in the middle of my shelves in either their 'X' or 'Y' locations, so I made sure to mark the front of my jig with an arrow so that I could align it to the shelves and post in the correct way, ensuring not to flip anything.

Drill holes for the dowel pins

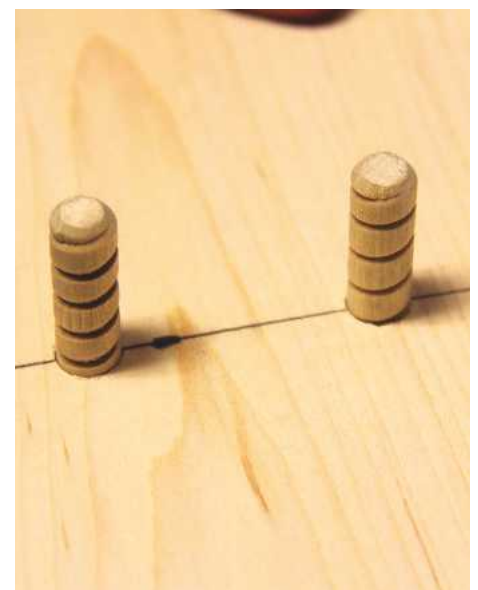
Mark the locations of where you want the shelves to go (**Pic.14**) – I spaced mine evenly along the post in an alternating pattern with two long shelves on one side, and three shorter shelves on the other – then clamp the jig into position and drill the holes that will accept the wooden dowel pins (**Pic.15**). Test fit a few dowels to make sure everything lines up (**Pic.17**). >



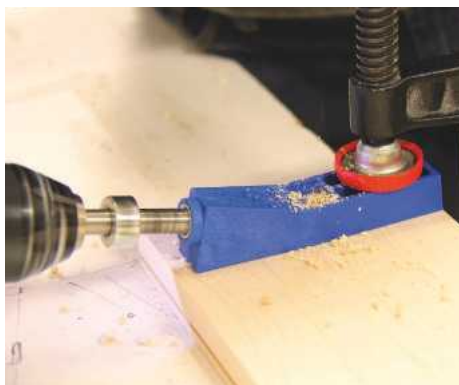
PIC 16. Further drilling of the holes



PIC 13. Mark the drill bit used to drill the holes for the wooden dowel pins with tape, to correctly show the depth to which it should be inserted into the jig



PIC 17. Test fit a few dowels to make sure everything lines up



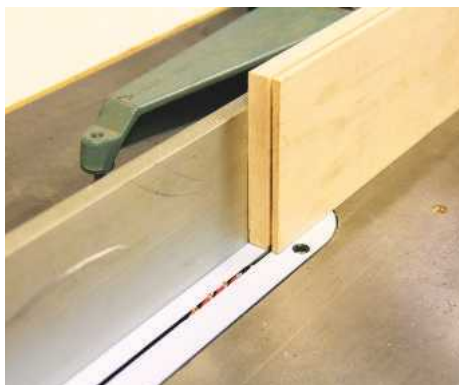
PIC 18. The other cantilevered side of the shelf is held in place using a pocket hole created with a Kreg Pocket Hole Drill Guide



PIC 19. Drill one pocket hole in the end of each shelf



PIC 20. One of the completed pocket holes



PIC 21. Start by cutting a 3mm groove using the kerf of the table saw blade all along the front face (**PLEASE NOTE BLADE GUARD HAS BEEN REMOVED FOR CLARITY**)



PIC 22. I chose a varying coloured green yarn that I thought matched the maple and walnut nicely



PIC 23. Lay the yarn into the groove cut by the table saw, placing little dots of white glue along the way to hold it in place

Drill pocket holes

While one end of the shelf is held in place by the dowel pins and corner post that I just fabricated, the other cantilevered side is secured using a pocket hole created with a Kreg Pocket Hole Drill Guide (Pic.18). These pocket holes will receive screws that go into plastic anchors, which I will later set into my plaster wall.

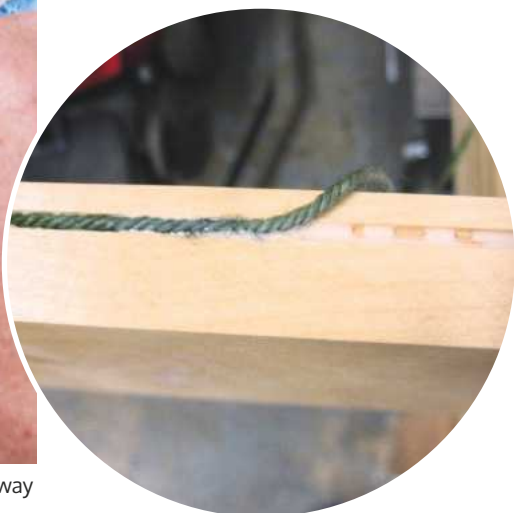
Drill one pocket hole in the end of each shelf (Pic.19), and another facing towards the corner post that can be used to lock the dowel pin connection into place.

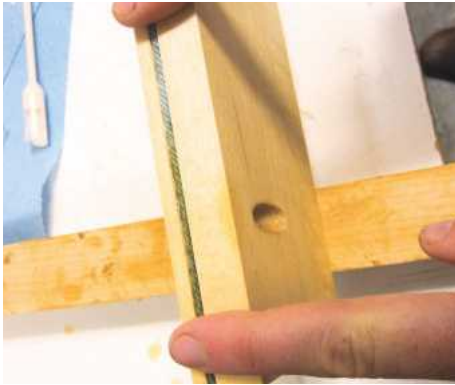
Cut yarn for inlay

Cut a 3mm groove using the kerf of the table saw blade all along the front face, outward facing side of the shelves and even a few inches along the back of the shelf that faces the wall so the yarn end has a place to terminate (Pic.21). The width of the table saw blade perfectly fits most normal gauged types of yarn. I chose a varying coloured green yarn that I thought matched the maple and walnut nicely (Pic.22). It references that whole tree thing that this shelf has going on...

Glue in the yarn

Lay the yarn into the groove cut by the table saw, placing little dots of white glue along the way to hold it in (Pic.23). Wrap the yarn around the corner tightly and terminate it in the groove on the back of the shelf (Pic.24).





PIC 24. Wrap the yarn around the corner tightly and terminate it in the groove on the back of the shelf

Rout groove for future lighting

I routed a groove into the back of the corner post with the expectation that one day after it was hung on the wall I'd want to add some kind of lighting into that corner of the room. The groove will allow the cord for the light to pass behind the bookshelf. Grab a straight $\frac{1}{2}$ in or $\frac{3}{4}$ in router bit, set the router fence and remove the back corner of the post, making several passes (**Pic.25**).

Mount hanging hardware

I mounted two keyhole hangers on the adjacent corner sides of the post. These keyhole hangers are blind mounting hardware that allow the post to be slipped onto a screw head that's driven into the wall that will hold it in place. Trace the keyhole hanger (**Pic.26**), load a



PIC 25. Using a straight $\frac{1}{2}$ in or $\frac{3}{4}$ in router bit, set the router fence and remove the back corner of the post, making several passes

Forstner bit into the drill press, set the depth so you don't remove too much material and drill holes to remove the wood inside the pencil line (**Pic.27**). I cleaned things up with a chisel (**Pic.28**) and mounted the keyhole hanger.

Sanding & finishing

You can now sand all surfaces with 120 followed by 220 grit discs mounted in a random orbital sander (**Pic.29**).

The next step is to apply a finish of your choosing. I chose to use Danish oil on this project because it's a simple wipe on, wipe off finish that will bring out the grain in the maple and walnut without yellowing things too much (**Pic.30**). Of course, you can use whichever one you prefer or have available. >



PIC 26. Trace the keyhole hanger



PIC 27. Load a Forstner bit into the drill press, set the depth so you don't remove too much material and drill holes to remove the wood inside the pencil line



PIC 28. Clean up the hole using a chisel



PIC 29. Now it's time to sand all surfaces with 120 followed by 220 grit discs mounted in a random orbital sander



PIC 30. Finish the shelf pieces using Danish oil, or a product of your choosing



PIC 31. The completed shelf components



PIC 32. The corner post in position



PIC 33. Knock the dowel pins into position on the shelf...



PIC 34. ... and lightly tap the shelf onto the corner post



PIC 35. Check to make sure the shelf is level



PIC 36. Use a hammer and nail to mark a point on the wall

Corner post installation

Translate the location of the keyhole hangers onto the wall, carefully measuring their location with a tape measure or callipers, then drill anchors into the wall before securing the corner post (Pic.32).

Shelf dowel pins installation

Knock the dowel pins into position on the shelf (Pic.33) and lightly tap the shelf onto the corner post (Pic.34). Be careful not to let the unsupported end of the shelf hang and put undue stress on the dowel pins. Getting someone to give you a hand in this install process helps a lot.

Level, mark & drill anchor hole installation

Check to make sure the shelf is level (Pic.35), and once it is, mark a point on the wall through the pocket hole at the end of the shelf. A really skinny pencil would work for this, but I used a hammer and a nail and lightly tapped a little dent into the wall where the anchor should go (Pic.36).

Next, remove the shelf and drill a hole into the plaster wall to fit the plastic anchor (Pic.37).

I drilled the hole at a slight angle to simulate the angle of the pocket hole and screw that it would soon be accepting.

Screw to post & wall installation

Align the pocket hole at the end of the shelf with the anchor (you can see through the pocket hole to the wall) and replace the dowel pins on the corner post.

Take one Kreg screw and drive it through the pocket hole and into the post. I chose to screw this connection together rather than use glue in case I ever want to move the shelving to a different wall. Simply re-installing it requires this connection to be undone since the anchor for the shelf at the far end has to be put in with the shelf out of the way.

Next, take a second screw (I chose to use a non self-drilling screw here) and drive it into the anchor that's in the wall at the far end of the shelf. Repeat this installation process for the remaining four shelves.

Lastly, add your belongings to the shelves and you're done (Pic.39). Thanks for reading and please let me know what you think of the yarn inlay. **GW**



PIC 37. Remove the shelf and drill a hole into the plaster wall to fit the plastic anchor



PIC 38. Take one Kreg screw and drive it through the pocket hole and into the post



PIC 39. The completed shelves are now ready for filling with belongings

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Letters & Makers

Letter of the month

Unwanted cordless drills

Hi,
I have several good quality cordless drills (Bosch/DeWalt), which require new batteries (NiCad or Nimetal). As I only use Li-ion batteries now, do you know of any organisation that would take the drills for free? Non-brand batteries can be obtained online for half the price of branded equivalents, and I've used these for several years.
Regards, **Kevin Naim**

Hi Kevin, there are a couple of charities that will take old tools, refurbish them and send them out to various countries in Africa. Tools With A Mission certainly accept power tools, including cordless products. I delivered some to their Ipswich HQ earlier this year, though they have several depots and will organise collection from various parts of the country. Not only woodwork tools but builders' and mechanics' tools, bicycles, sewing machines, computers and books. Visit www.twam.uk for more information.

The other organisation is Tools For Self Reliance, though best check with them first about power tools. Their website is www.tfsr.org. Let us know how you get on!
Regards, **Phil Davy**



📍 A significant donation to Tools With A Mission courtesy of Ed Usher and John Ellis from Lowestoft

An impressive glue collection



📍 Ben Hackney's enviable collection of wood glues

Hi Tegan,
I received my glue bundle yesterday – thanks very much! I've added it to the large collection of glues I already have, but look forward to trying these new ones out on a future project.
Best wishes, **Ben Hackney**

Saw maker identification – responses



📍 The medallion featured on Bill Croucher's saw – see GW321 for the original letter

Dear Editor,
Having seen the letter from a reader trying to identify the maker of his saw, just from the medallion on the side, may I point out two collections of such makers' marks: www.lumberjocks.com/Brit/blog/38689 has a discussion on how these moved from British makers to the US, and the medallion in question looks to be included about halfway down, as belonging to A. Ashton and Sons.

There is also another collection of these marks at www.lumberjocks.com/summerfi/blog/39861, but the Ashton one is not included there.
Kind regards, **Ian Shatwell**

Hello, the enquiry from Bill Croucher last month excited my interest as I recognised what I thought to be the stamp of a livery company – The Worshipful Company of Sawmakers – guaranteeing quality; a sort of early BS! I have several old saws and one new dovetail saw from ET Roberts & Lee with the same boss. The now owners of Roberts, Thomas Flinn & Co., show the same in illustrations on their website.

But it is not so and what the boss signifies is not clear. The use of the Imperial crown, lion and unicorn supporters and Garter motto suggest strongly that some Royal Warrant is involved, presumably for a Guild or Society; certainly a society of sawmakers was active in Sheffield from the late 18th century.

John Dickinson

Hi Tegan, as I recall, the 'Warranted Superior' medallion was a generic one often used by sawmakers who made saws outside of their own branded versions to be marked up with a specific supplier/store name – I'd hazard that the saw belonging to the reader is one of these, but I'm not up on Old Tool Store of Bishopgate, who may have been the seller of the saw.

My guess, judging by the medallion, is that

the saw was made in Sheffield and supplied to the London store to be sold under their own name/brand. The most common generic 'Warranted Superior' design is the British coat of arms with lion on the left and unicorn on the right of the shield with the 'Dieu et mon droit' motto below, but the centre shield variant in the reader's image looks like it's part of the Sheffield coat of arms that has eight arrows in a criss-cross pattern to indicate its origin. Also, the medallion was aimed to show that although often 'unbranded' the item was coming from a recognised saw maker, so it indicated that the saw was of equal stature to that of the branded versions, but perhaps without some of the flair of the top-end branded ones.

It might be worth getting in touch with Katie at Thomas Flinn – www.flinn-garlick-saws.co.uk – as she will have a better knowledge on the history of sawmakers of Sheffield, as well as the stores who used the sawmakers as suppliers, and chances are she would know the Bishopsgate store(s) that would have been around back when this one was being sold.
Hope this helps! **Andy King**

Thanks to everyone who wrote in on this one. From my own investigations I believe that the use of this particular medallion based on the Royal coat of arms of the UK was widespread, and signified little other than the desire of the saw manufacturer to be seen as belonging to the best quality. In a similar way that other makers would append the word 'London' to a saw blade, the brass medallion set into a hardwood handle conferred instant desirability to a saw, and especially to the eyes of the overseas buyer.

*Closer examination of an assortment of the 'Warranted Superior' and Royal crest mark will show variations to the design; the one originally submitted by Bill Croucher sports a stylised version of crossed arrows in its centre, a motif adapted from the arms of the City of Sheffield, and the likely place of this saw's manufacture. **Mark Cass***

Constructing perfect Gothic arches

Hi Tegan,

The last magazine I received before today was that of the June issue with the Champagne tower bottle case on the cover, which gave me a germ of an idea to construct some similar boxes styled after different buildings from various skylines – this is bubbling away in the back of my mind, but first I have a Gothic kitchen to build for my wife. Does anyone have any ideas as to how to incorporate perfect Gothic arches into solid oak kitchen doors – frame styled? I'm thinking about MDF templates to rout around the panel for each door, then either rebating the back edge of the arch and applying contrasting wood, stained glass, or slot cutting the sides of the cut-out arch and doing the same. Any ideas regarding this would be most welcome. Best regards, **Paul Gustar**

Hi Paul, I love your ideas for boxes that are influenced by Edward Hopkins' wonderful Champagne tower – do let us know how you get on! In the meantime, hopefully some readers out there will be able to assist in supplying tips for incorporating Gothic arches into kitchen doors. Please do send in your suggestions and let's help Paul create the perfect Gothic-style kitchen! Tegan

WRITE & WIN!

We always love hearing about your projects, ideas, hints and tips, and/or like to receive feedback about GW's features, so do drop us a line – you never know, you might win our great 'Letter of the Month' prize, currently a Trend Easyscribe scribing tool.

Simply email tegan.foley@mytimemedia.com for a chance to enhance your marking capability with this versatile workshop aid



SENCO competition winner UPDATE

Recent SENCO Systainer competition winner Andy Cumbley of A C Maintenance (in association with Innovative Leisure), was all smiles when he received his fantastic prize. We hope the tools and compressor will help with all of his future projects. Well done!



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AD16/06

One to watch: Canadian Woodworks

Paul Lemiski of Canadian Woodworks starts each day with a morning coffee and enjoys a short walk to his workshop. Spending early mornings and late nights designing and building custom one-of-a-kind furniture, he says that he loves every minute of it. "It all starts with the selection of raw lumber," says Paul, "which has been collected over years of searching. Each piece I have has its own unique story and character. With the selection of lumber, next comes deciding where to draw the first lines. I smooth and flatten the rough weathered worn exterior of the raw material to reveal the secrets of each board that nature's patina has hidden," he finishes.

Paul uses machine speed and accuracy to create tight-fitting exposed joinery which will stand the test of time, and with the addition of hand tools he's able to carve, shave and sand to reveal the final form, with each piece taking on its own personality.

Passing on knowledge

Specialising predominantly in chairs, his aim is to be recognised as a skilled craftsman, for the pieces he makes to stand the test of time and be passed down through the generations, and for his hands to be trusted to capture the timeless and unique character of wood.

As well as the pieces he makes being available to buy via his website, Paul also sells how-to manuals for building each of his chair designs, which can be downloaded as PDFs containing a step-by-step checklist and detailed instructions for each part of the build. Or if you prefer to work from a paper template, these are also available, including full-scale drawings with bending form diagrams and a full-scale seat layout, not to mention jigs to help you out along the way.

High voltage

As well as making a vast array of chairs, Paul also creates serving boards, some plain, but others featuring Lichtenberg figures – tree-like burn marks – that are singed into the surface of the board. Paul produces these magnificent patterns using a specialist tool accompanied by a source of high voltage to create an electrical discharge. Videos of this process in action can be seen on Paul's YouTube channel – www.youtube.com/user/CanadianWoodworks – and this exciting process really does have to be seen to be believed. It is as dangerous as it sounds, so please don't try this at home, but do have a look online at some of the wonderful results that can be achieved, which really do mimic the effect of lightning.

You can find out more about Paul and his inspirational work by visiting his website – www.canadianwoodworks.com – or have a look at his Instagram page [@canadianwoodworks](https://www.instagram.com/canadianwoodworks).



⬆ 'A' Chair



⬆ 'Dining Chair No.8'



⬆ Sculpted cherry bar stools



⬆ 'High Voltage' serving board in cherry

Photographs courtesy of Paul Lemiski

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AROUND THE HOUSE with Phil Davy



It was like losing an old friend. Selling a Kity planer/thicknesser recently, I was slightly sad to see it go after a couple of decades of use. I've no idea how many metres of both soft and hardwoods it had gobbled up, though it had filled plenty of plastic sacks with chips over the years. Admittedly it was a bit of a pain having to remove the fence on the machine, then raise the outfeed table each time for thicknessing, but you got used to it. Like any thicknesser without a digital depth scale, you just had to be certain that enough components (plus a couple of spares) had been machined before reverting to surfacing mode. I now have a secondhand Sedgwick, which is noisier and heavier but less of a hassle to use. It's easy to get attached to favourite hand tools, but machinery...

JOINERY



BOOK REVIEW: Joinery

Unless experience has shown you otherwise, the simple word joinery may conjure up images of stuffy school woodwork lessons, but this book from *Fine Woodworking* Editors could well change that view. Concentrating specifically on joints, it includes working with both hand tools and machinery.

If you ignore the table saw sequences, there are still plenty of great techniques to get your teeth into. There are probably more joint variations here than you could imagine, from basic pocket hole joinery to complex curved dovetails, which do look amazing. Dowel and biscuit jointing is covered in detail before moving on to double bridle joints (you've guessed it – table saw trickery).

Comprehensive guide

A joinery shoot-out assessing the strength of various glued corner joints comes up with surprising results, while subsequent pages include plenty of tips on creating perfect joints and fixing mistakes. There's a detailed explanation on building a fantastic precision jig for trimming mitres, courtesy of furniture maker Toby Winteringham. Japanese joinery gets a look-in with an explanation of how to make a delightful kane tsugi joint (combined mitre and pinned bridle), though the challenge would be to build it without a table saw...

More unusual techniques focus on ornamental tusk tenons, enhanced visually by the use of timbers such as curly maple, plus protruding tenons with diagonal wedges and dovetailed bridle joints. Cutting perfect dovetails by hand and several routing jig projects, particularly for mortising, are welcome.

Contributors of the calibre of chairmaker Brian Boggs, Shaker maestro Christian Becksvoort and teacher Chris Gochnour give an indication of what to expect from this comprehensive guide.

THE GW VERDICT

- ▶ **RATING:** 4 out of 5
- ▶ *Fine Woodworking* Editors published by **Taunton**
- ▶ **PRICE:** £17.99
- ▶ **WEB:** www.thegmcgroup.com

Q&A: Spit & polish

Q: I have a couple of bench planes with brass lever caps and these have become rather dull over several years of use. Can you tell me the best way to restore the finish on these, please?
J Everest, via email

A: Of course, many woodworkers would argue that tools are meant to be used and not kept wrapped in cotton wool! When you've paid a small fortune for what are premium products, though, it's understandable to want to keep them looking good. And anyone who spends time restoring old tools will probably want them to look their best with minimal effort.

Applying a suitable metal cleaner product normally does the trick, though you may need to first remove light rusting from ferrous metals with steel wool. I've had great results cleaning up tools with Autosol Metal Polish. At around £6 a tube it's not cheap, but a little goes a long way. It apparently leaves an invisible wax coating on surfaces to inhibit corrosion, though paste wax or camellia oil on cast-iron surfaces will also prevent tools rusting. Don't forget to keep threads on screw adjusters lightly oiled, too.



Cleaning tools using Autosol Metal Polish yields great results

SUMMER PROJECT – BASIC DECKING

TAKES: One weekend

TOOLS NEEDED: Circular or mitre saw, drill/driver, spirit level

Hands on deck

Phil Davy's decking is perfect for al fresco woodworking

Since renovating my workshop a few years ago, access to its new door has been a bit of a struggle, especially after heavy rain: with the garden in need of a major makeover, the area immediately in front of the building had been reduced to a quagmire at times, with weeds taking over in spring. Paving slabs would've provided an easy solution to the problem, but perhaps not the most attractive one. A narrow run of decking along the front of the workshop seemed a much better idea, but rather an indulgent way to make a glorified step. As many GW readers will know, however, I tend to do my messier woodwork outdoors, so by making the decking wider, I'd have a level, dry platform that would be perfect for my loyal Workmate. Better still, I thought, by making the decking freestanding, it could even be moved to another location if necessary.

Timber traits

Timber quality can be an issue with decking: most boards will be softwood so, though they'll be pressure treated, don't expect joinery grade stuff; there are likely to be plenty of knots. Hardwood decking is less commonly used because of the cost, though it obviously lasts longer.

If possible, select the decking material yourself at your local supplier, bearing in mind that stock over 2.4m in length could be a problem to transport unless you have roof bars for your car or can borrow a van. Otherwise, you can have them delivered, but be prepared to reject any that are of poor quality; a reputable supplier should be willing to accept returns. Once you've got the boards home, fit them as soon as possible to limit any bowing and twisting. Deck boards vary in thickness from 25 to 32mm, with 28mm being the most common. Widths vary, too, with 120mm and 145mm the most popular sizes.

In Britain, reversible deck boards usually have grooves machined on one surface, with narrower ribs on the other; other boards may have a plain surface, which gives you another option. Although ribs or grooves can help to improve grip for walking, their main purpose is to channel away rainwater. This means that, when laying decking, you should build in a slight fall (about 1:100) depending on groove direction – it's important to make sure that water drains away from a building, not towards it. Board edges should also be chamfered or radiused to help drainage.



Deck board lengths start at 2.4m and can be as long as 5.4m. I made my platform 2.3m long, so I could cut the ends off any boards that had minor splits. If you're using uncut boards, though, don't assume they are supplied with square ends! They may look square, but can often be several degrees out. So, depending on your design, either saw the boards to length before screwing them into place, or cut them all in one go after fitting by nailing a batten across them as a guide and using a circular saw or jigsaw to cut them to size. Sawing the boards after fixing is the best way to guarantee a straight edge if you're laying decking in a diagonal pattern.

For basic decking you just need a simple framework of bearers or joists to support the boards. I used 75 x 50mm CLS timber as I'd several lengths left over from another project, but any substantial wood will do. If it's not already pressure treated, however, it's essential to coat this framework with preservative, especially on its sawn ends. Butt joints are quite adequate for assembling the joists, screwing through the longer pieces into the shorter cross joists. Remember, though, to drill pilot holes when using long 5mm screws, unless they're purpose-made decking screws, which don't need pilot holes and will bite securely into the timber without splitting it. Do ensure, though, that your fixings have an anti-corrosion coating.



STEP 1. First clear the ground where the decking will be sited, using weedkiller if necessary



STEP 2. Check the ground for bumps and hollows, using a timber straightedge with a spirit level



STEP 3. Flatten the area with a spade or shovel, though this does not have to be absolutely perfect



STEP 4. Once the soil is level, lay down heavy landscape fabric to prevent weeds coming through



STEP 5. Mark out the positions of butt joints on the framework. Ideally, joists should be no more than 500mm apart



STEP 6. The next step is to cut all the short joists to exactly the same length, either with a mitre saw or by hand



STEP 7. Timber may be pressure treated, but brush preservative onto all sawn ends of joists



STEP 8. Cramp and screw through front and rear bearers into the cross joists, checking for square



STEP 9. Once the framework is complete, brush on exterior stain to give the timber maximum protection



STEP 10. Spread gravel across the fabric to provide a bed for the frame and to soak up moisture



STEP 11. Lay the framework on top of the gravel and make sure it beds down reasonably firmly



STEP 12. Check for level (front to back) and for sufficient fall across its length. Rearrange the gravel to increase height



STEP 13. You can then screw the first board to the frame, keeping the leading edge flush if facing it with a vertical board later



STEP 14. Boards should be fitted with expansion gaps of about 5mm; screws make ideal spacers



STEP 15. If you need to butt board ends together, stagger the joints across the bearers



STEP 16. Screw a vertical board to the front; the decking can overhang this or butt against it



STEP 17. Increase the lifespan of boards by treating them with two or three coats of a suitable decking stain or oil



STEP 18. Deck boards are usually machined on both sides, giving the option of a grooved or ribbed finish



STEP 19. If you decide to fix boards diagonally, make sure you adapt the joist layout for adequate support



STEP 20. A work area outside the workshop that can also be used for soaking up the sun

USEFUL KIT/PRODUCT

BATAVIA MAXXSHARP SHARPENER

A cordless power tool designed for sharpening edge tools is certainly an unusual concept. Described as a multi-sharpener, this device from Dutch manufacturer Batavia can either be hand-held or used freestanding, with four small rubber pads on the underside. Although designed primarily for putting an edge on knives and garden tools, I was keen to discover if the MaxxSharp could be used for chisels or plane irons.



The tool can either be hand-held or used freestanding, with four small rubber pads on the underside



Changing a belt is easy enough as the top roller is spring-loaded and can be swivelled sideways to ease fitting...



... this acts as a tracking device, with a thumbwheel beneath for adjustment



Contained within a plastic outer casing, sharpening is via a thin abrasive belt, rather like a narrow belt sander. The 12mm belt runs around three rollers, with various supports added to suit the blade. Changing a belt is easy enough as the top roller is spring-loaded and can be swivelled sideways to ease fitting. This acts as a tracking device, with a thumbwheel beneath for adjustment. Six fabric-backed abrasive belts are supplied, from 80 up to a super fine 10,000 grit.

Cordless sharpening

The MaxxSharp is a single-speed tool running at 14.5m per second. Its power switch is located under the grip and once activated the motor can be locked on if desired, which comes in handy when used freestanding. Operating from

a built-in Li-ion 7.2V battery (1.5Ah), charging is via a supplied mains adaptor. This plugs into the bottom of the grip, a red LED indicating that charge is underway. There's no indication of charge time in the instructions, though I timed it at about two hours.

Depending on the blade angle of the tool you wish to sharpen, there's a choice of two guides, which slide into place behind the belt. For kitchen knives or similar with 20° bevels an outer plastic guide is fitted that encloses the belt; this provides extra support as you draw the blade across the moving belt. For blades with serrated edges, 25° bevels or scissors (65°), an alternative guide is fitted, which gives better belt access when sharpening. This option is also used when restoring edges to axes or other outdoor tools.



The power switch is located under the grip



Charging is via a supplied mains adaptor, which plugs into the bottom of the grip



For blades with serrated edges, 25° bevels or scissors (65°), an alternative guide is fitted, which gives better belt access when sharpening



It quickly restored a Swiss army knife

Edge tools

The belt mechanism can be adjusted relative to the handle to any one of four positions for freehand sharpening. A spring-loaded catch means this can be done easily, and at the end of a session you can fold the tool up for storage.

As there's a 25° option I wondered how effective the Batavia would be for chisels and plane irons. Although the angle is correct for grinding these there's actually not enough support for the blade as you move it across the belt. So, unless you have a beaten up old chisel and no other way to re-grind it then the MaxxSharp is not the answer.

I tried the MaxxSharp on a small axe that was in desperate need of sharpening and it soon restored what was a pretty blunt tool. For knives it worked really well, quickly renewing some kitchen utensils plus a Swiss army knife. I found a 240 grit belt repaired an edge rapidly, with the finer grades leaving an excellent finish on knives.

Conclusion

Although it may be limited for woodwork use (unless you happen to be a green woodworker), the MaxxSharp is cheap enough. There's no storage case and instructions are rather confusing, though at least there's a two year warranty. Spare belts are available from Batavia.

THE GW VERDICT

- ▶ **RATING:** 3.5 out of 5
- ▶ **PRICE:** £39.99
- ▶ **WEB:** www.batavia.eu



I tried the MaxxSharp on a small axe and it soon restored what was previously a pretty blunt tool



Although the angle is correct for grinding these there's actually not enough support for the blade as you move it across the belt

USEFUL KIT/PRODUCT

UJK DIGITAL HEIGHT GAUGE

More often than not using a router successfully relies on getting accurate results, whether it's grooving, rebating, profiling, producing a joint or whatever. No matter if you're using a router hand-held or mounted in a table, it's important to set cutter height precisely before working through metres of expensive timber. You don't want to find you've cut too deeply, for example.

Using a steel rule to measure cutter projection is probably the most common method of checking, but this can be a hit or miss affair. Reading off increments of less than 1mm can be a struggle as we get older, let alone adjusting depth settings to match exactly. Of course, life becomes easier if you're doing repeat machining and already have a test piece to set tooling to.

Cast-iron construction

There are several gadgets available to help you set tooling height precisely. Cheaper ones may be plastic and some include a rule where you simply read off the required measurement. Fine, if you're not too worried about absolute precision, though more sophisticated versions feature a digital display so are easier to read.

This gauge from UJK is one of the sturdiest and is a cinch to use. Weighing 0.72kg, it's no lightweight tool. Made from cast-iron, the feet are machined flat so the device will stand without

extra support. With a gap of 54mm between these and maximum height under the gauge of 80mm, it's unlikely you're ever going to need greater capacity.

The vertically-mounted digital gauge is attached rigidly to the horseshoe body with four bolts. Made from steel, the rule has a graduated scale, which helps speed things up when you need an approximate setting. Sliding action is super smooth, with no play. The rule is locked with a small thumbscrew above the electronic display.

A sliding cover on the plastic casing reveals the battery compartment, the device operating from one LR44 cell – two batteries are supplied. On/off, zero and metric/imperial buttons are colour-coded and fairly prominent, and as you'd expect, the LCD display is easy enough to read.

Although this gauge is designed more for router and general machine set-up, it can also be used for checking rebate or mortise depths.

THE GW VERDICT

- ▶ **RATING:** 4.5 out of 5
- ▶ **PRICE:** £49.99
- ▶ **WEB:** www.axminster.co.uk



A probe can be screwed to the bottom of the rule specifically for extra deep mortises (up to 99mm), though this is an optional extra.

Conclusion

This tool could be seen as something of a luxury item, though a pretty good one at that. If precision machining is important to you, then it's worth a closer look. **GW**



Made from cast-iron, the feet are machined flat so the device will stand without extra support



The rule is locked with a small thumbscrew above the electronic display



A sliding cover on the plastic casing reveals the battery compartment, the device operating from one LR44 cell



As you'd expect, the LCD display is easy enough to read



The gauge is designed more for router...



... and general machine set-up...



... but can also be used for checking rebate or mortise depths

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Designed to accurately mortise lock cases every time, the DBB Mortiser is fast becoming the must-have tool not just for locksmiths but for carpenters, fitters and builders alike, cutting mortises for locks and faceplates accurately and quickly.

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The DBB Mortiser's carbide wood cutters are designed to increase cutting speeds by up to 50%, keeping their sharpness and producing a very clean cut. The addition of an optional plunging cutter and extended shaft allows quick installation of tubular latches, deadbolts and concealed door closers.

Particularly fast and accurate on doors from 30mm-55mm thick, the jig will save time and money by providing a quick and efficient alternative to the traditional hammer and chisel.

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ManVbowl



Les Thorne decides to do battle with a piece of brown burr oak and the end result is certainly striking, not to mention functional

I won't need to tell most of you that sometimes wood can be a bit of a pain. It will often frustrate you with its splitting and warping, often ruining your beautiful project. I have a large selection of what can be described as 'character wood', although I'm more inclined to call it 'problem timber'. If you're a relative beginner and you have pieces like these, put them to the back of the workshop and practise on an easier project before returning to something like this when you're more experienced.

I've had this particular piece of brown oak burr for a while and it came off our local golf course. I did make a project from the same tree a couple of years ago when it was easier to turn and still had some moisture in it, but now the oak has got much harder and will take some turning. I thought this was the perfect piece for trying out some of the new generation turning

tools on, which have been introduced to the market over the past few years. The majority of turning tools are made from M2 high speed steel, but these new gouges from Crown Hand

Tools are made from M42 HSS and have been cryogenically hardened, so should be ideal for working this hard, abrasive, curly-grained wood. **GW**



STEP 1. I'd normally mount a blank like this on the lathe and make natural- or live-edge bowls from it, but this burr doesn't lend itself to that type of bowl, so I first had to chainsaw a flat on the top



STEP 2. You can see the problem: it's hollow. The centre is full of all sorts of potential problems with bark inclusions and knots, so I used compressed air to get rid of anything loose



STEP 3. Fitting the faceplate proved to be a challenge as there's a limited area for the screws to go in. I just about managed to get enough purchase from the fixing, but I still had to keep an eye on it



STEP 4. The timber is going to be severely out-of-balance so I changed the belt on the lathe to a lower ratio. Even though I have variable-speed, I would get more torque on this setting



STEP 5. Here's the new gouge. I changed the factory grind to my own preferred one, which tends to have a more acute 45° angle as opposed to the 50° one supplied



STEP 6. Due to the dodgy fixing on the faceplate, I aimed to try and keep the tailstock support for as long as possible. When working on pieces such as this, always check to make sure the timber isn't fouling the toolrest before you switch on the lathe



STEP 7. There's going to be a lot of fresh air between the tool striking the wood, so ensure the tool is braced against your body. When using a pull cut, ensure to keep the tool handle down, as shown, to avoid too much scraping



STEP 8. This photo shows the amount of wood that is being cut with each revolution. If the bark becomes loose, it's better to remove it with the lathe stationary rather than it potentially flying across the workshop



STEP 9. By using this cut I am trying to find the maximum diameter of the piece. One of the benefits of this push cut is that I am standing to the left of the spinning wood, so therefore not in the firing line



STEP 10. When you get an odd piece like this, I think it's far better to keep everything simple. A fussy shape would probably be lost due to the voids and fissures that are going to end up in the finished piece



STEP 11. Using a pair of dividers, mark up the diameter of the chucking spigot. Here I was using my largest gripper-style jaws for the Axminster Evolution Chuck



STEP 12. Should an area like this be regarded as a fault or a feature? From a commercial point of view, it would be far better not to have a hole in the side, but it's natural and when it's cleaned up later in the process it should create an area of interest



STEP 13. Here I'm using the 13mm signature gouge to create an accurately cut spigot. It needs to be cut square so the jaws grip at their maximum efficiency. A parting tool would do the same job if you prefer to use that instead



STEP 14. The Ashley Iles' beading tool will cut very accurate and quick beads all the way up the outside of the bowl. The tool is used flute down on the toolrest and presented into the cut with a slight up and down wagging motion



STEP 15. To create the desired textured effect there is nothing better than a blow torch. It will not only clean up any rough bits left after using the beading tool, but will also create an interesting effect on the surface



STEP 16. A good quality brass liming brush held against the revolving wood will get rid of all the loose carbon on the surface. You could use a steel wire brush but it will be prone to creating scratches on the surface of the bowl



STEP 17. The surface has now gone like old leather. The blow torch will speed up the ageing process by removing the softer growth first. I like to think it looks like an old oak fence post



STEP 18. Now to ebonise the outside. I could use stain but would then run the risk of it penetrating the inside of the bowl, so instead I chose to use black lacquer, which will hopefully stay on the outside and not soak through



STEP 19. I really enjoy using coloured waxes to pick out the detail in the grain. I could have used verdigris, gold or silver, but decided to use liming wax, which although white gives off a pleasant bluey grey finish



STEP 20. Once you've wiped off the excess wax, remount the bowl in the chuck jaws. The top of the jaws must locate onto a flat on the bottom of the bowl, which will provide you with additional strength and accuracy



STEP 21. Now comes the hard part. The inside of the bowl proved to be a challenge. I put the toolrest across the front of the bowl and worked as close to the centre of the rest as possible, which allowed me to achieve maximum support



STEP 22. As I turned away the inside, bits of timber kept breaking off, and I then discovered a void inside the blank that wasn't visible from the outside. Luckily it was shallow enough that it could easily be turned away



STEP 23. The rim is turned using a push cut, and is taken down to the top of one of the beads. I like to put a curve onto the rim: either a convex or concave one depending on the effect I'm trying to achieve



STEP 24. Take the inside down in stages. You can change to using a larger bowl gouge as the cuts get further away from the toolrest. You can clearly see the hole spinning round, but the gouge won't fall through at this speed



STEP 25. Here's one of my favourite tools. It's quite normal to pick up a scraper at this point but I think the 60° gouge does a much better job of cleaning up the surface in the bottom



STEP 26. The short bevel on this gouge means it's very easy to rub the bevel and achieve a good quality cut. The flute of the tool is almost upright as you get to the centre of the bowl



STEP 27. The hole in the wall of the bowl looks a bit messy so I decided to carve away the edges to define the void a little better. A carbide burr in a drill will do the job quickly but you could use some small files if you prefer



STEP 28. I still didn't like the hole so I decided to emphasise it by ebonising the inside surface. I didn't have paint available so I used black spirit stain, which is much more difficult to control



STEP 29. When you sand the bowl it's imperative to present the power sanding pad to the work so there's a small gap at the top; this will stop the defects and the holes 'grabbing' the sanding pad



STEP 30. When sanding the inside, tuck the drill into the body and ensure the pad runs through the centre of the bowl. With coarse abrasives, such as 60 and 80 grit, you can ruin an interior shape with bad sanding



STEP 31. One of my favourite things in turning is applying the first coat of oil. You never know how pretty the grain is until you get that first coat on. I used lemon oil here as I like the matt finish it imparts



STEP 32. I couldn't use the vacuum chuck due to the holes in the piece, so I had to use a friction drive instead. The drum is protected using some thin packaging, so I didn't have to worry about it marking the inside of the bowl



STEP 33. The tailstock is brought up, which means you can remove the majority of the spigot by making small cuts with the spindle gouge. Remember not to take too much away as the bowl will fall off



STEP 34. Finish off the last part, first with a chisel, then use the 50mm sanding pad to smooth over the surface. Removing the spigot finishes off the bowl perfectly



STEP 35. All that's left to do is to sign the piece. You could use a pyrography machine to burn your signature in but I like to use a good quality permanent pen. Adding the species is a nice touch, but I rarely add the date



STEP 36. The completed burr oak bowl looks very striking and is a great exercise in turning 'problem' pieces of timber

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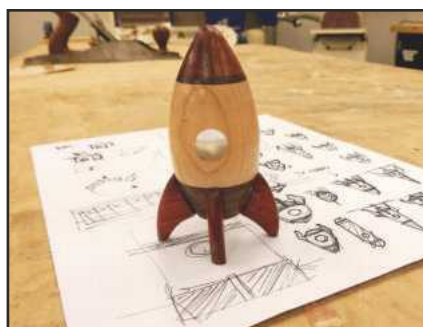
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EDWARD HOPKINS' HOME TRUTHS ➔ STOUT FURNITURE'S 'TAIAO TABLE'

ERRORISM

or how to fail safe

Knowledge of woodworking is accrued by trial and error. There is a certain amount you can learn from magazines and books. You can go on days, and courses. You could train, but the likelihood is that, like me, you simply make it up as you go along. The important bit is not the making-up but the going-along. You have to do it. Repeatedly. Often. Practice makes perfect. If you get within spitting distance of perfect, you can write a high price tag. Not many jobs allow you to start as your own tea-boy, and, without any major interpersonal issues, politics or ceilings of any sort, end up chair of your own board.

This, I presume, is why apprenticeships were so long. It's not that there's much to know, or learn about woodworking: it's that the whole process necessarily takes time. You don't, hopefully, make mistakes every day. But with every error, you learn a little more about how to use that tool or machine, and how to treat that piece of wood. There is an ease about a proficient woodworker that everyone admires: "He [she] makes it look so easy!" is a common cry. This is when you've made sufficient mistakes to learn almost everything about your speciality. You know what you're doing. You're relaxed.

Error is almost good

There are levels of error, ranging from structural and function inadequacy, through aesthetic failure, ugly dimensioning, clumpy handling, bad joints, poor finish, glitches, dints, and things so tiny that only you know they're there. Perhaps no-one in the history of the world will ever notice them. In the grand scheme of things, they are utterly trivial. Except to you. But to be a woodworker at ease, you must not beat yourself up for your errors. Notice why they happened. Was it not the right tool for the job? Was it not sharp or square? Were you tired? Were you impatient, lazy, careless? Did you feel it in your bones that you were about to do something wrong, but hey! You're going to do it anyway because you might get away with it! Whatever it is, acknowledge it. Then go and have a cup of tea. That's all. Like an automatic upgrade on a computer program, your woodwork files are amended, and you are one step nearer having comprehensive, encyclopaedic knowledge. Error is almost good.

Silver lining

Most of us are saved from one unfortunate side-effect of error: embarrassment. We work alone, so no-one sees what a dork

we've just been. You'll still need the tea, but when you've gathered your senses and taken a few breaths, you're back to woodwork with now just a different job in hand: how to get out of this mess. You might adjust the design. It has happened countless times to me that a mistake I've made has generated a solution superior to my original plan. It's a bit disconcerting really. It's as if an angel is sitting on my shoulder, batting me on the ear every time I take a wrong turn. Or you might stick to your guns and remake a component. If your workshop is still set up for such production and the remake is relatively easy, I suggest you time yourself. You might be surprised at how quickly the new piece is made, and the wrong righted. You might have spent more effort feeling bad about your mistake than it took to correct it. And though you naturally don't want to make a single mistake more than absolutely necessary, there is a pleasure in pulling out of a dive. **GW**

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