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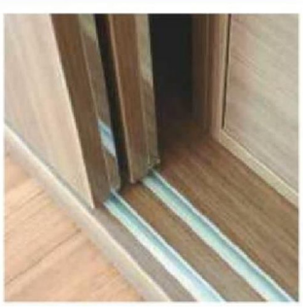

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Welcome

Despite a rather strange start to the year – facing another national lockdown and a second, more potent, strain of COVID-19 – here at *The Woodworker* we are choosing to face 2021 with a positive attitude and embrace all the wonderful things happening in our community. With this in mind, we find it heartening to focus on that which we are grateful for and have perhaps taken for granted in the past – freely being able to spend time with loved ones is the first thing that comes to mind. The fact is, we are all in this together and for that reason, we must support one another where we can, be compassionate, and see this as an opportunity to learn new skills, reach out to others, and share knowledge in this wonderful space.

Get social

Social media has been a real beacon of hope and support for many and lots of people are making the most of sites, such as Instagram and Facebook, which offer them the space to engage with like-minded people, share photos of their work and show other woodworkers what they are making. Yes, it may not be possible to currently attend shows, demonstrations or club meetings, but being able to connect and engage with others on a digital level is a great substitute. Similarly, many professionals in the field – woodturner and *WW* author Andrew Hall, for example – have had to adapt to this new way of working by utilising platforms such as Zoom to host paid-for demos, which are attended 'digitally' by people all around the world. Being able to monetise these avenues ensures that people like Andrew are still able to make a living from their craft by tapping into and accessing key audiences.

Hattie Speed joins judging panel

Another example of having to respond to the restrictions imposed by the pandemic is the re-branding of the Alan Peters Furniture Award, which is now an online award event plus a virtual exhibition. As such, the name had to change to include the 'online' element and many discussions have taken place with our sponsors as we brainstormed how best to navigate this. Moving online, however, has actually been a blessing in terms of allowing us to reach a wider audience, while at the same time opening up the judging panel to include furniture maker Hattie Speed, who graced the cover of our June 2020 issue. Not only an award-winning designer-maker, Hattie also set up 'This Girl Makes' – **@thisgirlmakes** – a community of designers and makers offering events and DIY kits that celebrate and promote diversity in craft and design. She is the perfect addition to the expert panel and is excited to be part of this prestigious, annual award, which celebrates the legacy of Alan Peters OBE – one of Britain's most prominent furniture designer-makers of the late 20th century. With regards to the designing and making of furniture, Hattie says that, when it comes to critiquing the pieces entered, she will be particularly interested in the concept behind the work as well as each of the individual stories.

Award ceremony & virtual exhibition

With the entry deadline only a few weeks away now (28 February), time really is running out. We're hoping that entrants will be putting the finishing touches to their pieces, photographing them according to the guidelines, and filling out the application form, which can be found here: **www.jeremybroun.co.uk/alan_peters_award.htm**. At the time of writing, the award ceremony is set to be streamed on 16 April via the above website, but we will confirm this, in addition to the time and web link, as soon as possible via **www.getwoodworking.com** and on our social media pages. It will be followed by a virtual exhibition of winners' work, a showcase of which, plus judges' comments, will then appear in the May issue. In the meantime, we hope you enjoy what we have in store for you this month, and remember to stay connected to this wonderful community.

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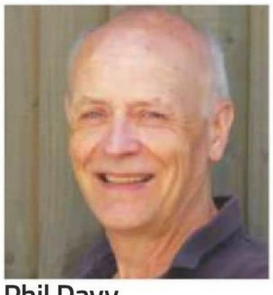

Phil Davy
Technical & Consultant Editor

63 PUZZLE CABINET MASTER

For award-winning furniture maker Craig Thibodeau refinement and complexity are key, from creating exquisite marquetry to incorporating complex automated mechanisms into bespoke pieces, he is always striving to reach new heights

The Woodworker & Good woodworking
MARCH 2021

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New **TREND** abrasives range

Trend's new range of innovative high performance abrasives are designed to meet every aspect of sanding, from fast, aggressive stock removal through to fine finishes across multiple materials including wood, metal, paint and plaster.

If the abrasive you use isn't up to scratch, you can bet your life the scratches it leaves will stick out like a sore thumb once a finish is applied and you'll be spending more time sanding it back off.

Trend step up to meet the challenges of high quality sanding head on with premium performance, high quality grit ranges of durable Aluminium Oxide, Self Sharpening Zirconium, and Ultra-Resilient Rinse and Re-use Silicon Carbide. Coupled with benefits that include flexible film backers, open coat grit format and two layers of resin to bond each grain firmly to the backer, each benefit ensures Trend abrasives easily outperform other conventional abrasives on the market to make sanding quick, easy and frustration-free.

Longer lifespan & performance

Unlike closed coat electrostatic abrasives where the grits are packed tightly together and prone to clogging and excessive heat build up, Trend's open coating leaves free space between each grain of grit to allow it to clear debris more readily, achieve faster, uniform cutting and reduce heat build up for a longer lifespan and performance.

Trend use flexible film backers that are designed to cope with sanding on both curved and flat surfaces without cracking or losing grit.

The Mesh abrasives have the added bonus of being rinsable; a quick swill under running water removes any build-up of dust and they're raring to go once again.

Covering three distinct grit types of Aluminium Oxide with a 3X longer lifespan over conventional abrasives, 4X the lifespan Zirconium and 5X longer lifespan Silicon Carbide Mesh, the range allows you to tailor your needs to suit the job in hand.

Selection is a breeze with informative icon-based packaging that points you in the right direction for fast, easy, cost effective options to suit your needs.

General day-to-day medium to fine sanding for finishing a workpiece, sanding back fillers or keying and denibbing finishes? Try durable open coated Aluminium Oxide in 120, 180 and 240 grit. Large flat areas in need of levelling, stripping back or fast shaping? You need Aluminium Oxide belts in 40, 60, 80 and 120 options. Heavy- duty stock removal or stripping back heavy finishes? Open coated 40, 60 and 80 grit Zirconium has the harder, coarser grits that take command in these areas. For the fastest, most durable solution for preparation, fine finishing, sanding plaster and removal of old finishes, Trend Mesh in 80, 120, 150 and 240 grit has the ability to pull dust away with ultra-efficiency in any task and revels in softer clogging materials like plaster and resinous softwoods, ticking boxes across every application.

Fast application & removal

Covering delta, detail, ¼ sheet, ⅓rd sheet and ½ sheet sanders plus 125mm 150mm random orbit and 225mm drywall sanders, both the Aluminium and Zirconium abrasives feature hook-and-loop backers for fast application and removal with punch patterns that conform to standard base layouts for efficient dust extraction.

The random orbit options also have a unique Universal pattern with elongated holes to match models with slightly different base hole configurations, maximising compatibility across all manufacturing brands. The hook-and-loop mesh pattern has no issues of extraction hole alignment for fast application to any sander base and has enhanced extraction benefits through the entire surface area for superbly efficient sanding and dust control.

Three belt sizes covering commonly available machines complete the range: 100 × 610mm, 75 × 533mm and 75 × 457mm, each option available in packs of three.

Hook and Loop Aluminium Oxide and Zirconium Oxide are available in packs of 10 for general use and Hook and Loop Mesh available in packs of five. All three ranges feature 50-piece bulk pack options for 125mm and 150mm random orbit machines in the following grits and prices:

- **125mm R/O Aluminium Oxide 120/180/240 grit** – 50-piece pack – £32
- **150mm R/O Aluminium Oxide 120/180/240 grit** – 50-piece pack – £46.59
- **125mm R/O Zirconium 80 grit** – 50-piece pack – £32

- **150mm R/O Zirconium 80 grit** – 50-piece pack – £46.59
- **125mm R/O Mesh 80/120/180/240 grit** – 50-piece pack – £45.99
- **150mm R/O Mesh 80/120/180/240 grit** – 50-piece pack – £56.99

Aluminium Oxide 120/180/240 grit – 10-pack
- **125mm random orbit** – £7.99
- **150mm random orbit** – £9.99
- **Detail sander** – £8.99
- **Delta sander** – £5
- **⅓rd sheet** – £10.99
- **½ sheet** – £13.99
- **225mm wall sander** – £24.99

Zirconium 40/60/80 grit – 10-pack
- **125mm random orbit** – £7.99
- **150mm random orbit** – £9.99
- **Detail sander** – £8.99
- **Delta sander** – £5
- **⅓rd sheet** – £10.99
- **½ sheet** – £13.99
- **225mm wall sander** – £24.99

Mesh 80/120/150/240 – 5-pack
- **125mm random orbit** – £6.99
- **150mm random orbit** – £7.99
- **Delta sander** – £4.49
- **Detail sander** – £6.99
- **¼ sheet** – £6.99
- **⅓rd sheet** – £7.99
- **½ sheet** – £7.99
- **225mm wall sander** – £14.99

Sanding belts – 3 pack
- **100 × 610mm belt** – £8.99
- **75 × 533 belt** – £5.99
- **75 × 457mm belt** – £5.49

To find out more about the new range of abrasives from Trend, see **www.trend-uk.com**.

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THE W EXHIBITION & ELEMENTS announces new February 2022 dates

Organisers of The W Exhibition & Elements have announced new dates for the event, which will return to the NEC, Birmingham from 6–9 February 2022. The postponement of the UK's flagship exhibition for the furniture manufacturing and joinery industries follows a period of unprecedented uncertainty due to the ongoing global impact of COVID-19.

Organisers have taken proactive steps to move The W Exhibition from September 2021 to February 2022, creating a safer timeline for the industry to work towards.

The W Exhibition Managing Director, Nickie West, said: "We have been in constant contact with the NEC throughout the pandemic to ensure that we deliver a safe and successful event when The W Exhibition returns. It's our priority to deliver the best possible ROI for our exhibitors, and the best experience for our visitors.

"When Ligna announced that it would be postponing its May event to September, and in fact directly clashing with The W Exhibition, we immediately entered a consultation process with each of our stakeholders to develop a new timeline that would preserve the success of the show, both now and in the future. The new Winter 2022 timeline will allow us to do this."

Following its February 2022 outing, The W Exhibition will return to the NEC in September 2023 before continuing to follow a biennial frequency, after Ligna, thereafter.

Nickie added: "After an extended period of restricted face-to-face business, we hope that the entire industry will share in our enthusiasm at getting back to doing what we do best. The W Exhibition & Elements is the UK's flagship event for the joinery and furniture making industry and we are excited to showcase all of the latest products and machinery when we return in February 2022.

"I would like to take this opportunity to thank each and every one of our stakeholders for being so supportive and understanding. From our exhibitors and visitors through to the WMSA and our industry press – we really do appreciate your support and patience."

The W Exhibition has over 40 years of heritage, and continues to grow. It will return to the NEC for its biennial four-day showcase from 6–9 February 2022. The show brings together some of the world's leading suppliers of woodworking machinery, materials and tooling.

For more information, see **www.wexhibition.co.uk**.

New TSC 55 K & TS 55 F plunge-cut saws from FESTOOL

Festool has provided the best plunge-cut saws on the market for many years. Joiners/carpenters, kitchen fitters, exhibition stand fitters, interior finishers, as well as parquet and floor layers, drywallers and painters, can look forward to new models being available from April 2021. The new saws have been designed to be twice as fast with the TSC 55 K also featuring unique KickbackStop.

TSC 55 K cordless plunge-cut saw with KickbackStop

Dangerous kickbacks will be a thing of the past thanks to the new TSC 55 K cordless plunge-cut saw from Festool. Intelligent KickbackStop technology ensures that the saw blade stops in the blink of an eye. This prevents backwards motion of the saw, which not only protects the workpiece but also keeps the risk of injury to a minimum. In the future, thanks to Festool's new saw blade generation and concentrated torque provided by the new TSC 55 K, users can work up to twice as fast with an extended battery range. The result is maximum cutting performance combined with perfect cutting quality.

Benefitting from a combination of the latest generation brushless EC-TEC motor technology and a dual battery system (2 × 18V), the new TSC performs just like a mains-powered tool, while providing full mobility. The latest saw blade generation also ensures both fast work progress and precise cutting quality.

The new corded TS 55 F – designed to be twice as fast

Festool plunge-cut saws have always stood out with their absolute precision cuts, maximum power and extreme durability. The reliability and cutting quality remain unchanged, but the working speed is unprecedented, and from now on, the new TS 55 F will be able to saw up to twice as fast. The new saw blades, which are perfectly designed for Festool's range of plunge-cut saws, feature a reduced cutting width, new teeth shapes and new carbide teeth; this ensures that a consistent and high degree of cutting quality is maintained as well as an extended service life. The saw system is rounded off with smart system accessories, such as guide rails, angle stops, a saw table and tried-and-tested details, including a splinter guard and dust extraction system that are perfectly suited to the tool. These new plunge-cut saws deliver excellent work results and a top-class sawing system – for every challenge.

An unbeatable pairing: TSC 55 cordless plunge-cut saw & the new TPC percussion drill

The TSC 55 K and the equally new TPC cordless percussion drill are an unbeatable pairing in any work situation – whether used for sawing or screwdriving. The new plunge-cut saws and saw blades will be available from specialist retailers from April 2021 – see **www.festool.co.uk** for further information.

triton
MASTERS OF WOOD

MINI PLANER
MASSIVE OUTPUT

450W
Mini Planer 60mm

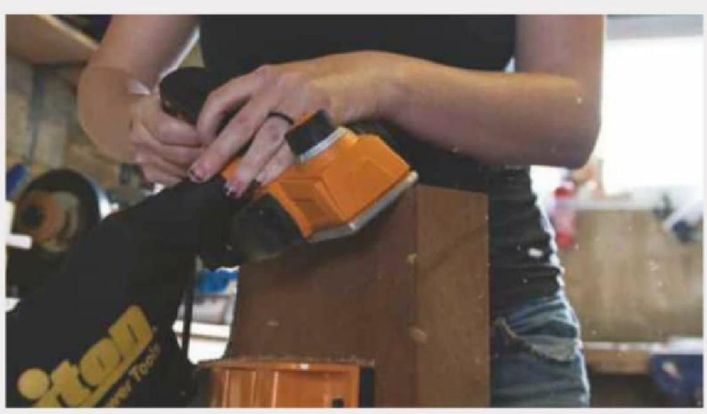
TMNPL

Lightweight, easy to handle, and includes all the features of a conventional-sized power planer.

Utilising dual 60mm reversible blades, the TMNPL offers the perfect combination of power and balance with excellent grip for safe, single-handed operation, while cutting at 32,000 cuts per minute.

The adjustable front shoe can be stepped to planing depths up to 1.5mm, and the rear shoe features a rear parking rest to prevent blade damage when not in use.

Rounding off this full-featured planer are two V-grooves, which are ideal for edge-planing sharp corners and chamfering edges.



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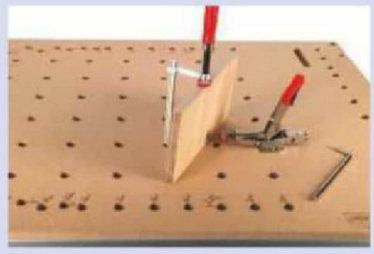
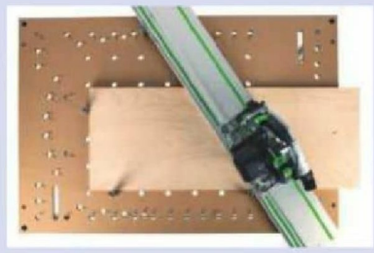
SAUTER Vario-Bench multi-functional table with intelligent & patented sawing function

With sauter's Vario-Bench multifunctional table system, the woodworking workshop has an intelligent worktop with a wide range of applications and the possibility of sawing at any angle, accurate to the degree.

A multi-functional workbench for clamping, gluing, sawing and routing should be a part of any woodworking workshop. The Vario-Bench system has been available exclusively from the Sautershop in Germany for a few years now and more and more enthusiastic woodworkers are beginning to get a taste for this intelligent solution. With the opening of their English shop, the company is finally able to offer this innovative and practical MFT to their English speaking customers. The heart of the Vario-Bench multi-functional table system is the patented MDF perforated plate, which offers a real innovation, in addition to the standard perforated grid of Ø20mm. The extra holes with the clearly lasered angles allow guide rails to be positioned at defined angles in relation to a workpiece and then processed with hand tools guided on the guide rail. In order to set the desired processing angle, the bench dogs are inserted into the correspondingly labelled holes of the Vario-Bench worktop, then both workpiece and guide rail are placed against them. The guide rail and workpiece can be rotated against each other allowing adjustments in 1° increments.

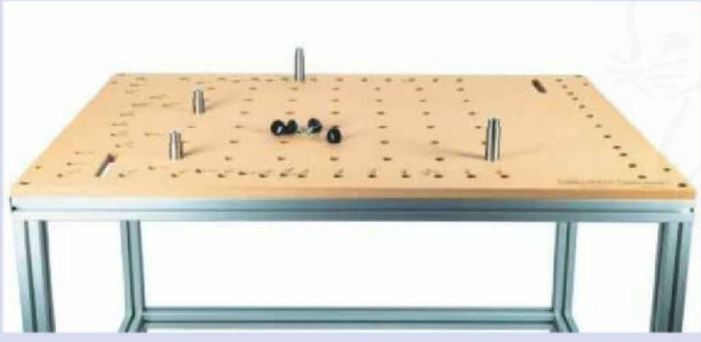


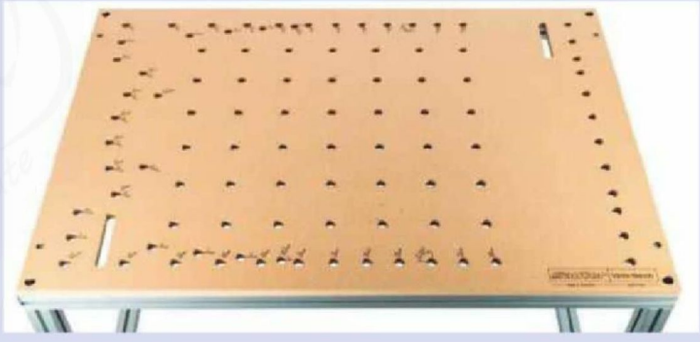


In order to achieve maximum accuracy, the bench pins and holes in the Vario-Bench worktop are manufactured with the highest precision and are optimally matched to each other in terms of diameter. In standard use the bench pins are inserted into the bench end with a hole facing up. However, as the Vario-Bench worktop is made of MDF, in humid conditions it can slightly swell. In this case, if the bench pins can no longer be easily fitted into the Vario-Bench worktop, simply turn them over. They have been designed with a slightly smaller diameter on one side, so as to maintain the perfect fit and maximum accuracy.

The Vario-Bench comes in two different sizes: the first fits into the Festool MFT; the second (1,200 × 800mm) can be used with the optional base frame, made from profiled aluminium. This system allows the multi-functionality to be fully exploited. Not only on the worktop but also on the table frame, a range of accessories, such as clamps and sliding blocks, can be attached to make the Vario-Bench a complete all-rounder.

The multi-function table is a time saving, easy to use workshop helper. Robust and 100% precision built in Germany, see **www.sautershop.com/multifunctional-tables/vario-bench-multifunctional-table**.





The best hearing protection headphones for your workshop

Whether you're welding or running a mitre saw, planer or jointer, one thing's for sure – workshop tools are loud. As the new standard in workshop hearing protection, ISOtunes' new products maintain its SafeMax Technology while introducing enhancements in design and functionality. Unlike most headphones, all ISOtunes products limit the volume to 85 decibels (dB) and offer a noise reduction rating (NRR) between 22 and 29dB, making them compliant with OSHA and NIOSH regulations.

ISOtunes XTRA 2.0

ISOtunes XTRA 2.0 (£79.99) provides an all-over upgrade to ISOtunes' best-selling neckband-style line with the same classic magnetic earbuds customers love. With an NRR of 27dB, XTRA 2.0 is fully water, dust and sweatproof and comes with an increased battery life of up to 11+ hours, making it perfect for long days in the workshop. With a redesigned controller, XTRA 2.0 is ISOtunes' easiest-to-use product for staying connected and protected while you work.

ISOtunes LINK

ISOtunes LINK (£79.99) is the company's first Bluetooth earmuff, perfect for the woodworker who prefers over-ear hearing protection but refuses to compromise their listening experience. Lightweight and comfortable with a 14+ hour battery life, LINK safely reduces damaging noise by 24dB. Its noise-isolating microphone also blocks out steady-state noise for clear calls in loud environments.

To find out more about both of these great products, see **www.isotunes.co.uk**.

Re-launch of **Europe's largest woodturning competitions** – call for entries

The Worshipful Company of Turners' Competitions, which were postponed from October 2020, will now go ahead at Carpenters' Hall in the City of London on 12 October 2021. Emerging from over a year of pandemic and lockdowns, this event aims to be a beacon of hope for woodturners and woodturning enthusiasts alike.

With categories for all levels of interest, skill and turning speciality, including plenty for young turners in schools and colleges, it is the largest of its kind in Europe with entries from the UK and abroad.

All entries registered with the Turners' Company by Monday 4 October and received by Monday 11 October will be exhibited as part of Wizardry in Wood, the Company's major exhibition attracting over 2,000 visitors, which will take place from 13–16 October. Competition entries can be offered for sale as part of the 'Love View Buy' theme.

Held every four years, up until the 2020 pandemic, Wizardry in Wood was launched by the Turners' Company in 2004 on the 400th anniversary of the granting of the Company's Royal Charter in 1604.

Melissa Scott, Master of the Turners' Company, said: "The Turners' Company Competitions are now firmly embedded in the woodturning community's calendar, and we're excited to provide a platform that reveals the very best in contemporary turning as well as an opportunity for those new to the craft. Simply by entering, their work will be seen by woodturners, art lovers and the curious public, who will be amazed at our time-honoured craft."

How to enter the Competitions

The Competitions are run in association with the AWBG (Association of Woodturners of Great Britain), the Association of Pole-Lathe Turners and Green Woodworkers, and the Society of Ornamental Turners. Full details can be found here: **www.turnersco.com/turning/turning-competitions-2021/**. There are 13 categories, including those requiring special turning techniques, such as combining two species of wood, or special themes such as creating a piece depicting 'Music'. There are categories for young turners, and several where entrants can just enter a piece of their choosing. The top prizes are worth over £1,000, along with sponsors' prizes of tools.

Wizardry in Wood 2021

Some of the UK's leading turners will be exhibiting, including Sally Burnett, Margaret Garrard, Mick Hanbury, Louise Hibbert, Simon Hope, Phil Irons, Tobias Kaye, Richard Kennedy, Carlyn Lindsay, Stuart Mortimer, Gary Rance, Joey Richardson, Mark Sanger and our very own Les Thorne.

In addition, there will be exhibitions of 400 years of turning in music, turning in magic and pre-historic turning, as well as curated talks on specialist turning subjects. There will be demonstrations of plain, ornamental and pole-lathe turning, and all entries to the Company's 2021 Competitions will be on display. The AWGB will be showing its travelling exhibition, and the Register of Professional Turners' (RPT) stand will include a retrospective of the work of Master Turner, Ray Key.

To find out more about Wizardry in Wood, see **www.turnersco.com/turning/wiw/**.

What's new from

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

D&M TOOLS

FESTOOL SYSTAINER 3 TOOLBOXES

MANUFACTURER: Festool
D&M GUIDE PRICE: From £34.95 (inc VAT) – see our website

The latest addition to the Festool Systainer 3 range is the open Systainer for instant access. Open at the top, reduced to the bare essentials and designed for quick access to hand tools, consumables and accessories. Perfectly matched to the Systainer system, Systainer³ ToolBoxes can be connected to each other, as well as to all Systainer generations and mobile dust extractors.

There is a spacious compartment and foldable carrying handle for quick access to tools, which benefits from a robust design, made from high-quality plastic, and a load capacity of up to 20kg. It can connect to the Systainer system thanks to T-LOC in standard format with a proven base area, for practical transportation of hand tools, consumable materials and accessories. Available in four different sizes: M 137, L 137, M 237 and L 237.

MIRKA® DEROS 650CV & MIRKA® DEOS 663CV KIT

MANUFACTURER: Mirka®
D&M GUIDE PRICE: £679.95 (inc VAT)

This new sander twin-pack from Mirka® comprises the DEROS 650CV random orbital sander and the DEOS 663CV Delta sander, supplied in a systainer case. Both models feature an integrated vibration sensor and are equipped with Bluetooth low energy technology. Download the myMirka app from the App Store or Google Play to monitor vibration levels. The DEROS 650CV has 5.0mm oscillation and a 150mm pad. The high efficiency brushless motor has plenty of power to get the job done quickly. With performance comparable to a conventional 500W electric machine, it maintains constant speed even under heavy load.

The DEOS 663CV benefits from a compact design and very low profile at only 10cm high, which ensures maximum manoeuvrability and excellent balance. Precise and efficient sanding at any angle makes the Mirka® DEOS Delta ideal for the sanding of corners, profiles, vertical and hard-to-reach areas. The sander is small and light, thanks to its brushless motor and advanced engineering. Combined with a comfortable and ergonomic grip, this allows you to sand for long periods without experiencing fatigue.

MIRKA

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

D&M TOOLS

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HAND, POWER TOOLS & MACHINERY SPECIALIST

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Have you visited us at our Twickenham Superstore?

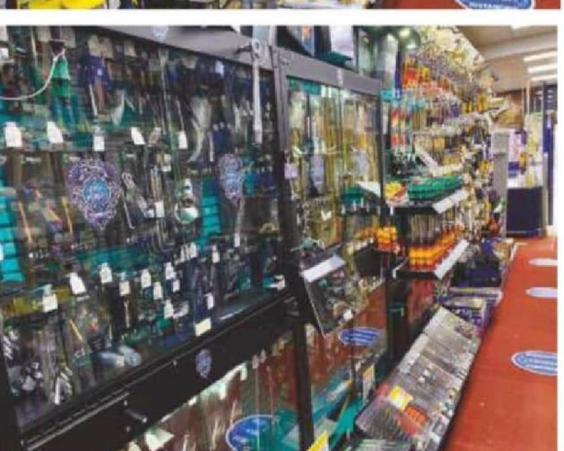
With over 600 power tools on display from all the leading manufacturers, as well as an extensive range of hand tools and accessories our Superstore is well worth a visit!

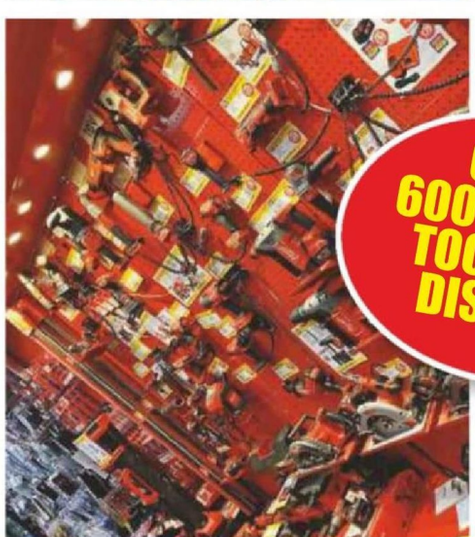
We also have an area dedicated to a wide selection of woodworking machinery by leading manufacturers including Record Power and Scheppach, which is available to view on request.

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

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

EXTENSIVE RANGE OF HAND TOOLS





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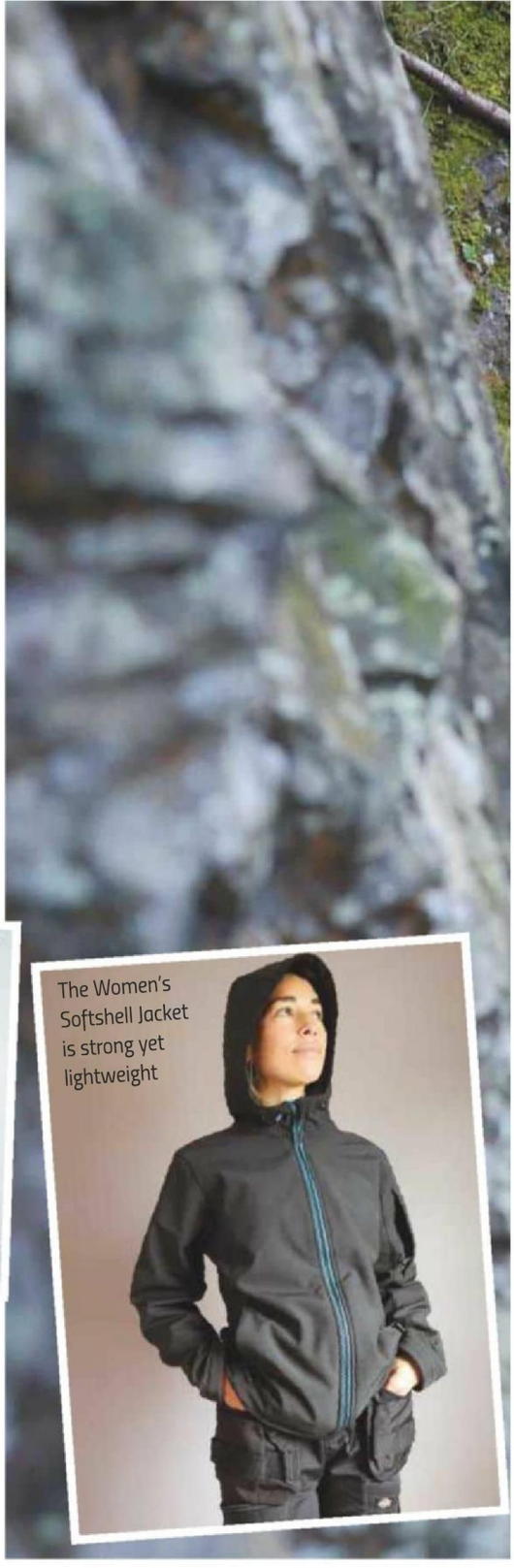
DICKIES PERFORMANCE WORKWEAR FOR WOMEN

Furniture maker **Fernanda Nuñez** takes a look at **Dickies'** new functional, durable and affordable workwear range for women

Dickies has been around for quite some time now (since 1922 to be precise). A sense of durability and unmatched value is what defines the brand, making it trusted among hardworking men and women throughout the years. I've had my eyes on their workwear for a couple of years now, but I have to admit that I've been resisting the neutrality of a stereotypical working look. I always thought workwear was rather stiff, uncomfortable and ill-fitting, and I find it really hard to compromise on style, even at work. On this occasion, however, I had the opportunity to test three items in the new Performance Workwear collection for women, and was thrilled to discover that all my needs had been met! These garments are so much more comfortable than I expected, while also being highly technical, and to my surprise, uncompromisingly stylish.



Dickies FLEX Women's Universal Trousers (SPF003)

My first impression of these trousers is their excellent quality. The fabric feels soft to the touch, yet durable and the garment is well made. They have a slight shimmer, which I like as it makes them smarter. They fit nicely (I expected them to be a bit baggy but none of that) and as the material is thick yet stretchy (a blend of rich cotton and polyester) they mould to your shape allowing for a greater range and ease of movement. The high rise style provides extra freedom and comfort and is easily the most flattering, defining the waist and making your legs look longer, which is always a bonus!

On a more technical level, these trousers feature multiple pockets, including one for a ruler as well as a practical cargo pocket, which sits nice and close to the body. They also feature some very useful bottom loading knee pad pockets. I particularly like the detachable ones as you can zip them off, so they can be worn on and off the job as needed.

Made using FLEX and CORDURA® fabric these trousers are made stronger to last longer and as a result, need to be replaced less often. For me, durability is important when it comes to contributing to a more sustainable world, so for these reasons, out of all the items I tested, these trousers are my absolute favourites.

The FLEX Women's Universal Trousers receive the full five stars from Fernanda

SPECIFICATION

- CORDURA® knee patches with knee pad pockets
- CORDURA® hem guard for durability
- Contoured Flex waistband
- Detachable holster pocket
- Hammer loop and ruler pocket
- Large centre back belt loop for comfort fit
- UV Certified – 40+
- Better Cotton Initiative

Typical price: £60

Perfect for workshop use, the trousers are highly technical, yet stylish

THE VERDICT

PROS

- Excellent quality; superb fit; comfortable; highly technical; stylish

CONS

- None

RATING: 5 out of **5**

The Women's Softshell Jacket is strong yet lightweight

Dickies Women's Softshell Jacket (SJF002)

A very technical garment, this jacket is strong yet lightweight, highly water repellent and the outer fabric is really easy to clean and de-dust. What makes this jacket great is the fact it is constructed in three layers: an outer softshell, the inside soft fleece, and a middle PU lamination. All together these layers prevent rain penetration and block out the wind. What's more, the hood features adjustable toggles, which fully protects you from hazardous weather. I like the fact that the adjustable elastics are neatly housed inside the jacket, which makes for a clean and relaxed design.

Wear it underneath the Women's Performance Jacket when working outdoors in the coldest months of winter. The slightly

oversized fit means you can also wear a chunky sweater underneath, although I found that a light Merino base layer was more than sufficient, as the inside layer of soft fleece works wonders at keeping you warm. All in all, a fantastic workshop jacket.

SPECIFICATION

- Enhanced wind protection with bonded fleece lining
- Water repellent finish
- Abrasion resistant elbow patches with ergonomic shaping
- Adjustable three-piece contoured hood with adjusters for weather protection
- Reflective trims
- Hidden zipper pockets
- Drop-tail hem for added coverage

Typical price: £50

THE VERDICT

PROS

- Light; practical; strong; warm; easy to clean

CONS

- A detachable hood for workshop use would ensure sawdust wouldn't gather where it wasn't wanted

RATING: 4.5 out of **5**

The jacket is constructed in three layers

Dickies Women's Performance Jacket (SJF001)

As the trees turn bare and the peaks get covered in snow here in the Lake District, it's time for a serious winter jacket. I tried this one on and walked straight out of my door and up the mountain towards the snow, on an icy cold day. My first thought was that it fits well, if only slightly on the large side. However, as I dug into the pockets, I was surprised to find an adjustable waist band, which allowed me to achieve a closer fit – so clever! The jacket instantly mimics your shape, becoming tighter, warmer, more comfortable and smarter.

As I approached the top and the wind blew piercingly cold, I realised how well insulated this jacket is. The three-piece contoured hood can be adjusted to completely close, which offers full protection from the wind. The internal storm cuffs make a big difference and keep the heat trapped inside. One thing I noticed as I quickly zipped up before I literally froze was how easy and reliable the mechanism is. Even with my big winter gloves on, I could zip it up with ease. In the midst of winter and at the very top of a snowy mountain, I felt incredibly toasty. Bear in mind that these are the words of a chilly mortal from a hot country who is always, always cold in this part of the world, so you can take my word for it!

Finally, I think it's worth mentioning that the front pockets are deep and easy to get things in and out of, and a neat side pocket on the upper left arm provides storage for a mobile phone. All in all, a very well insulated, highly technical, comfortable and perfectly urban jacket.

The Women's Performance Jacket is the perfect winter garment for the female woodworker

A highly technical, comfortable and perfectly urban jacket

SPECIFICATION

- Waterproof fabric
- Breathable fabric
- Seam-sealed with insulation
- Abrasion resistant elbow patches with ergonomic shaping
- Adjustable three-piece contoured hood
- Full length storm flap with hook & loop closures
- Internal storm cuffs with thumbhole
- Reflective trims
- Drop-tail hem
- Adjustable waist accessible from pockets

Typical price: £75

THE VERDICT

PROS

- Great quality; very warm; comfortable and smart

CONS

- The cuffs could be slightly longer for a more comfortable thumb position

RATING: 4.5 out of **5**

Conclusion

One of the first things I noticed across the range of products was the selection of materials used and the quality. A blend of synthetic and natural fibres provide great comfort through softness, elasticity, strength, durability and easy care. Functionality is not overlooked either as all of the garments tested are highly technical, which makes life in and out the workshop a lot easier.

I must admit that my preconceptions of workwear as stiff, uncomfortable and ill-fitting have crumbled and I can see that Dickies is a serious contender. Lightweight yet tough, comfortable and very stylish, Dickies' new range of performance workwear for women can be worn with grace and aplomb, on and off the job.

Lastly, something that should be taken into consideration and a little food for thought: although there are important issues within the performance and outdoor apparel industry in general, such as the use of Nylon, which is non-biodegradable and inherently unsustainable, Dickies is a company that shows an initiative towards a positive change. In this instance, the company partners with The Better Cotton Initiative (BCI), promoting enhanced standards and practices in cotton farming (such as reducing the use of fertilisers) across 21 countries, which makes these products even better from a sustainability and carbon footprint perspective – excellent job!

FURTHER INFORMATION

To see the full range of products tested here, visit **www.dickiesworkwear.com**

KREG FOREMAN

Fans of pocket-hole joinery will certainly benefit from this handy piece of **Kreg** kit, which allows you to make perfect pockets at twice the speed and in half the time

'Proper' woodworking, with all the marking out and accurate cutting it entails, is both time-consuming and requires a certain amount of skill and patience to yield consistent results, so anything that helps make life easier while achieving the results you need is no bad thing.

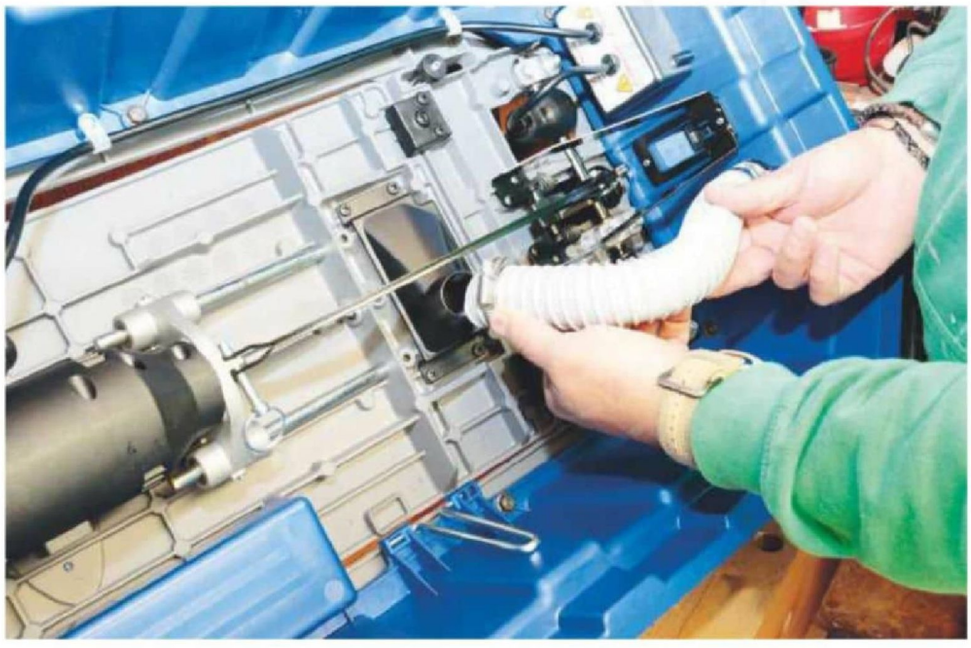
Pocket-hole joinery is certainly an area that does that, although back in my day, pocket-holes were associated with joinery to get fixings in areas where it was tricky to position a joint to do the job or attach clamps on, as well as part of a knock down option on bigger furniture, such as securing plinths on wardrobes, for example.

The potential to use the same technique to secure components in traditional joinery styles led to the introduction of the Kreg jig and it works incredibly well in many areas, face frame work especially so.

The traditional jigs are quick enough, but there's still a lot of time-consuming and repetitive work, such as setting the clamp, drilling with a suitable power tool, unclamping and repeating countless times...

Combined functions

The Kreg Foreman reduces some of these repetitive functions, combining everything in one neat unit; an underslung motor with drill secured, along with a fast paddle clamp.



You have to connect the supplied link hose if you want to use an extractor

Within the clamp handle is the power and safety lock switch: depressing it allows the lever to descend as well as the trigger to be pulled. The beauty here is that as the paddle clamps down and applies pressure to hold the work and the drill starts, by continuing the plunge of the paddle it swings the motor, moving the drill up through the aluminium table to form the complete pocket, all in one movement.

Setting the Foreman up requires setting the fence at the correct backset to suit the timber thickness being used, moving it backwards or forwards and securing the position with twin locking levers. There are settings on the table to indicate common thicknesses; it's also easy enough to set the fence up using these as positional indicators for any other sizes if needed. Once the backset is secured, the screw length is determined using the supplied setup block; this is achieved by winding the adjusting knob at the rear of the clamping arm assembly until it hits the correct position on the block.

With the basics done you're almost ready to go; it's just a matter of positioning the pockets on the project in hand. The fence is marked up with increments radiating from the centre so you can align the work easily to the left or right to the appropriate measurement.

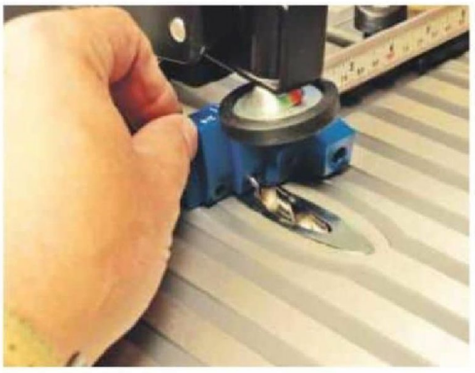
It's graduated in imperial and metric and either are just as useful as you are simply referencing from a mark and replicating on the opposing side if you are looking to set pockets in pairs, set spacings, or simply

The drills are held in a sleeve chuck for quick changeover

Removing this pin allows the motor to drop out, so you can remove the table

With the table removed the sleeve can be swapped for different drill sizes

Common timber dimensions are marked to help set the fence



You set the drill depth against this setting block...

... which is altered by screwing this knob up or down

wanting to achieve a single central pocket.

Within the fence are two sliding stops for fast repeat work, which are ideal for stock of consistent widths. These require a hex wrench to alter their position, but are very quick to achieve. Additionally, the stops are sprung so that if they're not required, simply pressing the work against them depresses them back flush to allow the work to address the fence in any position, so you can work between a set width and other components without resetting anything. You can also slide them back to lock in flush if they're not required for a particular project.

Flat working

The cast aluminium table hinges up to allow you to gain access to the motor for bit changing and the storage area for spare drills and other accessories, while a quick-release sleeve chuck secures the drill so that any swaps of dull cutters is very quick, but in order to change to the Micro-Pocket or HD options, the guide sleeve needs to be replaced as well, which requires the table to be moved. This is simple to do, disconnecting the internal extractor hose to allow the pivots to disengage, which permits the table to be flipped over and the sleeve swapped using the supplied hex wrench.

The extractor hose link pulls the waste directly from the cutter area to the rear outlet and works very efficiently; ideally the best setup is when linked to an extractor with a take off power port to engage the extraction as the Foreman is powered up. If you don't have extraction available, the hose can be uncoupled and the waste allowed to simply drop below where it collects in the base cavity.

Aside from the immediate increase in speed the motorised all-in-one clamp and drill function offers, the biggest benefit is that the work sits flat to the table for all joints.

The normal pocket-hole jig's method of use has the work addressing the jig in a vertical plane and longer components soon become unwieldy. Here, the large table surface supports components well and any longer or wider pieces can easily be supported so that any pockets can be made in a safe and efficient manner, although if working with really wide boards, it could become a challenge to reach over and engage the paddle and power switches.

Conclusion

It's always worthwhile getting in the routine of making a cutting list and sketching or setting out your projects prior to jointing, as you can swiftly make marks to indicate which parts have the pockets. I loved just how quick and easy it was to get up and running once I had cut the components to size, and this is where the Foreman cleans up over other standard pocket-hole jigs available.

Pocket-hole joinery might not be for everyone, and purists may well scoff, but in many areas where it's the look that is the desired effect, the Foreman excels at quickly preparing the parts ready for assembly, and for production jobs where carcassing and face frame work makes up a big proportion of what you do, this motorised option is a no-brainer.

The Foreman is very easy to use: simply pull the trigger and plunge the handle

The resulting pockets are clean and uniform

Once cut, the joints are screwed together in the normal manner

It makes any number of joints very quickly and strongly

SPECIFICATION

Power: 120V 5.0 Amp 2,800rpm
Stock capacity: 13-38mm thick
Drill supplied: standard 9mm
Drill options: Micro-Pocket and HD drills
Table dimensions: 355 × 597mm
Adjustability: adjustable fence clamping and drilling-depth functions
Capacity: 12-38mm thick material
Supplied with: adjustable fence with spring-loaded stops; dust-collection attachment; stepped drill bit and drill guide; drill bit setting block; owner's manual

Typical price: £329
Web: www.kregtool.com – search for UK dealers and you'll be able to find one near you

THE VERDICT

PROS

- Pockets can be made very quickly; easy to adjust; multiple drill options

CONS

- Hex key needed to adjust the stops

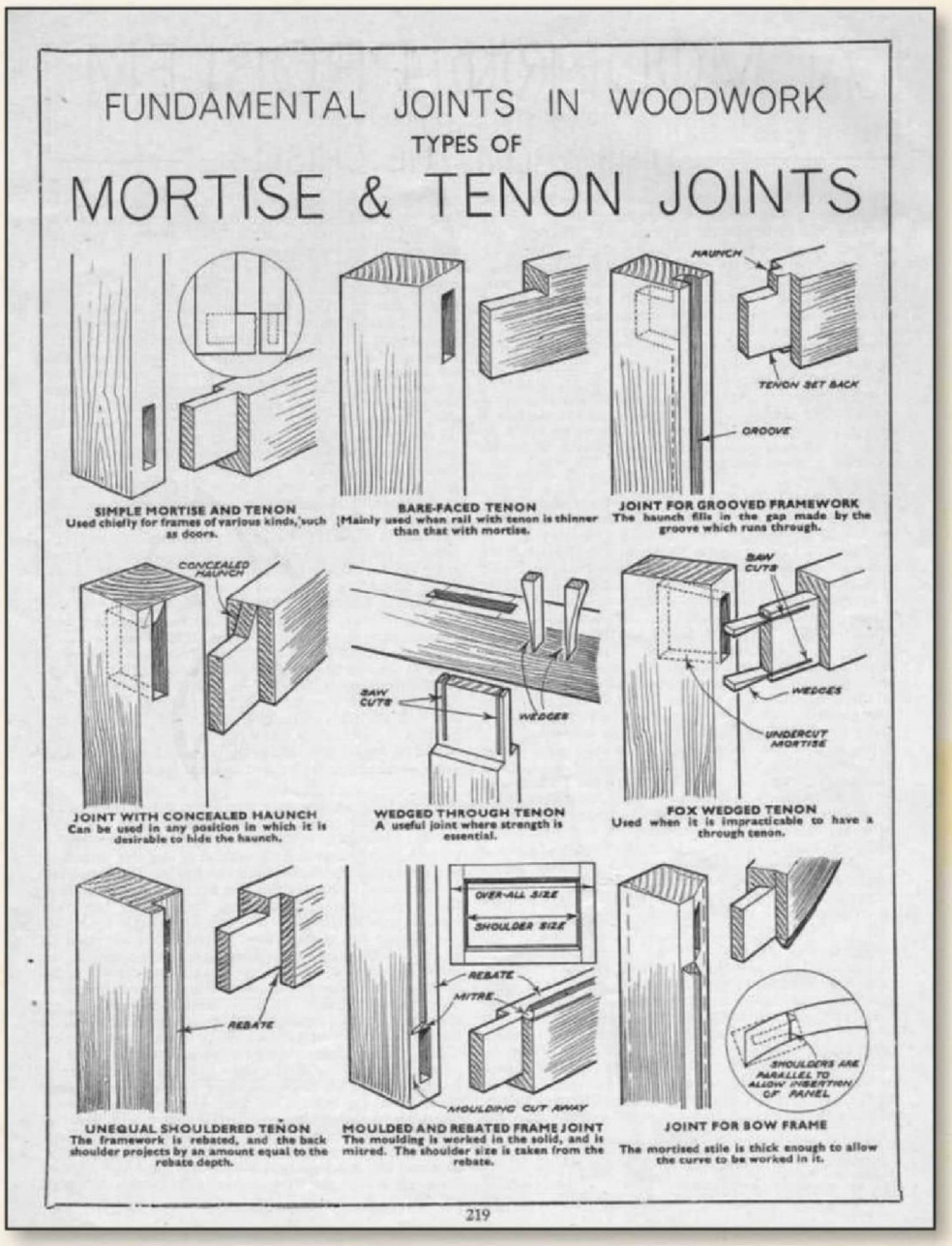
RATING: 4.5 out of **5**

The joint of antiquity

Prompted by the July 1938 issue of *The Woodworker*, **Robin Gates** reflects on the venerable mortise & tenon joint

Two things clinched the deal when we moved home seven years ago: one, visible mortise & tenon joints in the timber-framed walls, and two, a useful looking shed in the garden. Taken together, and after lively family discussion, these features somehow trumped the glaring deficiency of being one bedroom short of requirements. But then, given the chance to sleep among venerable oak beams then to step into the garden for a spell of woodwork, who wouldn't give up their dining room as a bedroom?

What rekindled the memory of this delicate negotiation was finding a well-illustrated page of mortise & tenon joints in the July 1938 issue of *The Woodworker*. As someone who thinks in pictures as much as words, I find this kind of visual explanation very instructive. In its purest form the mortise & tenon is as simple as a cork in a bottle, but try explaining in words alone the more developed varieties with their haunches or fox-wedged tenons and what is essentially straightforward will read as though drafted by Sir Humphrey Appleby (the famously verbose civil servant from *Yes Minister*). For some things – and joinery more than most – you can't beat a good diagram, albeit with a few labels to be clear about what's what.



A long history

I doubt there's a joint in the joiner's repertoire with a longer history than the mortise & tenon, probably because, as a step up from lashing things together with plant fibres, it's the most obvious way of fixing pieces together. Make a hole in part A, then insert part B. Ancient Egyptians were using a species of this joint to construct their boats thousands of years ago, joining planks edge-to-edge by loose tenons shared between adjacent mortises. Cabinetmakers taking pride in their 'secret' mitre dovetail joints will appreciate the subtlety of this 'secret' mortise & tenon building large buoyant structures. To my mind the extensively framed, nailed and screw-fastened wooden hulls of more recent times appear cluttered and crude by comparison.

Besides building so many practical things – doors, windows, chairs, tables, cabinets – this joint has named some of the most familiar hand tools in a woodworker's kit. The tenon saw, for example, is for many a general purpose saw but for the joiner engaged in making sash windows or frame-and-panel doors, its job is the cutting of tenon cheeks and shoulders. Then there's the mortise gauge, used to scribe the parallel lines of the mortise and also those of its matching tenon. In its earliest form the mortise gauge was not the fancy brass-inlaid screw-adjustable device we treasure now but a more humble tool with pins fixed to the width of a commonly employed chisel. This makes good sense as it eliminates the human error of setting pointy little pins to the corners of the blade – an awkward procedure fraught with the possibility of cuts and mistakes.

Many shapes & sizes

Dedicated mortising chisels come in as many shapes and sizes as there are woodworkers, ranging from dainty jewellery box tools to the hefty 'pig stickers' of timber framing with their fist-filling oval handles and blades like railroad spikes, built to soak up the punishment of life at the end of a relentless mallet.

Perhaps lesser-known is the mortising bench used for making sash rails, stiles and bars, vividly recalled by Walter Rose in his classic memoir *The Village Carpenter*. The legs on this bench projected upwards so as to accommodate a pair of sash bars between them, ideally placed before the carpenter whose body weight helped to steady the arrangement. Rose recalled this work was assigned to a learner and that 'it was a favourite task to sit astride those rails and, with mallet and large-handled chisel, cut those parallel mortises through the clean, crisp deal'.

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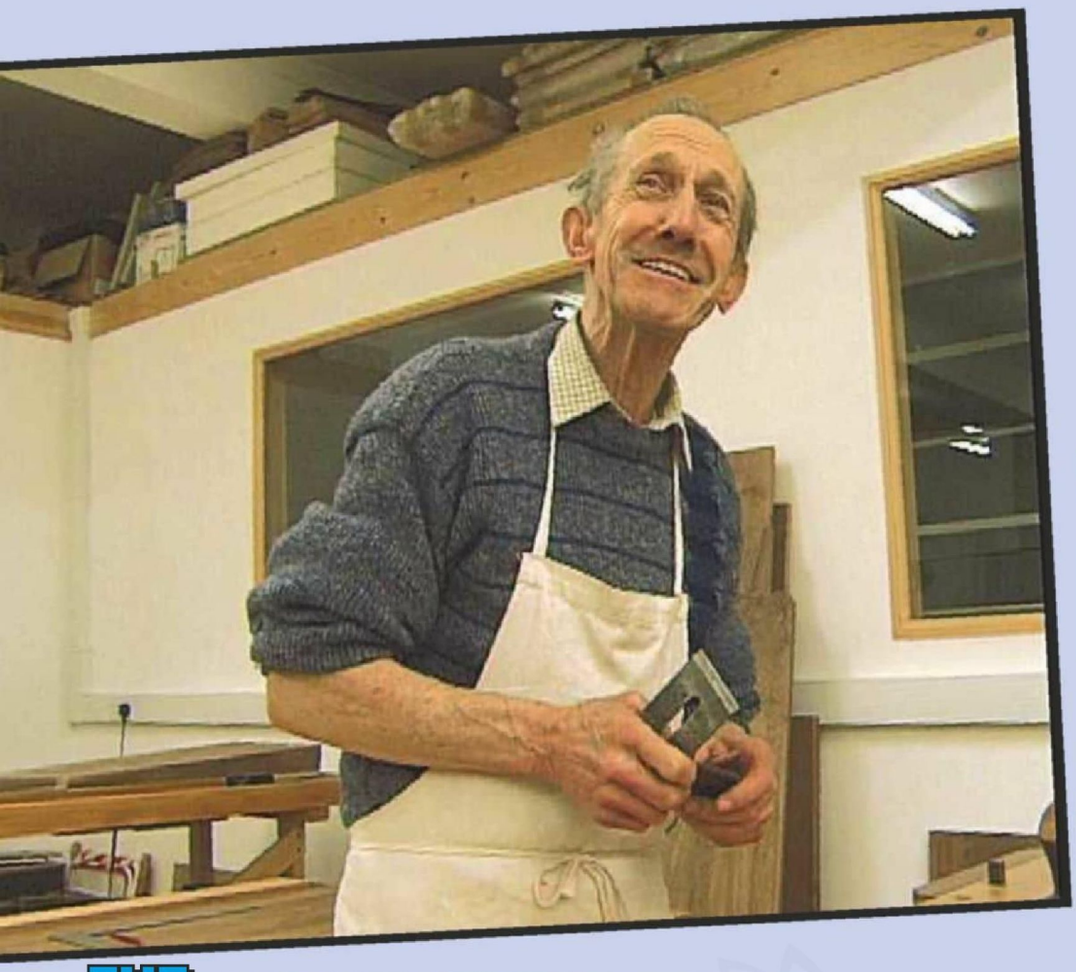

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In collaboration with

The Woodworker & Good Woodworking

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THE WILSON

THE ALAN PETERS Online FURNITURE AWARD 2021

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

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

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

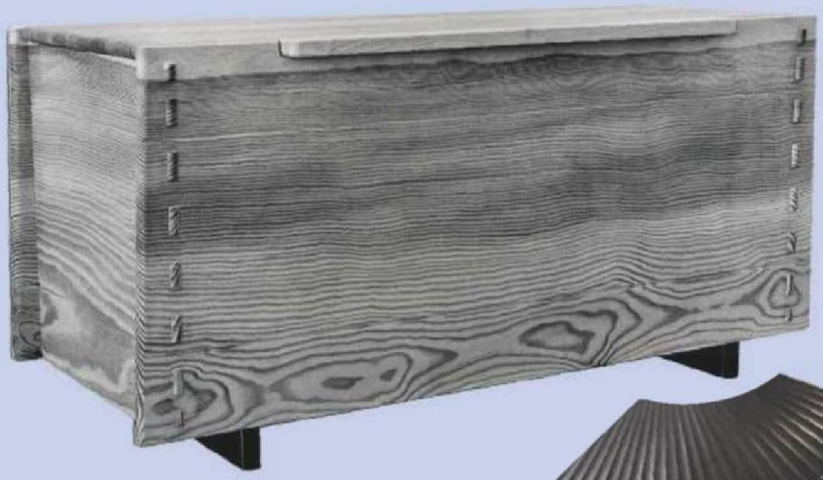
Both one-off designs and potential batch-produced designs are encouraged and the piece(s) does not have to be large. Applicants should be familiar with the work of Alan Peters prior to applying and are encouraged to read organiser Jeremy Broun's 64-page online video-integrated ebook, which is offered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

The man behind the award

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

Alan Peters and Jeremy Broun in 2005

Alan Peters chest with silver inlay



Blanket chest in Douglas fir

Fan Table detail

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

History of the award

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

Award judges

Jeremy Broun (organiser) – designer-maker and co-exhibitor with Alan Peters 1978–2002
Andrew Lawton – designer-maker who worked with Alan Peters and on his last commission
David Barron – professional furniture maker who also produces his own range of hand tools.
Hattie Speed – award-winning designer, educator, artist, maker and founder of on and offline community, This Girl Makes.

Introductory video

To see a YouTube video giving details of the award along with an introduction from the organiser and sponsors, see **https://www.youtube.com/watch?v=0y308TcMeBs**.

Please note that due to COVID-19 restrictions, The Alan Peters Furniture Award 2021 will now be an online event with a virtual exhibition of winners' work. You will also be able to watch the award ceremony and prize giving, as well as hear judges' comments regarding the entries.

PRIZES OFFERED

1st prize
£1,000 Axminster Tools voucher

2nd prize
£500 Triton Tools voucher

3rd prize
£300 Judges' prize

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

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

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

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

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

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

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CBS300	305mm/12"	165mm	115mm	£398.00	£477.60
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CBS225

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CTS800B	600W	200mm	£72.99	£87.59
CTS11	1500W	254mm	£149.98	£179.98

Clarke ELECTRIC HEATERS

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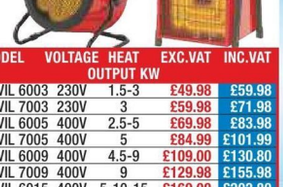
DEVIL 6003



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DEVIL 7005	400V	5	£84.99	£101.99
DEVIL 6009	400V	4.5-9	£109.00	£130.80
DEVIL 7009	400V	9	£129.98	£155.98
DEVIL 6015	400V	5-10-15	£169.00	£202.80
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Clarke CBS2	1200W	480	£79.98	£95.98
Makita 9911	650W	75-270	£99.98	£119.98

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KA900E*	350W/230V	13x455	£59.98	£71.98

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7/510#	2HP	7	50ltr	£119.98	£143.98
11/550	2.5HP	9.5	50ltr	£139.98	£167.98
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DEFINING & USING **VENEERS**

Peter Bishop explores the history of applying and using decorative timbers, and how mechanisation has moulded and enhanced this process

An extremely rare antique chamfer edge radial veneer cutting tool – an engineering marvel that would have been perfect for cutting circles in veneer with a chamfered 45° edge
Photograph courtesy of **www.tooltique.co.uk**

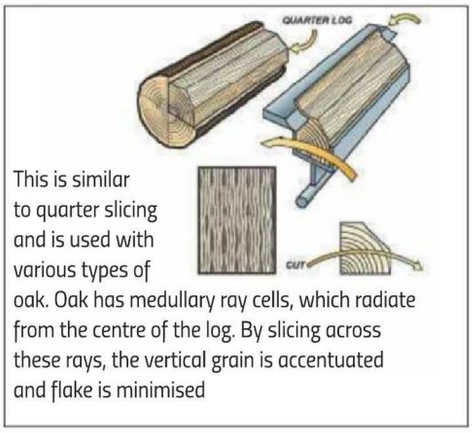
Bundles of veneers

Crown cut veneer

The art of using veneers has been refined over many centuries. The pre-Egyptians were the first to use decorative timbers applied to plain cores, technically known as a ground or groundwork. The basic principle is to make better use of some of the fine-figured woods by cutting them thinly and attaching them to a stable ground. The ground is usually made up of a much cheaper material, making the final piece much more cost effective than a solid section of expensive wood. The other benefits include the fact that a more stable component is likely to result from the procedure and the maker has much more licence to produce free-flowing shapes. In addition, positioning the veneers in different forms allows them to be transformed into true works of art.

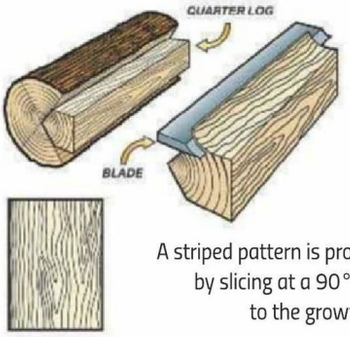
From hand to machine

Before mechanisation in the 19th century, veneers were cut by hand. Trying to slice up the sections as thinly as possible must have been a tedious job. Water and steam power intervened and the saws were made to cut more accurately. Still, a very wasteful process with nearly as much sawdust produced as actual veneer! As technology developed, however, slicing the wood became the norm. Logs, or baulks of wood, are placed in ponds of cold or warm water to help them become more pliable and easier to cut. To maximise the decorative qualities of the timbers producing the veneers, they are usually shaped so that the quartered face is sliced. To be more economical,



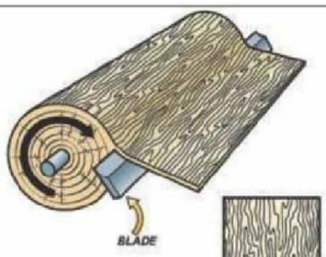
This is similar to quarter slicing and is used with various types of oak. Oak has medullary ray cells, which radiate from the centre of the log. By slicing across these rays, the vertical grain is accentuated and flake is minimised

Rift cut veneer



A striped pattern is produced by slicing at a 90° angle to the growth ring

Quarter cut veneer



A bold variegated grain pattern results from rotary slicing. The log is rotated against the blade, thus producing an unbroken length of wide veneer

Rotary cut veneer

the other cuts using these techniques are known as 'crown' and 'rift' cutting. In most cases, the object piece is fixed in a machine and the blade mechanism driven across, at a predetermined pace. In other options, the object piece is fixed into a holding mechanism that drops onto the cutting edge. As each cut is made, it is notched forward by the required thickness and the process repeated. The objective is to produce a thin, even slice of top quality veneer. In both cases, there will always be a residual piece left over where the 'dogs' have held it in place. These are called backboards and are highly prized for making top quality, solid wood cabinetry.

Figures in veneer

Both the above methods can be used to produce the very best veneers with top quality figuring. The alternative, and most efficient way to produce veneers, is by rotary cutting. After centring each end of a log, it is simply mounted in a mechanism that is driven. This is then presented to the cutting edge and the cutting process begins. The log is moved forward at an even, progressive rate so that as it rotates, a veneer is peeled off, just like a roll of paper. This method of producing veneers is much more economical because the final thickness can be less than half of that produced by the slicing method. Peeled veneers tend not to be too decorative, although there is one exception to this – bird's eye maple – which is efficiently produced in this way. The rotary cut technique is used extensively to produce plywood. Cheaper, poorer quality timbers are used for the cores and these are faced up with a veneer or a simple, defect-free covering.

Veneers are cut from the most decorative face of the wood. In most cases, this is along the quartersawn section. The result will depend on the structure of the wood. Interlocking grain, such as that found in sapele, will produce a striped or ribbon figure. When the grain alignment includes undulations, this produces a number of interesting variations including wavy, curly and fiddle-back figures. Maple and birch both produce blister and quilted like figures and one of the most well-known from the former is bird's eye maple figure. European oak cut in the same way will expose the medullary rays, thus creating the easily recognisable flower figure.

Defects in wood also create interesting effects. Burrs, or burls, are large, bulbous growths that can occur on any tree. It is thought that damage to a tree through fire, frost or mechanical injury, will set off a reaction that creates the growth.

The grain fibres in a burr are totally out of line and irregular. When sliced into, the result is highly prized for the spectacular grain effect produced. Creating artificially stimulated burrs has occurred by placing steel bands around a trunk. Over time, the resulting growth swells out from the tree to create a bulge that can then be sliced.

Creating interesting veneers

Natural growth features can also create interesting veneers. The fork in a tree or a large branch sprouting from the trunk can produce a crotch or curl figure. Mahogany was widely regarded for this feature and much antique furniture displays the curl-like effect. The same growth configuration produces feather, moonshine and swirl crotch figures, depending on the individual structure and orientation of the tree's grain. It should also be noted that wood from below ground, in the root system, will produce some very interesting figures.

Being inventive with veneers can produce some great results. The interplay of grain and decorative finish has led to spectacular effects on both antique and contemporary furniture. As usual, when working with wood, the end result is only limited by the imagination of the creator and maker.

A range of decorative veneers

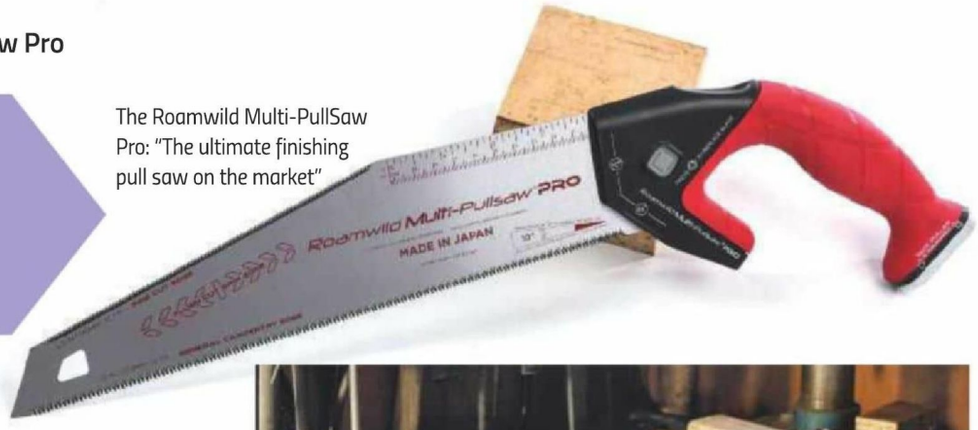
Bird's eye maple veneer figure

Interesting veneer design on a table

Camphor burl veneer

Walnut crotch veneer

WIN!



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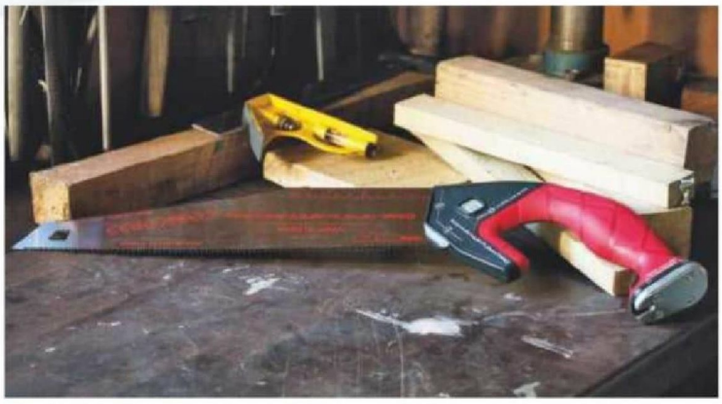

Product features

- **2 saws in 1:** unique design: 12in/30cm 14tpi general carpentry cutting edge and unique angled 6.5in /17cm 22tpi fine cut edge. Quick-release button replaces the blade quickly, meaning less environmental waste.
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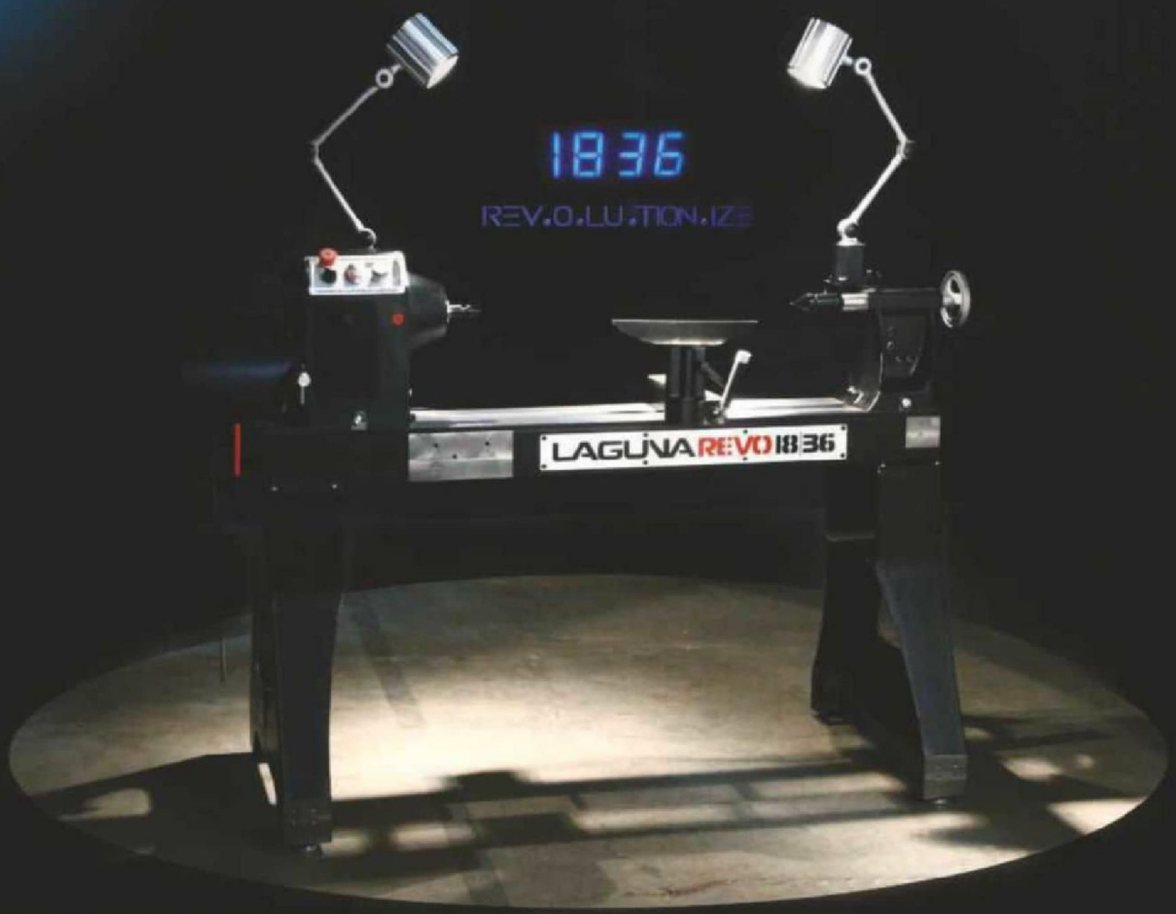

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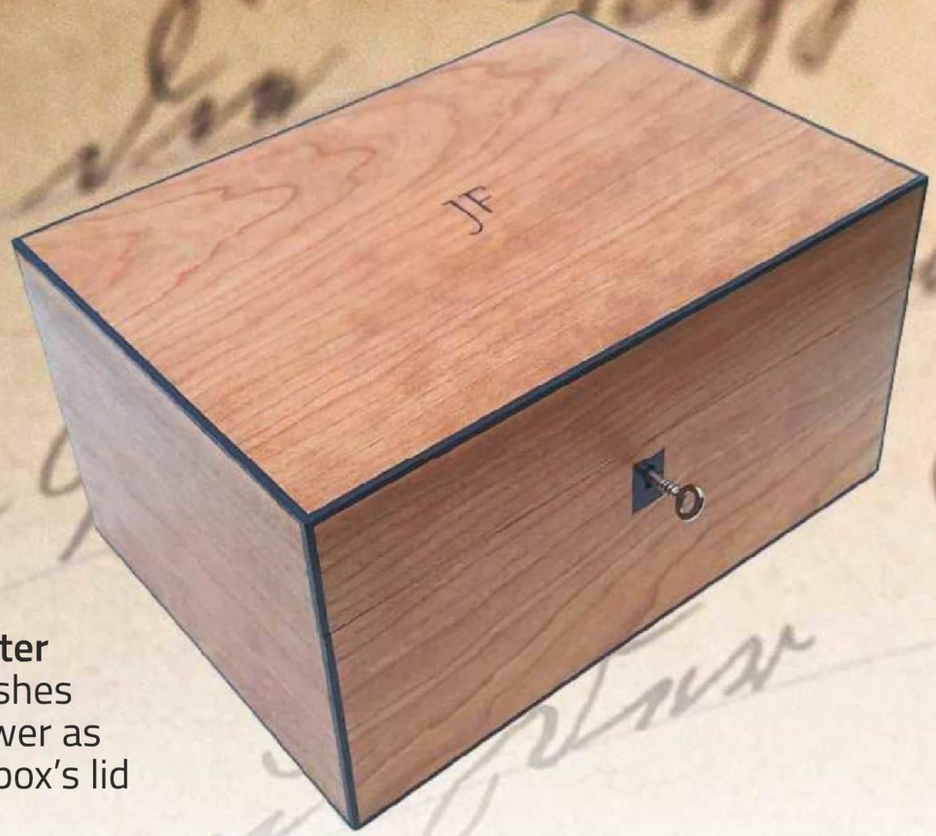


TO THE LETTER

Commissioned to make a contemporary version of a traditional writing slope, **Peter Dunsmore**'s personal flourishes include adding a secret drawer as well as inlaid initials to the box's lid

The traditional writing slope goes back a long way and many examples of these attractive pieces can be found for sale. Their popularity may have diminished with the advent of electronic media, but there is still something appealing about writing a letter with a proper pen and, more so, to receive one.

This particular commission came about following a request for a writing slope with a contemporary feel that was to be given as a wedding present to a young couple. The letters inlaid into the lid are the initials of the recipients. In the grandeur boxes of the 18th and 19th centuries, it was quite common to have one or more hidden drawers secreted about the box and, in a similar way, I have also fitted one in this project.

Making a start

The choice of timber is important and I wanted to steer away from the traditional oak, walnut and mahoganies typically used for these boxes. Cherry, combined with a black harewood and ebony would, I thought, give a very modern feel, the light colour and attractive figure providing a contemporary twist.

To start the project, take a length of cherry planed flat to 110 × 140 × 14mm and cut into the four pieces required for the sides. Have your wits about you and mark each piece to keep them in order; this will ensure the grain flows through the corners when the project is assembled. Obviously the two ends of the board won't marry up perfectly and this corner should be at the back of the box. However, cherry is quite a forgiving timber as the grain is similar throughout its length and I was fortunate in that the two ends of the board almost matched perfectly. Set up a straight cutter in the router

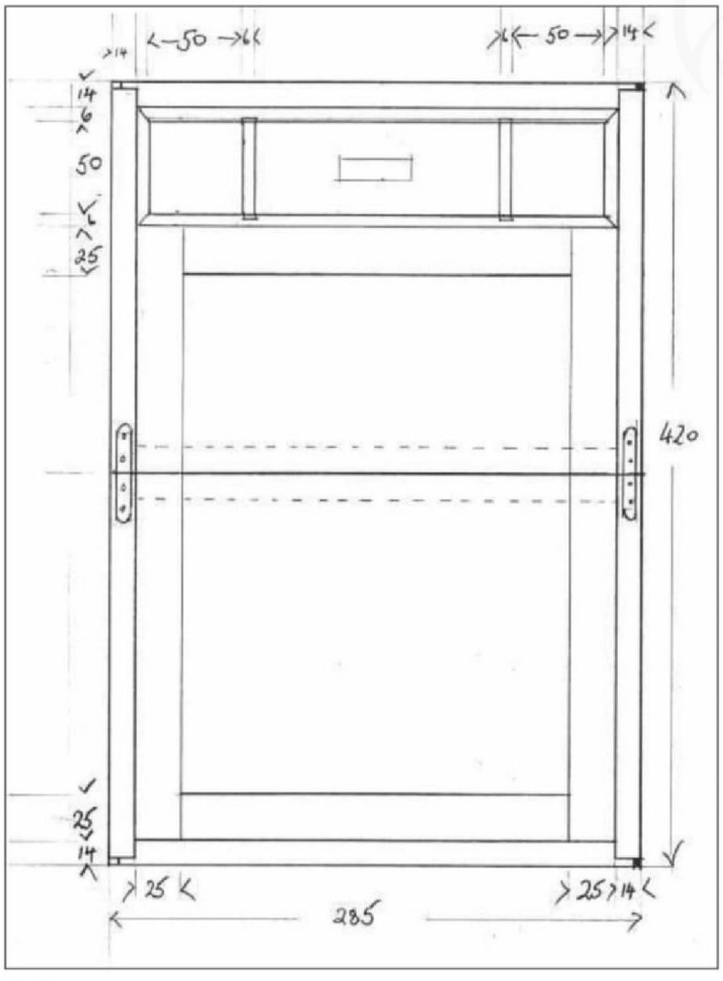


Fig.1

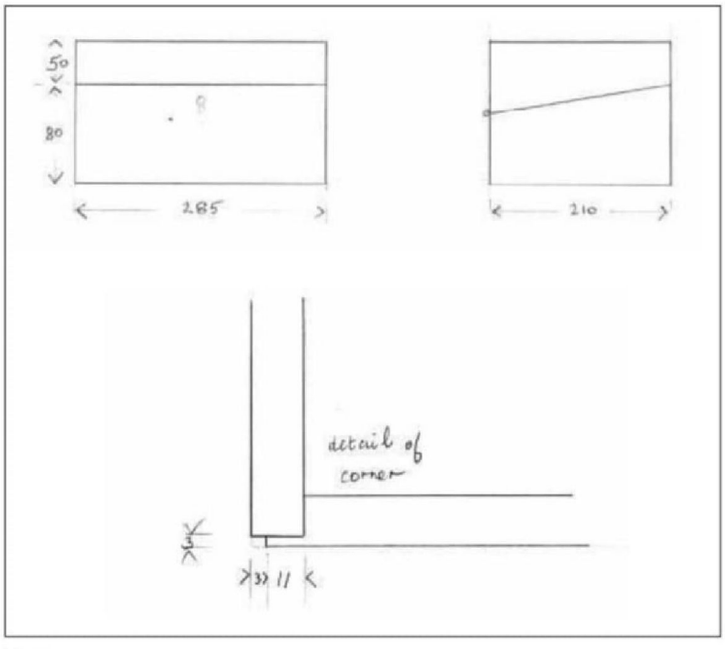


Fig.2

table (**photo 1**) and cut a rebate along both the top and lower edges, as shown in **Fig.1**. The idea is that a piece of veneered 6mm plywood will sit proud of the sides to a depth the thickness of some 3mm square beading, which will be secured to the edges of the box. The main purpose of this beading is to protect the edges of any veneers from damage as the box is handled. In a similar way, the two timbers used for the front and back have a rebate cut to a depth such that when the sides are fitted, this too gives a 3mm square rebate for the beading (**photo 2**). Both the base and top are made from 6mm plywood. The top is veneered on both sides but the base needs only to be veneered on what will be the inside of the box. Prior to gluing the top veneer in place, the couple's initials were cut into the cherry with a black harewood using a very sharp pointed blade. At this stage, it's a good idea to apply any polish to the inside faces as this would be much more difficult upon completion. Avoid applying any finish where the adhesive goes (**photo 3**). Assemble the box together using adhesive and use softeners to prevent any damage to the surface. The lid and base will help keep the box square as it dries (**photo 4**).

The ebony beading is now glued in place around the perimeter of the box, and if the rebates are cut accurately, there should be minimal levelling (**photo 5**). If any does need to be removed, it would be better to use a cabinet scraper or a very finely-set block plane rather than abrasive paper as the dust tends to get rubbed into the paler wood and is a bit of a job to remove.

Cutting the box open

Traditionally, boxes are made as described previously and then cut open as this ensures the lid fits the base and also guarantees that the grain flows through from the top half and into the base. The tricky part with a writing slope is that the front and rear edges are cut at a slant to suit the slope of the box. Draw a line around the box, as shown, making sure that the one to the rear is truly central in the horizontal plane. Masking tape makes the pencil line show up clearer. Now take a sharp saw (a Japanese pull saw gives a very fine cut) and cut around the line (**photo 6**). Slow and steady is the way forward here.

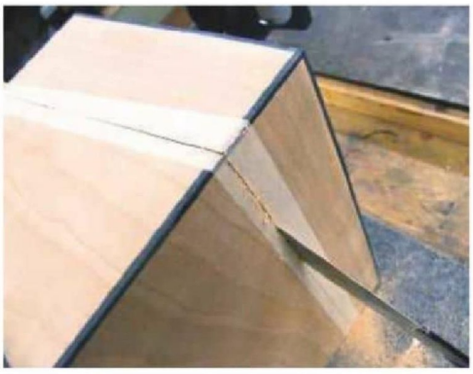
1 A scrap wood fence with a suitable dust extractor port works well

2 Note the lettering to keep each piece in its correct place

3 It's much easier to polish the inside of the box prior to assembly

4 Note the use of softeners

5 The beading should fit flush with the veneers



6 The tricky part!

7 A simple jig made from MDF

Levelling up the top faces

Levelling the top edges can be achieved using a sharp plane and a steady hand but a very accurate method goes as follows. Butt both box halves together and make two identical MDF templates (**photo 7**) such that when they are held against the sides of the slope, the top edge is about 5mm above the sawn edges of the box (**photo 8**). Glue a couple of scraps on the inside faces of the MDF to locate both box halves together securely. It is important that they are an identical handed pair as the templates must be parallel with each other (**photo 9**). Secure the box halves to a flat surface with the templates either side and use clamps and battens to hold everything tightly together. You don't want the box to slide around as soon as the router touches it. I think the jig shown (**photo 10**) is called a 'ski'. Basically it is a reinforced piece of MDF onto which is screwed a router.

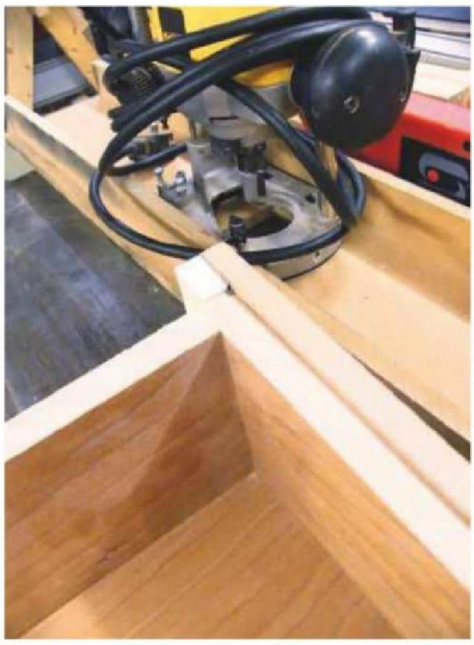
A hole is drilled under the cutter to allow the cutter to plunge through the base of the ski. The ski is placed on the MDF clamped to the box and the depth of cut set to just remove a little off the top edges of the box. Increase the depth of cut a little at a time until the top edge s are perfectly flat. Don't remove the top of the MDF as you will still need the support. Just nibble into it as you work your way along the box (**photo 11**). The result is a perfectly fitting lid and base with the rear opening level.

Completing the case

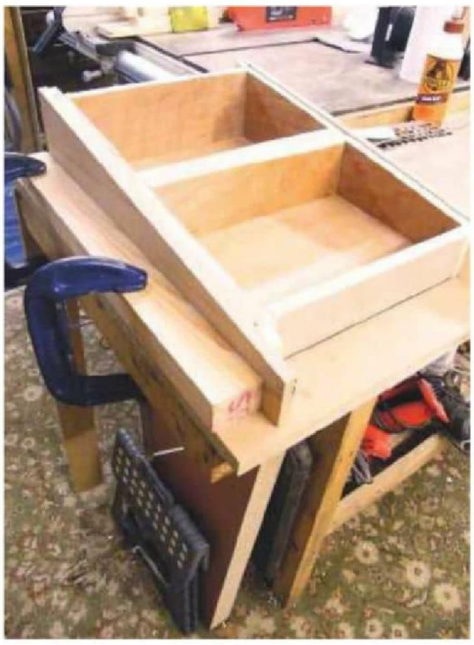
I hate fitting hinges. You only really have one go at getting it right and for this reason I usually do a test run on an offcut the same thickness as the box. These writing slope hinges have rounded ends, which make them ideal to use with a router fitted with a cutter of the same diameter. Set up a straight edge fence on the router table and make two pencil marks on the fence either side of the cutter (**photo 12**). The distance should be the length of one half of the hinge measured from the centre of the knuckle to the end of the curve on the strap. Transfer this length by measuring from the outside edge of the cutter. Clamp a piece of scrap in place on the table, which acts as a stop as the wood is pushed along the fence, then set the depth of cut to half the thickness of the knuckle. I find that when the stop is reached, it is much easier to just lift the timber up and away from the cutter rather than pull it back. Now, the problem occurs when cutting the opposite half of the hinge as 'pushing' the timber into the cutter from left to right is really difficult. This is because the cutter snatches the wood and wrecks the box edge. A much neater and safer way is to move the scrap piece acting as a stop to the right-hand side of the cutter against the pencil mark and clamp this in place. Lift the box side over the cutter, butt it against the stop, lower the box onto the revolving cutter and push the box in the normal direction, i.e. right to left. Remember to keep the box side pressed against the fence and flat on the table. I made a temporary MDF table top wide enough to support the box, which will prevent it tipping. The result of the test piece before cutting into the box sides can be seen in **photo 13**. The box lock needs little explanation: a drill bit, a little measuring and a sharp chisel (**photo 14**).

Making the compartment holder

The rear compartment is a little project in itself. The outside comprises four pieces joined together at the corners with mitre joins simply glued together. A method I find that produces accurate results is to mark the lengths required



8 The top edge of the MDF is a little above the box sides

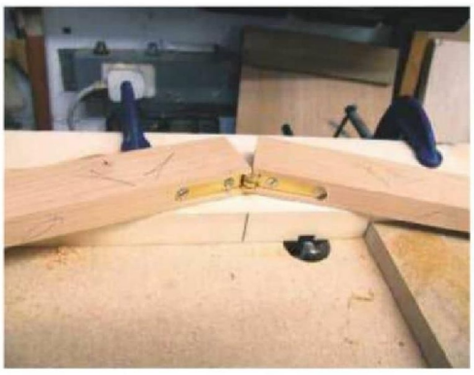


9 Everything must be clamped securely on a flat surface

10 The router jig is self explanatory

11 You can see where the cutter nibbles into the template

12 Experiment with a scrap piece to check the settings



13 If all is OK it's time to fit to the box

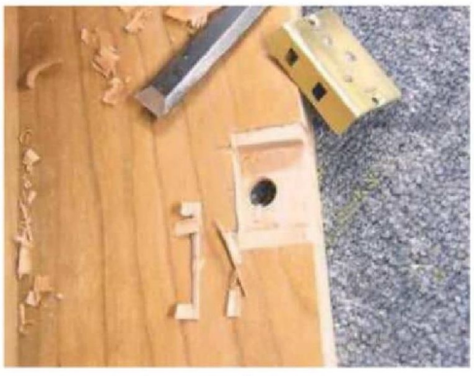
onto the timber with a craft knife and to set a disc sander accurately to 45°. Look out for a small feather of wood falling away as the line is reached (**photo 15**). At this point just pull the timber back and away from the revolving disc. Licking your finger tip ensures a better grip for this! The two interior partitions slide into grooves cut on the inside faces of the compartment. If the panel's lower edges are butted together when cutting the grooves (**photo 16**), then the partitions will sit square in the compartment. A rebate needs to be cut along the lower edge to suit the floor of the compartment. To assemble the sides, lay the four pieces face down against a straight edge and stretch some masking tape over the joins (**photo 17**). Turn this over, apply a small bead of PVA, fold the sides together around the base and allow to dry (**photo 18**). This compartment sits on a support in the box and the top edges are planed to match the front and sides of the box (**photo 19**). One point worth mentioning is to source an ink bottle beforehand in case any adjustments are required to ensure it fits.

Making the secret drawer

Many early writing slopes had a secret drawer and I thought it would be nice to incorporate one here. It's very small but fun to know it's there. Perhaps an ideal place to hide an engagement ring for a proposal? Anyway, the drawer is simple to make, as it is just a smaller version of the compartment. A small spring is located and glued to the inside face of the compartment and is activated by lifting the partition up, which enables the drawer to slide out. The drawer slides between two scrap guides glued onto the compartment back and front and a lid glued on top ensures the drawer springs forward. It's straightforward to make but just involves smaller pieces of timber (**photo 20**). A further piece of timber is glued in place to act as a stamp slide, which covers this part of the compartment. The compartment then slides into the writing box and rests on the timbers that fit on the insides of the box that support the slopes (**photo 21**). A simple lid fits on some timber to act as a pen rest between the two partitions.

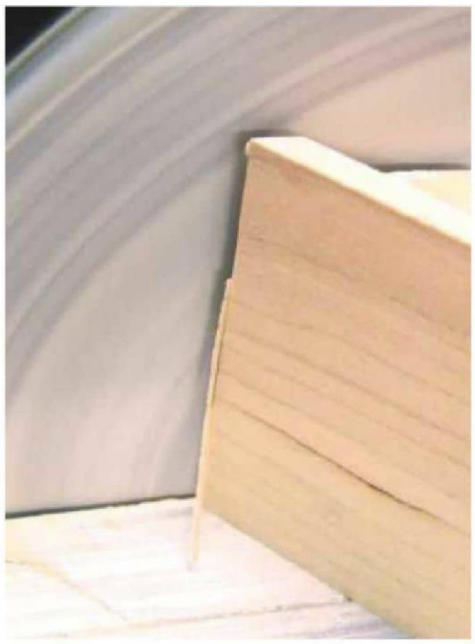
Making the slopes

The slopes are a very straightforward affair. The frame is half-lapped joins at the corners with a strip of timber securing the 6mm MDF in corresponding grooves around both the base and frame (**photo 22**). The underside of the MDF slope is veneered prior to assembly. What must be remembered is to use a small block plane to bevel the rear edge of the upper slope to ensure a neat fit into the opening. Some timber will need

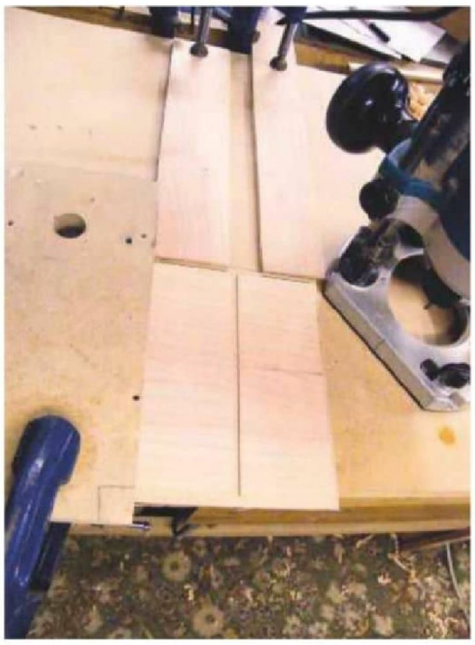


14 A sharp chisel is used to fit the lock

to be removed from the rear of the box between the hinges to accommodate the skiver when it is fitted to the slope. This is shown as the shaded area (**photo 23**) and needs to be recessed to ensure it is exactly level with the writing slopes. This is achieved in exactly the same way as levelling the sides earlier on only with a suitably increased depth of cut. Remove the hinges prior to clamping the guides in place, check that the recess is level using a straight edge (**photo 24**), and finish by squaring the ends with a chisel.



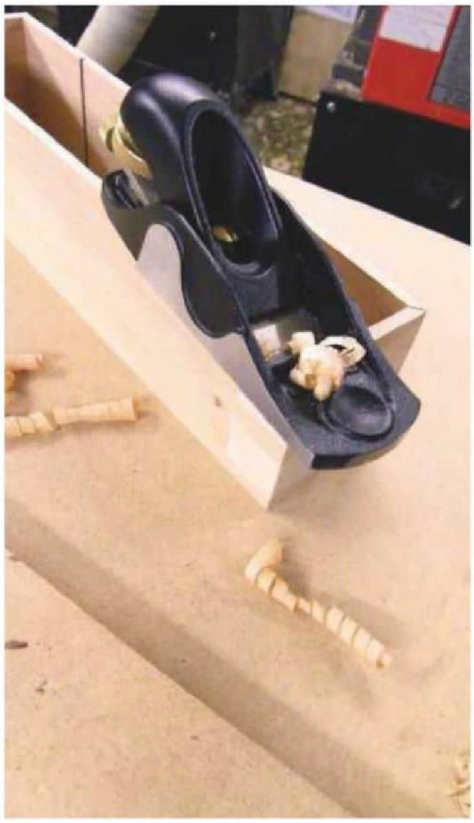
15 Note the feather of wood falling away



16 The lower edges are butted together

17 Stretch masking tape across the pieces

18 Apply a little bead of adhesive into the joints

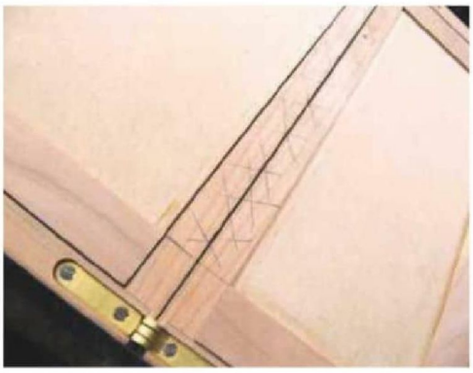


19 The top edges of the box need to be bevelled to suit the slope

20 The workings of the secret drawer

21 The slope supports extend under the rear compartment

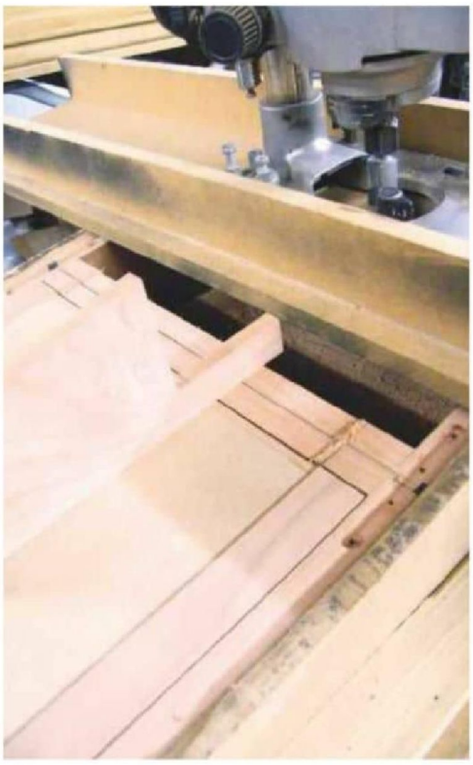
22 The components which make up the slope part



23 The shaded area needs to be level with the slope

Finishing off

That more or less completes the writing slope. A protective finish needs to be applied, in this case a cellulose-based sanding sealer followed by a wax worked well. The skiver is straightforward to fit using a reinforcing cloth over the hinging part of the slopes prior to gluing the skiver in place. Watered-down PVA was used for the adhesive. There are several YouTube videos showing this process, which are worth watching prior to fitting this part if you need a little extra guidance. Often a piece of skiver offcut was used as a lift up tag for both slopes, but this often proved to be too thick and caused problems when closing the box. To overcome this, some black ribbon is folded in half before being pushed through a small hole drilled in the slope and wrapped round a small block of ebony offcut. Being a very contemporary design, I opted for a simple ebony escutcheon and matching handle to the lift-out pen tray, which was long enough to act as a pen rest. The ebony and cherry seem to complement each other very well, as I am sure the recipients do too!



24 Check the slope is level with the recess

25 The completed writing slope with the secret drawer sprung open

26 The finished project showing the compartment for storing envelopes, etc.

FURTHER INFORMATION

Hinge & lock suppliers – Prokraft Woodworking & Woodturning Supplies
Web: **www.prokraft.co.uk**

1 × solid brass strap hinges/writing slope hinges (pair) – WSH – £8.99
1 × 1½in brass box lock set – BBL15 – £16.95
Skiver suppliers – John Hubbard Antiques
Web: **www.deskleathers.com**

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Tools for the toughest demands

The makers with no name

In the first of a new series, **Simon Frost** begins exploring what makes makers great, starting with the Shakers

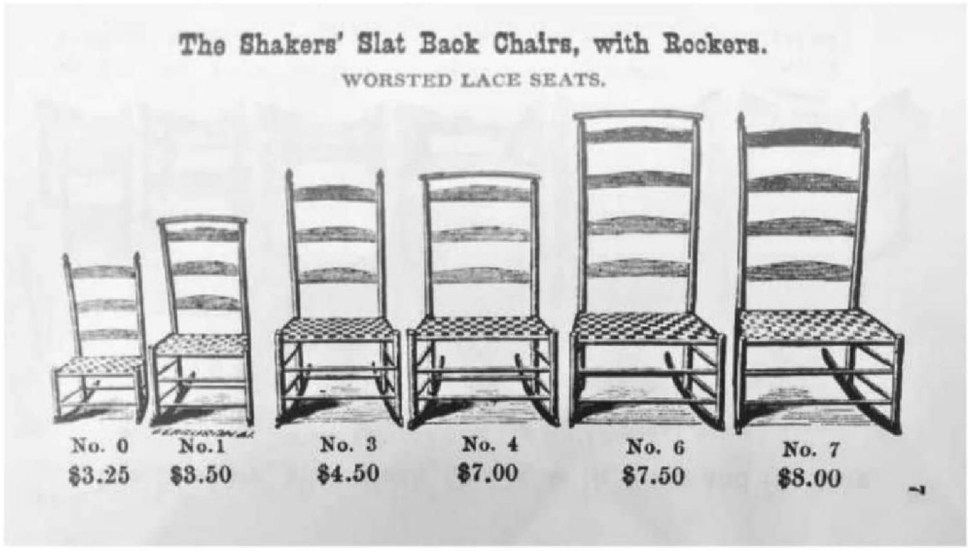
A beautifully sparse dining room at Shaker Village of Pleasant Hill, Kentucky – now a visitor attraction. Note the peg rail that surrounds the room
Photograph courtesy of **Frank Kehren**

The United Society of Believers in Christ's Second Appearing, a small offshoot of English Quakers, left Manchester for New York City in 1774, led by the group's prophet, Mother Ann Lee. They became known as the Shaking Quakers – soon shortened to Shakers – owing to their distinctive 'shaking' movements during worship.

At their height in the mid-19th century, there were more than 6,000 Shakers living in 18 largely self-sufficient communities across America. Today, in the village of Sabbathday Lake, Maine, live Sister June Carpenter and Brother Arnold Hadd; the last two remaining Shakers.

The Shakers were celibate, and so relied on recruiting new members to preserve their way of life across generations; often by taking in orphaned children, or offering refuge to unskilled or poorly educated adults with few prospects among what the Shakers called 'The World's People'.

In the second half of the 19th century, orphanages increasingly began to favour families over institutions when housing children in their care. And after the Civil War, the shift to a more prosperous industrialised society meant that citizens could now find employment in one of the many factories popping up throughout the country. A strictly celibate puritan sect could not compete with the promise of the modern world, and over the following years, Shaker numbers inevitably declined.



This advert from a Shaker chair catalogue produced by the Mount Lebanon Shakers shows ladder-back chairs available with or without arms and rockers. And what a bargain...
Photograph courtesy of **Simon Frost**

But while their way of life gradually ceased to exist, their simple, beautiful utilitarian furniture would go on to inspire virtually every movement that followed, from Mid-century modern to Bauhaus and minimalism; and every maker from Gustav Stickley to George Nakashima.

Hands to work & hearts to God

Mother Ann Lee instructed her followers to put their 'Hands to work and hearts to God'. The Shakers approached every aspect of daily life as a form of worship, striving for perfection in everything they made. As such, all of their crafts were pure, honest and as simply but well-made as possible.

What did that mean for their furniture? First of all, it was the complete abandonment of anything that might be considered ornament. You'll struggle to find elaborate carvings, inlays or even veneers in Shaker furniture – such extravagances were deemed sinful in their 'deception'.

The Shakers loved nothing more than repetition and order in their living quarters – as can be seen in this handsome room of drawers. The flat broom seen hanging in the foreground was a famous Shaker invention
Photograph courtesy of **Frank Kehren**

Despite the availability of fashionable imported timbers, the Shakers used wood grown locally to each village; typically maple, cherry, pine, or walnut. Elder Giles Avery (1815–1890) – resident of the largest Shaker village, Mount Lebanon, New York – described 'dressing [...] furniture of pine or white wood with the veneering of bay wood, mahogany or rose wood' as 'adultery', no less.

Cleanliness is next to godliness

Shaker villages represented heaven on earth; and Mother Ann asserted 'There is no dirt in heaven'. As typhus and cholera tore through vermin-infested cities, visitors to Shaker villages were invariably struck by the immaculate cleanliness the communities upheld.

As well as its aesthetically clean design – simple, elegant symmetry and uniformity – Shaker furniture was actually designed to keep the household clean. Complex, ornate mouldings were entirely absent, unnecessary decoration being deemed boastful, and therefore sinful – but even modest mouldings were left out where possible, as they could collect dust.

But cleanliness and orderliness informed how they designed their homes and furniture in a more significant way. With as many as 30 believers (as they referred to themselves) living in a single home, even this most materially austere community had to organise their few possessions fastidiously to keep their homes pristine. Shaker furniture was therefore designed to be hung on peg rails that lined the walls in almost every room.

Round wooden pegs were placed at regular 6in intervals along rails to hang everything from chairs to clothing, cupboards to clocks. Most of a room's contents was designed to be hung on its walls, minimising clutter on surfaces and making it easy to sweep floors and keep everything sparse, neat and tidy.

The regular spacing of the pegs informed the dimensions of the pieces to be hung on them, the back slats and leg stretchers of most chairs,

The Shaker trestle table design is light, elegant and simple, as seen in this watercolour by Anne Ger
Photograph courtesy of **National Gallery of Art, USA**

The influence Shakers had on minimal design can be seen in these benches
Photograph courtesy of **Dylan Steinberg**

Shaker boxes – a perennial favourite, replicated by countless makers
Photograph courtesy of **Rebecca Gale**

for example, would have been around 13in long, allowing for each chair to be hung either upside down from the stretchers or upright by the back, held snugly in place by two pegs – a third directly in the centre.

Simple, clean design

Shaker furniture is known for pleasing proportionality paired with simple, symmetrical and repetitive design, but the Shakers were innovative, too. Take, for example, the distinctive ladder-back chairs that exemplify Shaker design. They were beautifully simple – evenly spaced slats tenoned into two rounded back posts, which were topped with simple acorn or egg-shaped finials – just about the only element of the chair that could be considered embellished. The seat would be woven of cane, rush, wood splint, or fabric tape, and the two rounded fore legs would mirror the back post legs, with leg stretchers front-to-back and left-to-right – typically two at the front and at both sides, and one at the back.

They were repetitive and uniform – the back slats were evenly spaced, usually with three slats for a side chair, or just one for the lower dining chairs, which could be slid underneath the table. But the Shakers weren't afraid to innovate. Attached to the back posts of Shaker side chairs were tilting feet, with a ball and socket joint that allowed the chair to be rocked back on the back legs while the rear feet remained flat on the floor.

Another iconic innovation, the Shaker version of the trestle table, raised the medial stretcher from close to the floor to directly underneath the top. It created more leg room, did away with a potentially dirt-gathering surface, but also made the table incredibly elegant and light in appearance.

It is this elegance, lightness, and lack of artifice where the beauty of Shaker furniture lies. More than the sum of its parts, it is the kind of simple, clean design that looks so easy until you try to design it yourself. The American theologian Thomas Merton put it best, when he wrote that 'The peculiar grace of a Shaker chair is due to the fact that it was made by someone capable of believing that an angel might come and sit on it'.

Communalism was central to Shaker culture, and this is reflected in the lack of variation in the furniture produced by many different craftsmen. While a Shaker piece can be identified as the product of a particular village by the shape of its finials or other subtle markers, the many makers of Shaker furniture were not individual designers as such – they were forbidden from pridefully marking their work with their name, and uniform rules for making were circulated through the church's publications.

To support their communities, the Shakers sold some pieces of furniture to the outside world, and they built an effective brand around their name and distinctive style – they were prohibited from selling anything that would not be admissible for their own use and didn't pander to the vices found elsewhere. They had no issue with the use of power tools to make this work more efficient, employing steam-powered lathes, mortisers, and even an early version of the circular saw invented by Shaker woman, Tabitha Babbitt.

With its timeless, graceful utility, Shaker furniture has never been out of fashion for long and has inspired makers and movements ever since, and explicitly 'Shaker-style' furniture is perhaps more popular than ever. By stripping the design of furniture down to its most essential elements, creating work that served as testament to their devotion, the Shakers created the blueprint for honest, high-quality modern furniture design.

The exquisite clean lines of Shaker-style furniture never go out of date – the Shaker influence on this modern kitchen by Philip Clay Designs Ltd is unmistakable
Photograph courtesy of **Philip Clay Designs Ltd**

A connection with the NATURAL WORLD

Widely recognised and admired for his award-winning 'Toro' chairs, bold maker **Dave Taylor** tries to capture the natural forms of flora and fauna as well as creating symmetry in his work, as **Martin Pim-Keirle** discovers

Dave's 'Toro' hallway chairs in Wych elm and constructional veneer. These extraordinary pieces are paired down to just five major components

For many of us, the fact that we're shaping a natural material is undoubtedly one of the more satisfying aspects of woodwork. Crafting anything from wood is often something akin to a two-way conversation, the material showing us how it can be worked and where the greatest strength and beauty might lie. Furniture created with no thought for the organic origins of its base material is somehow missing the point.

One woodworker who is most definitely not missing this point is 33-year-old Dave Taylor, a graduate of the renowned Peter Sefton Furniture school, and a maker whose work seems to actively celebrate the natural world. His striking 'Toro' chairs were 'Highly Commended' in 2019 as part of The Furniture Makers' Company Design Award, and it's easy to see why.

A labour of love

Historically, organic forms and references to nature are not uncommon in furniture design: wildlife anatomy as a feature of furniture can be said to date back at least 3,000 years, to a time when most wealthy Egyptians' beds stood on animal legs of one form or another, ranging from delicate gazelle-like forms with hooves to stocky bull's legs, or even feline paws with claws. More recently we might point to the 'pied de biche', or hoof foot, which began appearing on fine French furniture towards the end of the 17th century.

Dave Taylor's unique chairs take this idea to a different level, each piece feeling somehow alive. Their poised, animalistic forms lean and taut, these chairs are composed of curves and lines so natural they could almost have been grown that way. Unsurprisingly, this impression is somewhat at odds with the truth of just how many hundreds of hours went into creating each piece. "I used 2mm elm veneer to make the leg with the backrest in one huge consecutive section – it probably took about two weeks just to make that single component. Carving the rake into it was a nightmare," admits Dave.

"I laminated using a combination of press jigs and a vacuum press, gluing with cascamite. Then, once I had six legs and two leg/backrests in square sections, I hand carved the desired shapes. The saddles are hand carved from Wych elm. The very steep and dramatic ergonomics were achieved with gouges and violin planes – I removed as much material as I dared!"

The legs themselves are held to the seat with what Dave describes as "knock-down fittings," though in truth you'd almost certainly need several hours with a very large hammer to knock these particular fittings down. A threaded rod is secured into the top of the leg, and this is pulled into a cavity in the seat using a nut. This mechanical fixing was used in combination with marine-grade epoxy between the leg and

From above, the layers of veneer form a unique pattern at the top of the legs

Each combined leg and backrest took at least two weeks of work

Dave applying Van Dyke Crystals for an ombre finish on the legs

seat, and then the inner cavity filled with resin, both as a final belt-and-braces and as a way of making a feature out of a mechanical necessity.

"The legs and backrest are extremely strong. It paid off at an exhibition where one of the construction staff (an absolute unit of a bloke) erecting the room next door was sat on one of the chairs stating to a shocked room of other furniture makers that they were in fact a lot more comfortable than they looked. When my heart began beating again, I politely asked him not to test the exhibits!"

Overall the two hallway chairs took Dave about six months to make, and were undoubtedly a labour of love: "Lots and lots of R&D went into these chairs. It was an obscene amount of work to make that design comfortable. As far as achievements go, carving one of those chairs was extremely challenging, but to do a mirror image was really pushing it from a technical point of view."

While the chairs were certainly challenging to make, Dave is the first to admit that they were challenging for his audience, too: "I have learnt from these chairs that people can be put off by overly ambitious design. The chairs perhaps ask too much of people's perception of what constitutes a functional piece. This is great for discussions, but not so much for sales!"

The clue is very much in the name here: 'Toro'. The shape of the legs and one-piece leg-with-backrest are intended to (and do) evoke the stance and horns of a bull. And yet at the same time there exists an almost arachnid-like tension in those shapes; a slight evocation of scuttling legs, and maybe the threat of a scorpion's tail. To see such dynamism, such challenging work, from a person so new to their craft, is undeniably impressive.

Background

From the evidence of these sculptural forms, not to mention the other work displayed on these pages, you might expect this talented maker to have entered the industry from an art and design background, yet the truth is quite different, coming as he does from a family of builders and tradesmen (his mother – clearly more academically inclined – is actually a retired engineer), and spending his early years surrounded by brickies, stone masons and plumbers in his native Bolton.

"It was a fairly typical Northern, working-class upbringing," says Dave, in an accent that has lost none of its richness despite years spent bouncing around the country and globe as a whole: "I was always surrounded by tools, and I grew up hanging around the pubs with all the old men talking about their jobs."

Dave talks fondly of his early forays into this type of work: "I was always working on sites in the school holidays and faffing around with AutoCAD as a teenager."

Having left school after his GCSEs, Dave had initially planned to join the College of Policing on an Armed Response course. How different his life might have been were it not for the job that filled the gap between school and college and gave him a taste for earning his own money. The idea of more study was put to one side, and his natural affinity for construction and general practical skills led him to find employment as a fabricator and CNC bender, spending two years working for a large office furniture making firm in Bolton.

But this wasn't enough, and Dave saved his wages and applied for University courses: "I felt like I wanted to challenge myself academically, so I studied anthropology, and intended to become an experimental archaeologist, researching tool use and ancient building techniques."

A Bachelor's degree at the University of South Wales was followed by a great deal of travel, including six months spent in Australia, before finally finding himself in Cornwall.

"My mother-in-law had bought this house some time ago, and it needed lots of work. She offered to let us stay there on the cheap if I fixed the place up. Surfing in the mornings before work is sorely missed!"

Restoring his mother-in-law's house led to other offers of work from friends and neighbours in the local area, reigniting Dave's love of wood. Money that he had been saving in order to do a Masters Degree suddenly seemed like it might be well spent learning how to be better at doing what he really loved, and so the idea to take a furniture making course was born.

The Peter Sefton Furniture School

Deciding to hone his woodworking talents

The combined leg and backrest setting in a press jig

A completed leg section, prior to carving

Hand carving an elm saddle for his 'Toro' chairs

'Sands of time' – a black walnut and oak jewellery box currently in progress

was one thing, but how did he decide on the Peter Sefton Furniture School? After considering a few places, Dave had an informal meeting with Sarah and Peter Sefton to discuss the course, and was persuaded that theirs was the right learning establishment for him.

"I would describe their long course as being for the real world. Yes, it was intensive, but doing one full-on year meant I could get into a workshop much sooner than on a run-of-the-mill degree/college course that could take three years to complete. Peter recognises the importance of hand skills, but more importantly knows the industry extremely well and understands that proper machining and timber management makes for a successful business. Once I found out Sean Feeney would be teaching design, I was sure this was the school for me."

Dave's decision to take his woodworking skills to the next level and learn the fine art of furniture making was not taken lightly. Signing up to Sefton's Long Course was a serious commitment both in terms of time and financial outlay, but one about which he has no regrets.

"It was intense, and I loved it. I hadn't made any furniture before my studies. I was akin to a builder: lots of varied skills, which suited me well while doing up houses and building external structures", explains Dave, "But at the start I had so many bad habits with shop machinery, and really needed to work on accuracy in marking out. I'd never even seen a chisel below two inches wide! "I took so much from the school: they gave me the skills needed for fine woodworking, which I could then go out and improve upon."

Dave's moss river wall art has proved very popular

He continues: "More importantly, these skills and their guidance gave me the confidence to push the boundaries of what I can achieve with such an amazing material. Sarah Sefton (the brains of the operation) gave me some priceless advice on the running of a business in this industry. Peter and Sean took me from a total beginner with bad habits to a woodworker with the confidence to achieve my challenging designs."

Interestingly, he also feels that his time with Sefton and Feeney has changed his relationship with wood: "I'm a bit of a nerd when I get into a subject. I really got into the technicalities of timber and trees, their growth and ways of working with them. I'm considering arboriculture studies in the future, so I can source timber in the round and mill my own planks effectively."

After finishing his course at Peter Sefton's, Dave initially went to work with an experienced sculptor who had encountered the 'Toro' chairs at the School's end of year exhibition, and wanted to learn how to replicate the lamination technique used to create those exotic curves.

Leatham Creative Woodwork

Dave now works out of a shared creative hub at the Sylva Wood Centre in Oxfordshire. In this huge space he finds himself surrounded by many different crafts (boat builders, upholsters, table makers, carvers and more besides), and with a communal machine shop and "more coffee being made than it is humanly possible to consume," he feels at home here. He currently works off a rented bench, but hopes to eventually take up residence in one of the surrounding workshops, and can't talk highly enough of the Sylva Foundation: "I couldn't be happier, really. They're just brilliant; they make such an effort to help fledgling businesses become a success."

So far his new business – Leatham Creative Woodwork – is doing well: "I'm right at the end of making a huge black walnut and oak jewellery box. This has been a real labour of love and I'm really pleased with the outcome. I'm working on wall art constantly: the current concept is 'shorelines'. I use extremely figured timber and weave in living reindeer moss to create topographical inspired artwork, and these seem to be very popular, plus I have more designs agreed and ready to go. Next in line are a freestanding ash cabinet with oak inlay design, and a very unconventional set of contemporary garden furniture. Design-wise I am fascinated by asymmetry, and pieces of furniture that can be symmetrical in one position and asymmetrical in another. Trying to capture natural forms from flora and fauna and even geography seems to lead me and affect my 'style' of design."

The future

So what next for this bold maker, unafraid to challenge preconceptions about his craft? Perhaps business is one area where conventionality is the best option: "I'm still trying to find my niche and customer base at the moment. It all still feels completely unknown, but I'd just like to build a sound business so I can continue to do what I love."

And his ultimate goal? "A business that operates with hired management so I can pursue the craziest of commissions without going bankrupt!"

For now, Dave is content to enjoy his first taste of success, soaking up the attention his chairs have brought, the popularity of his art pieces, and just taking pleasure in his accomplishments as they come. As he says himself in typically self-deprecating style: "It's the little things that make me proud. Making fewer and fewer idiotic mistakes is encouraging!"

And it sounds like his connection with the natural world will always be there: "Nature seems to be the thing that informs me the most. I love the way things flow and move, and are constantly changing. Capturing that and putting it into a piece of furniture is what inspires me."

FURTHER INFORMATION

Dave's website can be found at:
www.leathamcreativewoodwork.co.uk

Beautiful drawer detail from Dave's side table in rippled sycamore

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WOODWORKER'S ENCYCLOPAEDIA PART 24

As he reaches the halfway point in this series, **Peter Bishop** pauses and reflects before exploring more terms beginning with the letter 'M'

We're about halfway through now, so I thought a little reflection was due. The information in this directory is drawn from a book I wrote about 30 years ago, which seems like only yesterday! To me it's similar to a return journey along a familiar path. I keep turning the pages and finding all these descriptions – some interesting and others not so much – but what I'm doing, for sure, is adding to my original text because things have moved on and I've learnt new things along the way. I hope you, as the reader, are enjoying it as well and, if you're like me, you'll be able to add to and expand on what is written here as time goes by.

Marking knife

If you require a bit of precision when marking out, you'll need one of these. There are a good number on the market so there's plenty of choice. Mine is a single bevelled edge, but, for marking both ways, there are double-edged variants available. Using a marking knife as opposed to a pencil gives a clearer line definition and you can, with a fine-toothed saw, start a cut off in the groove created.

Axminster workshop double-edge marking knife

Narex marking knife

Marking out

Marking out, or setting out if you wish, is preparing full size drawings from which you can scale and take measurements. It also means marking out joint positions, etc., on your working components. It's a key element in the production process and doesn't need to be complicated.

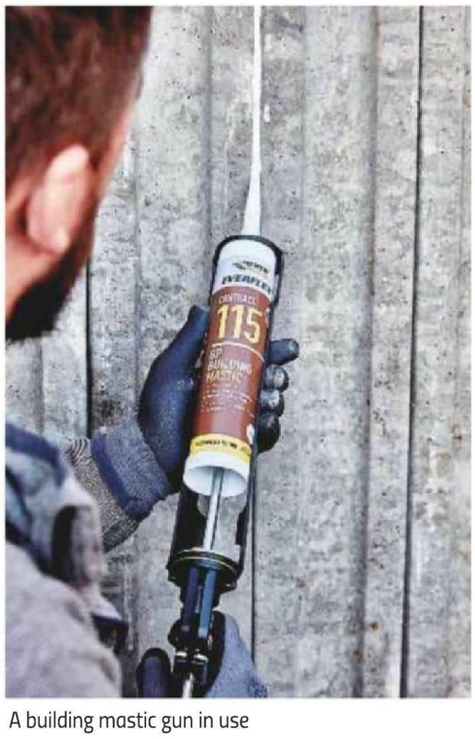
Marquetry

This is creating patterns and images from thin pieces of different types of materials. These are inlaid into the surface of the piece they are being applied to. The results are often very detailed

Regency style marquetry table

Boulle marquetry, which is the technique being carried out here, refers to the inlay techniques developed by the French craftsman André Charles Boulle in the 17th century

landscape pictures, etc., or complex patterns. In marquetry you can use just about anything for the inlays. Although it's most likely that different coloured woods will dominate, things like marble, stone and various metals are often employed to enhance an image. Look out for the definition of parquetry later on in the series.



A building mastic gun in use

Mastic

This is something that most of us would not be without these days. Mastics are flexible, durable and waterproof sealants for use indoors and out depending on their make-up – always be sure to check if it's for external or internal use before you buy. We'll use mastics to seal around windows and doors, fill cracks and gaps, etc., and they'll come in various colours. In tubes the mastic will be squeezed out using a special gun designed especially to take them. There are two lengths of mastic tube produced, so try and buy the longer gun that will accommodate both.

Match boarding

Sometimes abbreviated to 'matching' this thin tongued & grooved boarding is used as a light weight covering for walls, etc. It's usually not finished much more than 12mm thick

Redwood match boarding

and possibly around, say, 95mm wide. When calculating how much is needed to cover a specific surface area, the key measurement to take into account is the 'face' width. The face width excludes the protruding tongue because this is slotted into the next board.

Diamond matched veneer

Matched veneers

This is a term used when applying veneers with adjacently cut pieces. Not 'book' matched, as discussed previously, but creating symmetrical patterns. It is sometimes referred to as 'butt' or 'side' matching.

A sample of MDF

Medium Density Fibreboard (MDF)

We talked about MDF under the fibreboard heading, but let's expand on it a little here. I think you could quite happily call the introduction of MDF into the woodworker's world revolutionary: it's stable, solid, comes in big sheets, can be cut, sawn, painted, stained and veneered. You can even get water resistant stuff as well. In fact you can buy whole sheets with specific veneer faces on both sides. Some people love it, some hate it. Common sense should prevail. Of all the sheet materials available to us it's the most flexible, so, even though you might not like the look of it, you should consider applying it where it's suitable and fits the project you are building. For large surface areas, I sometimes use veneer-faced and solid wood-edged panels. Yes, it can be pretty repetitive but you can be confident it won't cup or distort. However, there is one caveat: like all wood products, MDF is carcinogenic – just think of all those mashed up wood fibres going into it – so please do wear a face mask whenever you are sawing, planing or sanding it.

Medullary ray flecks

Medullary rays

Growing trees, and the timber harvested from them, is made up of a number of different cell structures. The medullary rays are the cells that add stability and run from the centre of the tree to the outside. In some timbers, such as oak, if you look at a cross-section you'll see lighter flecks running through the growth rings. These are the rays that, when cut through, will provide the 'flower' figure we so associate with oak. To expose the medullary ray patterns, we cut along them creating what we call quartersawn wood.

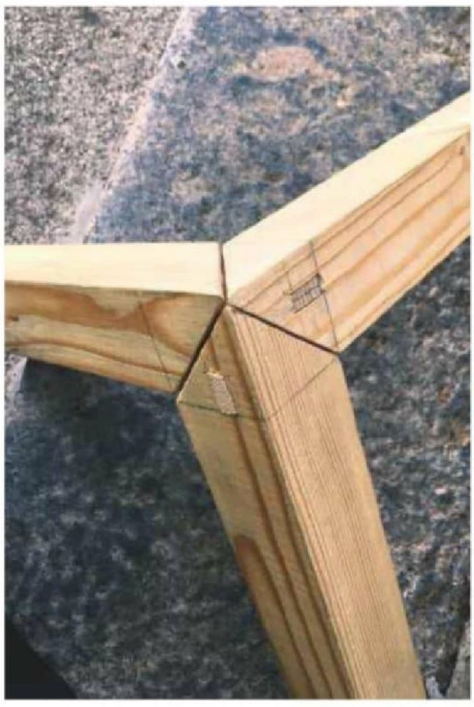
Metre or meter

This is one of the primary metric measurements. A metre contains 100 centimetres and 1,000 millimetres and is the equivalent to 3.28084 feet or 39.37 inches. Most woodworkers should be able to work in both metric and imperial measure. Metrification has been an ongoing objective for various governments in the UK since the 19th century! Back in the 1960s and '70s, there was a drive to make metrification mandatory. Our coinage changed – and we lost out overnight – but successive attempts to turn us metric failed. In fact, our leaders gave up in the 1980s and let us use whatever was most appropriate. Youngsters are taught in metric but a few 'oldies' like me use both. It depends on what I'm doing, but I'm quite happy either way.

Mineral streaks

All trees will be absorbing nutrients and minerals as they grow. Depending on how abundant these are, some will store the minerals in pockets within their structure. When the lumber is cut these pockets might be exposed as streaks in the face of the wood. As long as they are not large and only on one side, this will not be a problem. Just take a little care with your selection.

The mitre joint



A three-way mitre joint

Mitre

A mitre is usually where the ends of two pieces come together, each with a 45° angle on their ends, to form a right angle joint at 90°. There are many variations, some of which will use lesser or larger degrees on their ends to reduce or expand the total angle at which the pieces join. If it's not a right angle, the former is called an 'acute' mitre and the latter an 'obtuse' mitre.

Crown mitre box made from kiln-dried beech

Mitre box

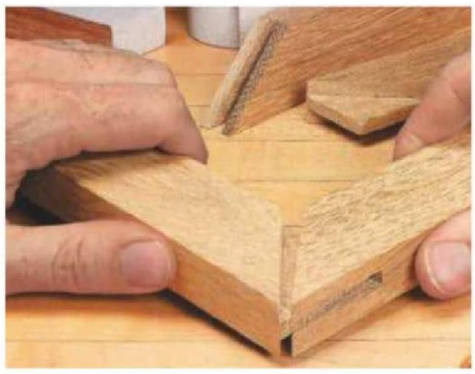
A simple mitre box is constructed from three pieces of wood with pre-cut saw slots that enable you to cut repetitive 45° angle joints. You can now buy preformed boxes, some of which will help you cut compound mitre joints. There are also special mitre saws used in sliding guides with boxes where you can clamp the workpiece firmly in place.

Stanley STA120600 clamping mitre box and saw

A frame mitre joint

Mitre joints

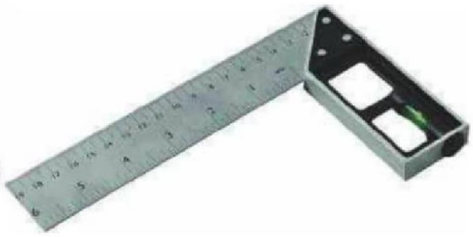
We'll often find simple mitre joints at the corner of frames; some of these will just be gled and butted up together but there are some more complex ones out there. Even the simple mitre joints will need strengthening at times. We can do this by inserting a flat dowel. For even stronger mitres, you can purchase special cutters that create an interlocked joint, which increases the surface area that the glue works on.



A mitred bridle joint

Mitre square

These marking tool bevels can have a fixed, 45° angle, be adjustable and/or slide and some will be dual-purpose with a right angle arm. Out of interest, you might also find on a few new hand saws a square and mitre angle as part of the handle design. I have a couple of different sized mitre squares in my workshop and choose one or the other depending on what I'm doing.



Silverline try & mitre square with spirit level

Mitre square by Dieter Schmid Fine Tools

Mm

A simple abbreviation, which can be used instead of the full version – millimetre.

Modulus of elasticity

All wood has the ability to bend and then return to its original shape, which is referred to as its modulus of elasticity. Wood technicians have calculated this and different ratios will apply to different timbers. They also call it the power of recovery of material, after strain or distortion, which is determined by laboratory testing. It's something to bear in mind if you are, for example, making a bow – you'd not want to use a light, brittle wood for that!

NEXT MONTH

In part 25, as Peter reaches the halfway point in this series, he decides it's probably time to start covering a few key headings in detail

CREATE YOUR OWN

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GESSO GEM

Colin Simpson's beech platter features a coloured and airbrushed rim, which is then textured using Gesso to create an unusual effect

1 Fix a faceplate to the middle of the blank

I like making large platters and either texturing or colouring the rim. There is an infinite number of ways that texture can be applied to wood and, in this article, I'm going to use a product called Gesso. Gesso is a paint mixture usually used by artists to prime canvas or wood to add a little texture, but more on this later.

Shaping the platter

Start with a blank – mine was beech and about 350mm in diameter and 50mm thick – and screw a faceplate to the centre of the side; this will become the top of the platter (**photo 1**). Use a 12mm fingernail profile bowl gouge to flatten the bottom of the blank. This cut is actually a scrape, using the bottom wing of the gouge and the flute pointing towards the wood. With the tool on its side (**photo 2**), start the cut in the very centre of the blank and gently pull the tool towards you using the bottom wing to make a pull cut. **Photo 3** shows the same cut from a different angle and you can see the shaving coming off the lower edge of the tool.

It isn't always necessary to true up the edge of the blank; this happens automatically as you shape the outside. However, this blank was out of balance and I had to turn it slower than I would have liked, so I used a push cut to true up the edge (**photo 4**); this is a bevel supported cut using the tip of the cutting edge. Next, I cut a foot on the base using the tip of the gouge to cut into the wood (**photo 5**) and then a pull cut to remove the waste (**photo 6**). Next, I shaped the outside of the platter to an ogee or 'S' shaped curve using a pull cut, but this time I had bevel support. Lower the handle and roll the tool up so the bevel starts to glide on the wood. Keep the shaving near the tip of the tool (**photo 7**), then cut a chucking recess using a parting tool (**photo 8**). Because I cut a foot on my piece, I needed to ensure that the chucking recess was deeper than the foot, which would give me the necessary strength in the wood for the chuck to expand onto.

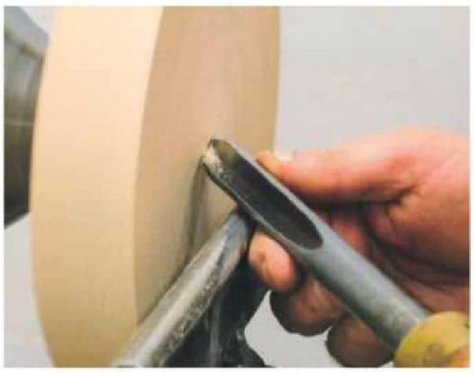
If necessary, clean up and refine the shape of the outside using a round-nosed scraper (**photo 9**). The position of the camera doesn't

show it well, but the handle of the scraper is slightly higher than the cutting edge – it's called trailing mode – and you must get shavings from the scraper (**photo 10**). If you are only getting dust, you need to sharpen the tool. Sand the outside of the platter to a finish – I power sanded down to 600 grit (**photo 11**), and then gave it a coat of acrylic sanding sealer (**photo 12**).

The front

Remove the platter from the lathe followed by the faceplate and mount it in your chuck using the recess cut in **step 8**. Flatten the top surface with a pull cut (**photo 13**), then cut the rim,

2 Use a swept-back bowl gouge to flatten the bottom...



3 ... making light cuts with the bottom wing

4 True up the edge with a push cut

5 Cut a foot using the tip of the bowl gouge…

6 … and the bottom wing to remove the waste

cutting from the edge towards the centre (**photo 14**). Do not remove the centre of the platter at this stage. I don't like perfectly flat rims, so mine is higher at the edge, sloping down towards the middle. Sand the rim using 120 grit – there is no need to sand any finer – and then give it a thin coat of Gesso using a cheap paintbrush (**photo 15**). The next step is best done with the piece off the lathe, so remove it together with the chuck and put it on a work surface. If you have a lazy Susan it will help you to rotate the piece. Put some Gesso in a plastic bottle which has a spout – an old glue bottle is ideal. Use the spout to draw a pattern onto the rim, just as if you were icing a cake. I drew random sized rings (**photo 16**), but choose any pattern you like. Complete the whole rim of the platter and then leave the Gesso to dry overnight.

7 Rolling the tool up until the bevel rubs will give a cleaner cut

8 Cut the recess for the chuck using a parting tool

Airbrushing

Photo 17 shows my equipment, which consists of a small compressor, a dual action airbrush and, of course, the paints. These are acrylic paints and I use Golden and Createx transparent colours. If you are spraying solvents, do so in a well ventilated area and wear a mask. Ideally you should use a spray booth. If you want to try airbrushing, you can buy a cheap brush and you don't even need a compressor as you can purchase the propellant in an aerosol can. Before spraying your piece, however, I'd strongly recommend practising on sheets of paper first.

There are two types of airbrush: a gravity feed one where the reservoir is on top of the brush and a siphon feed brush where the reservoir is underneath. Within this there are also single and double action brushes. The simplest – single action – releases the paint and propellant when the trigger is depressed. You pre-set the spray pattern – the volume of paint that is propelled – before starting. The double action brush provides more control. Depressing the trigger allows the air to flow and pulling back on the

9 Refine the shape and clean up the surface using a round-nosed scraper

10 You should aim to get very fine shavings from the scraper

11 Power sand the outside down to 600 grit…

12 … then apply acrylic sanding sealer

13 Turn the platter around and flatten the top side

14 Cut the rim, leaving some bulk in the middle of the bowl

15 Apply an even coat of Gesso with a brush

16 'Draw' on your pattern with Gesso from a bottle

17 My airbrush setup

trigger allows the paint to flow out. For this piece, I'm going to colour the area previously painted with Gesso. **Photo 18** shows me applying the first colour – blue – in a random pattern, but leaving some unpainted Gesso. I'm spraying the paint at an oblique angle so that more paint lands on one side of the high points of the texture, which will enhance the 3D effect. I'm spraying with the workpiece on my lazy Susan, but you could also remount it on the lathe.

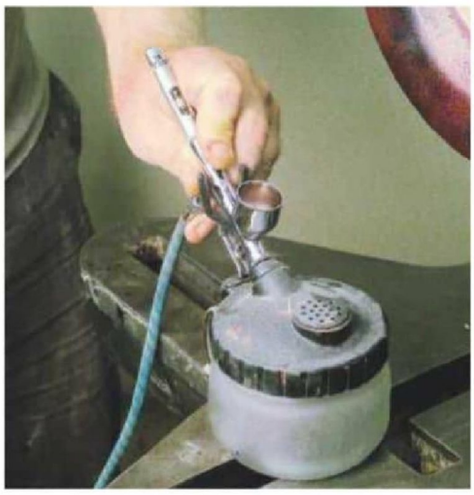
Next, clean the airbrush between colours. There are proprietary airbrush cleaners, but I use a diluted window cleaner in a spray bottle. I spray the cleaning agent into a special cleaning pot to prevent a fine mist of cleaner becoming airborne (**photo 19**).

Photo 20 shows the rim after I've sprayed the second colour – purple – onto the piece. Overlap this colour with the blue but also cover some bare Gesso. Clean the brush again and repeat this process with yellow, overlapping the colours in places (**photo 21**). Continue to alternate colours until you are satisfied with the result, then leave the piece to dry.

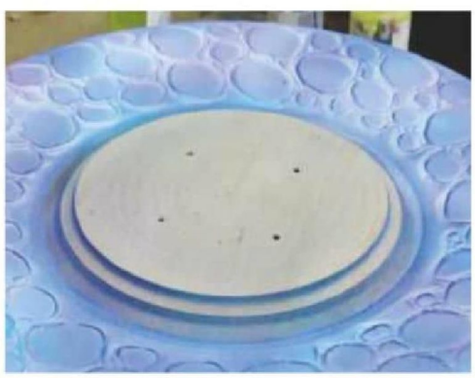
It's essential to clean the airbrush thoroughly after use otherwise you'll be left with a paint encrusted pile of junk!

When the paint is thoroughly dry, turn the middle of the platter out using a bowl gouge (**photo 22**), then sand the bowl area to a finish. Very lightly sand the high points of the rim to reveal some of the white Gesso (**photo 23**), then apply acrylic sanding sealer to the bowl part of the platter and, when dry, cut back with wire wool. If there is any overspray of paint on the back of the bowl, remove this with wire wool or fine abrasive. I didn't want to disturb the coloured rim of this piece so I decided to spray the whole platter with lacquer (**photo 24**).

18 Lightly spray the first colour randomly...



19 ... then clean the airbrush, spraying into a cleaning jar...



20 ... before overlapping the second colour in places...

21 ... and repeating for the third colour

22 Hollow the platter in the usual way using a bowl gouge

23 Lightly sand away some of the colour to reveal the white Gesso in places

24 Apply several coats of acrylic lacquer to finish

LETTERS

LETTER OF THE MONTH

MISNAMED SKILLS

A cabinetmaker in Denmark, 18th century

Dear Tegan,
Reading part 21 of Peter Bishop's 'Woodworker's Encyclopaedia' (November 2020 issue) touched on a subject that has been something of a problem to me throughout my adult life. I am a retired cabinetmaker with qualifications similar to Peter, and like him, it annoys me to be referred to as a carpenter, which is a very different skill.

Recently I met an obnoxious and rude American who asked me what I used to do for a living, and I told him that I was a cabinetmaker. After a moment's thought he replied: "So you're a carpenter." When I said "no" he told me that, in his country, I would be called an "ex lumber butcher," which I considered offensive. I replied that I was an ex nothing. You do not lose your skills on the day you stop work, and as I still make many things in my retirement, I will be a cabinetmaker until I die.
Best wishes, **K Jones**

Thank you very much for your email and I'm glad Peter's article resonated with you. It seems like the mislabelling of things in the industry is quite commonplace, and while this may be due to people not actually knowing the difference, I can't help but think that a lot of it is due to ignorance. You sound like you're rightly proud of your qualifications and working background, which is very refreshing to hear. It's great you're still putting those skills to good use even though you've retired, and long may you continue to do so. It's very important to be proud of where you came from, and thank you for flying the flag for cabinetmakers around the world.
Best wishes, **Tegan**

COLLAPSE OF BOOKCASE SHELVING

Hi Tegan,
Like a great many people, my wife and I have had to resort to the phenomenon of flat-pack furniture, which historically included six large items marketed as bookcases. All of these self-assembly units have been in constant use for over 20 years. Their construction allows for intermediate shelving to be placed at a variety of heights, resting on plastic supports. One central shelf and the topmost shelf are held in place by two through screws, supported at the rear by panel pins through a hardboard backing sheet. All of these bookcases use the topmost shelf, which is 6ft high, and carry a full weight of books.

Last week, a completely unexpected failure of one of these top shelves resulted in a serious collapse, which might have had serious consequences. It appears that throughout a score of years, the shelf was very slowly working downwards through the 'front' screw on each side until finally breaking through the outer veneer, with spectacular results. In our situation, a noisy collapse occurred at 2am, shedding many heavy files. The bookcase lies behind a piano stool, and the annual visit of the piano tuner took place eight hours later! He could have been injured.

HAPPY DAYS


Woodworker magazines from yesteryear

Hi Tegan,
A few months ago I received the latest copy of *The Woodworker*. I'm sure it can't be easy producing a magazine of this quality in these difficult times, so thank you for your hard work!

I recently bought 50 old copies of the magazine in an auction and have spent many happy hours looking through them – some date back to the 1950s but most are from the 1960s. How things have changed! The articles were always well presented and informative, but how I miss the colour pages (and a lot more of them) the layout and quality of paper! To be fair, reading the earlier ones it appears there were still paper shortages from after the war. There were quite a few articles on 'how to make a cigarette box' and any illustrations of the woodworker (always a man) shows him with a pipe in his mouth, presumably over a pile of fresh shavings. One feature was 'make your own circular saw' – no riving knife, or safety guard – which isn't something you'd dare publish today! Happy days! I will offer them on your 'marketplace' page once we are back to normal. So yes, I really do appreciate more than ever the great magazine that we have today. Thank you!
Best wishes, **Roy Barwell**

Hi Roy, thanks for your email. Your kind comments are very much appreciated and it's due to our readers, including yourself, that we are able to soldier on through these uncertain times. It's very important for us to keep the magazine's legacy going and it's amazing that it has survived through such turmoil. Many of our readers enjoy collecting past issues and even though things have changed over the years and health and safety has definitely increased, many of the projects, techniques and practices are still valid today. I'm so happy to hear you're still enjoying the magazine and thank you again for all your support.
Best wishes, **Tegan**

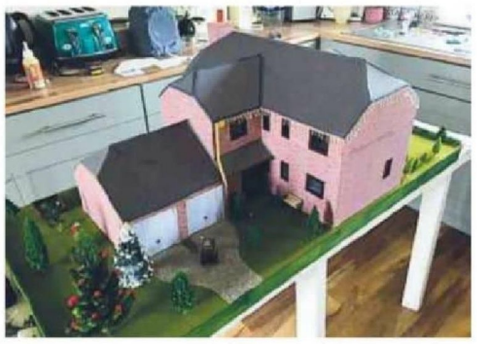

The aftermath of the collapse – as the otherwise full bookcase was against a wall, the protruding screw was removed by hacksaw – the metal L-plate was screwed to the vertical side...


... raising the shelf – a bolt and nut were fixed to the horizontal part of the L-plate for the shelf to rest on


An intermediate shelf showing signs of pre-collapse, given remedial support by the metal L-plate

The attached photos show the result of the failure; my remedy of this particular shelf using an L-plate and nut-and-bolt, and an example of one of the intermediate shelves in the process of failure, which I have now supported with L-plates. I have checked the bookcases and all need remedial attention, both at the top, and centre.
Best wishes, **Trevor Boult**

MODEL HOUSE



Tony recently constructed this house build using plans from an old issue of *Practical Woodworking*

Hi Tegan,
I wanted to let you know that I recently used the plan, included within the November 1991 issue of *Practical Woodworking*, to make the house shown in these photos, which was designed by Richard Blizzard. To construct the project, I used a plain foam board with paper backing on each side. Due to the size of the board, I resized the measurements to fit (½₁st of the full scale). I used paper prints to create the walls, internal and external, to achieve the effects. I also added lights inside and out to create a night shot as you can see here. It would be nice for Richard to see what I have made if he is still around.
Regards, **Tony Steele**

Hi Tony, thanks for your email. It's great to see the house you've made but I'm afraid I don't have any contact details for Richard. I'm happy to publish it in the magazine in the hope that he may see it, or indeed someone else may be able to pass this on to him. Let's see what we can do!
Best wishes, **Tegan**

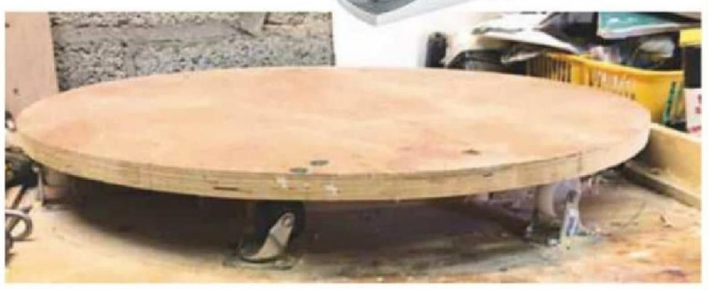
The addition of lights really helps to make the project stand out

READERS' HINTS & TIPS

For the next 12 issues, in conjunction with Veritas and BriMarc Tools & Machinery, we're giving one lucky reader per month the chance to get their hands on a fantastic **Veritas apron plane with PM-V11 blade**. Ideal for trim carpentry and featuring a ductile cast-iron body, its unique side wings allow for a comfortable, firm grip. To be in with a chance of winning this great piece of kit, just send your top workshop hints, tips or pointers – indeed anything that other readers may find useful in their woodworking journeys – to **tegan.foley@mytimemedia.com**, along with a photo(s) illustrating your tip in action. To find out more about Veritas tools, see **www.brimarc.com**

WOODEN TURNTABLE FOR A CRAMPED WORKSHOP

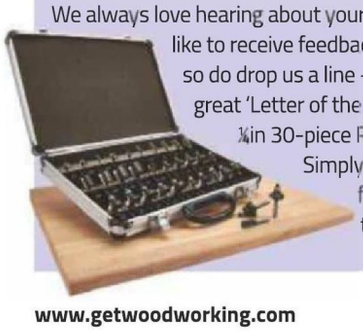
Hi Tegan,
An idea just came to me, which I recall from around 10 years ago, when I was trying to find ways of fitting more equipment into my cramped garage. I thought that with a turntable fitted on the end of my bench, I would be able to have two or even three extra pieces of equipment, depending on their size, and just swing it around to whatever I needed to use at the time. The turntable is 29in diameter and 2.5in above the bench, mounted on a large 'lazy Susan' bearing and supported by upturned castors (static and swivel). The turntable is 24mm thick – it needs to be of a fair thickness in order to support the weight of the machinery it will hold. The lazy Susan bearing needs to be a minimum of 12in diameter in order to spread the load. To aid the support on the outer edges of the turntable, as can be seen in the photos, I used eight upturned castors, with the wheels supporting the underside, and evenly spaced with alternating fixed and swivel variants. It has a dowelling peg to hold it steady while working, which goes through holes drilled into the turntable and bench. This turntable has been used with different configurations of machines for about 10 years, latterly of a bench-top pillar drill, mortise machine and tool honing machine, but recently, following a clear out, I've been able to extend my working area and it's now home to a mortise machine plus a mitre saw. As I say, this is a handy tip if you're stuck for space.
Best regards, **Martin Pomroy**



The workshop turntable awaiting a piece of equipment

The mitre saw fits like a glove

WRITE & WIN!



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

A LABOUR OF LOVE

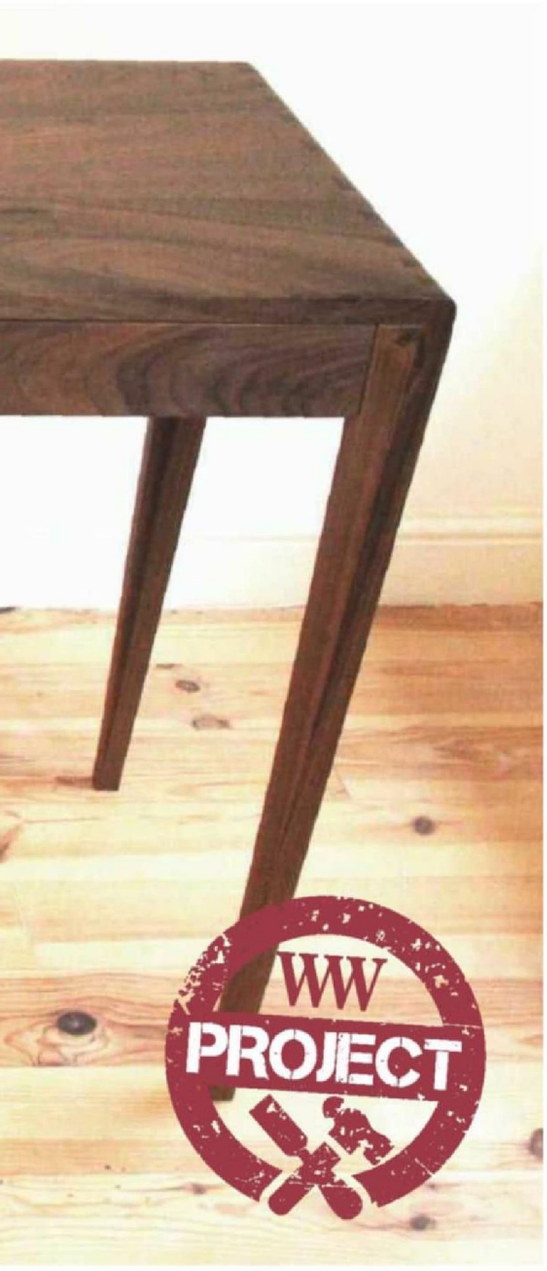
Deciding to make her own writing desk from scratch, **Emily Robinson** shares the highs and lows she encountered during this challenging build

Writing desks have always been one of my favourite types of furniture, so when I finally had space for one in my flat, I decided to make one instead of buying it. I was making it in the evenings after work, so it became a year and a half long labour of love, patience, and occasional swearing, for me and my tutor Helen, from the London School of Furniture Making. The design came together fairly quickly; I found many of the desks I'd seen for sale were too boxy or heavy, and I wanted a sleek, simple

1 Marking out the pins

2 Cleaning up all those dovetails

3 The completed leg pins ready for gluing up



design, as well as the opportunity to experiment with dovetail patterns, diagonals and curves.

I also wanted to include slim drawers for bits and bobs but avoid setting them in a chunky frame, hence the final design in which the drawer fronts are made from a single piece of wood overhanging an internal frame. I've always loved the darker, warmer colour of walnut, so decided to use this throughout the build of the whole desk. The dimensions were easy to choose and the desk was designed to fit a particular space – the final dimensions are 450mm deep × 770mm high × 1,270mm long.

Side-section

Three main sections (the top and sides), which create the outer structure of the desk, are each comprised of three pieces of wood, with carefully matched grain patterns to ensure the joints disappear as much as possible. What surprised me is how much the grain changed after we glued the sections together and put them through the thicknesser, so the final pattern, which now shows, is quite different from the one I selected when originally matching the grain.

4 Routing the sliding dovetails for the drawer frame

5 Gluing up the drawer frame

The side-section, which connects the two legs at each end, allows the dovetails to run the full depth of the desk. I wanted the dovetail joints to be a feature, so experimented with an expanding pattern of tails diminishing in size, with the largest joint in the middle, and then rounded off the dovetails after gluing.

Legs/sides

The legs/sides were roughly cut before gluing, and I used a router to create the final, slimmer shape. The curve at the top of the legs was not in the original design, but was created accidentally by the router. However, since it complemented the curved dovetails, I decided to leave it in.

Before gluing the dovetails in place, I made the frame on which the drawers are set using biscuit joints – ensuring that this was both flat and square was much more difficult than I had anticipated, and took a lot of careful adjustments after the clamps were in place.

The frame, inside of the legs and underside of the desk, were fully sanded to 400 grit, then connected to the leg/side-sections using a sliding dovetail (created with a router) and secured with a screw at the back; this would allow the frame to expand and contract without creating tension with the outer frame. The inside sections of the frame, which were to be exposed to the air, were treated with oil.

As this stage, when looking at the desk front-on, I felt the legs were very slim and didn't match the expanding diagonal shape of the legs when seen side-on. For aesthetic purposes,

6 Slotting the frame for the drawers into place

7 The frame fitted!

8 Do these dovetails really fit?!

9 I breathed a sigh of relief after the dovetails were securely in place

10 The desk top dovetails after planing to round off the edges

11 Gluing on the sloping panels to complete the legs (with a multitude of clamps!)

12 Testing the size of the drawers before gluing up...

13 ... with the drawer bases still missing!

I decided to glue slim triangles of wood onto the front of each leg (with the use of many clamps), in order to increase the sturdiness and match the shape seen at the side of the piece.

Drawers

This, however, added a layer of complication when creating the drawers, as the end of each side drawer also had to be a diagonal to match the angle of the legs. We considered creating end drawers with diagonal sides, but to avoid unnecessary complications, we decided to retain rectangular drawers and use the drawer fronts to meet the diagonal of the leg. I chose to keep the drawers deliberately slim, as although this obviously limits how much you can store in them, I didn't want to compromise the overall shape and lightweight feel of the desk, which I had spent so long developing.

The backs of the drawers were constructed using dovetails, but we used a biscuit joint to attach the drawer fronts, as the front of each drawer is larger than the main drawer section in order to hide the frame in which these sit. I then cut a finger-grip into the front of each drawer, giving an area to grip and pull this away from the frame. Before gluing up, the inside of each of the drawers was sanded to 400 grit,

14 The glowing disassembled drawers before gluing up

15 Aligning the drawer fronts with the frame prior to sanding

16 The final assembled, but untreated, desk

17 The desk having received its first coat of oil

18 The final version of the dovetails

19 The desk in its final resting place

then treated with shellac and wax, with the outsides sanded and oiled after gluing.

Fitting the drawers into the frame was much more time consuming than I'd anticipated. Although I had measured the drawers to size, much planing went on to ensure that each ran smoothly within the frame. For the overall design, it was also important to ensure that the gaps between the drawer fronts were as small and even as possible, which took a lot of checking and re-planing in order to get right. I then re-sanded the entire external area of the desk to 600 grit, oiled it, applied three more coats, smoothed it off using wire wool, before finishing with two coats of wax.

Conclusion

Although it took a lot of thinking and planning to figure out how to deal with all the curves and diagonals included in the desk, which made the making process more complicated and time consuming, I'm glad that I remained faithful to the original design. Overall, I'm really happy with the final result and the desk now sits in place with the grain glowing under the lights.

20 The drawer fronts, made out of a single piece of wood

21 A side view of the tapering legs

Robert Sorby

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Puzzle Cabinet MASTER

For award-winning furniture maker **Craig Thibodeau** refinement and complexity are key, from creating exquisite marquetry to incorporating complex automated mechanisms into bespoke pieces, he is always striving to reach new heights

I came across Craig Thibodeau's work purely by chance, and what instantly jumped out at me were not only the luxurious little touches he adds to his work and the exquisite marquetry detailing, but also the sheer complexity of the mechanical/movements he incorporates into his puzzle pieces. Inspired by the furniture of Abraham and David Roentgen from the late 18th century, this is an avenue he has been exploring in greater depth over the past six years. Craig's obvious skill in working to such fine detail and fusing increasingly creative ideas means he is now regarded by many, especially his clients, as something of a puzzle cabinet master.

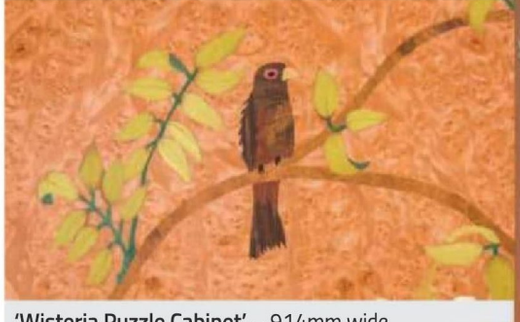
'Spinning Puzzle Cabinet' – 1,067mm wide × 600mm deep × 1,168mm high – walnut, figured anigre, Sitka spruce and various marquetry woods. Designed in collaboration with Robert Yarger (Stickman Puzzle Boxes) for a puzzle collecting client, once the initial puzzle is solved the cabinet can be easily rotated 360°. As it rotates, drawers begin to open and close automatically around the perimeter. At each stage of rotation, additional puzzles need to be solved in order to access other areas of the piece

'Spinning Puzzle Box' – 406mm wide × 305mm deep × 229mm high – wenge, curly sycamore, Sitka spruce and Douglas fir. Designed for magician Chris Ramsay as a place to hide several of his signature playing card decks, the box includes 16 drawers of assorted sizes, all of which are hidden behind a variety of puzzle mechanisms and automated movements. You can watch Chris solve the puzzle in this video: **https://youtu.be/Obtv_vi5McU**

A professional furniture maker for some 25 years, Craig explains that he worked in engineering after graduating and his interest in woodwork was only something he began to explore as an evening and weekend escape, and then it started to grow.

Going back to his childhood, Craig recalls his father as a hobby woodworker who built a variety of furniture and accessories for the family home: "I didn't realise at the time how lucky I was to be exposed to a wide range of tools at such a young age, and I don't remember even using the workshop much while I was growing up, but I'm sure there were many times that I was drafted into being a shop helper."

As his interest in furniture making developed, Craig began to explore the business side of things in an attempt to generate the necessary capital to make it a viable profession, and within a few years he had secured enough side work building furniture that he decided to make the leap to go full-time: "Luckily I'd been able to convert a nice two-car garage into a decent workshop to start my new career," he tells us. He expanded his workshop numerous times over the next 10 years before moving into a larger, more industrial unit close to home. As Craig explains: "I'm essentially self-taught minus a few week-long seminars on marquetry."



'Wisteria Puzzle Cabinet' – 914mm wide × 508mm deep × 1,778mm high – Honduran mahogany, maple burl, Amboyna burl, walnut burl, walnut, sycamore, olive ash and various marquetry woods. Also designed in collaboration with Robert Yarger, as different parts of the puzzle system are solved, two moving components automatically open to reveal a variety of additional small puzzles, which also need to be solved. The most complex of these is the magnetically-activated clock mechanism, which unlocks a series of drawers

Learning from the experts

But Craig wasn't satisfied with just making ordinary pieces of furniture, he wanted to elevate his work by incorporating various inlay and marquetry techniques, which would not only make him stand out from the crowd, but also help to showcase his skills. After all, in such a competitive marketplace, creating a niche and going against the grain, while often a risky strategy, can definitely pay dividends in the long run. So this furniture maker decided to undertake training in classical marquetry, where he studied with Paul Schurch and Patrick Edwards, both modern masters of the medium. After enrolling in a week-long class with each, he felt he'd learnt enough to take things to the next level, as he tells us: "My marquetry work developed slowly over a few years after taking those

'Watch Winder Cabinet' – 610mm wide × 610mm deep × 1,219mm high – wenge, redwood lace burl, mahogany, ebony, brass and various parquetry woods. Designed for a client who needed a storage cabinet for a variety of items, this piece features various automated opening compartments, which are accessed via four buttons in the upper trim. Each button activates a different mechanical compartment, which opens automatically. Each of the compartments are divided into a variety of spaces for storing jewellery and other personal items

classes. I built a number of speculation pieces to increase my skill level and those were well enough received that they generated a few additional marquetry pieces." Looking back, it's clear to see that things grew from there with new pieces attracting new clients, and while there was no real plan to fuse marquetry and furniture beyond the desire to continue creating new work in both mediums, this was obviously a notable turning point in Craig's professional career.

Today, Craig loves to incorporate luxurious materials into his work, including a variety of precious and semi-precious stones, such as opals and ammolites, which have brilliant sparkle that grabs attention. Unsurprisingly, he's no stranger to best of show awards but winning the grand prize in the Veneer Tech Craftsman's Challenge really attests to this furniture maker's immense skill.

Aside from other additions such as mother-of-pearl and brass, you cannot overlook his timber choices, as each piece is hand-selected for its wonderful texture and grain pattern – something Craig clearly has an eye for. His favoured timber is mahogany, used in much of his work; not only does it have a wonderful texture and grain, but it also makes an ideal frame around decorative veneered panels.

Pushing the envelope

In terms of inspiration, Craig explains that he looks to the great James Krenov and Jacques Emile Ruhlmann, both of whom have had strong influences on his work: "Krenov's work displayed such precise detail and grain selection and I attempt to have both precision in my joinery and harmonious grain orientation in all my furniture." Similarly, he says that Ruhlmann is a fantastic example of someone who takes furniture to an extreme, with the most precious materials and endless labour used to create

'Art Deco Chess Table' – 622mm square × 864mm high – Macassar ebony, bubinga, holly, ebony, mother-of-pearl and jatoba. This chess table features a playing surface made up of bubinga and holly squares framed with ebony and holly inlay. There is one drawer for chess piece storage and a slide-out tray decorated with inlaid mother-of-pearl, which holds captured pieces during the game

CRAIG'S TRADE SECRETS

- If you're interested in pursuing a career in furniture making, I highly recommend getting some formal training in the subject. For a very long time I had intended to enrol at the College of the Redwoods and study under James Krenov, but unfortunately that ended up taking a back seat to making a living and I just moved on being self-taught
- Buy the best tools you can afford. Cheap alternatives aren't worth the money you pay for them and good tools will last a lifetime. I've become a great fan of Festool products. I don't like everything they make but certain pieces of kit, like the Domino and Rotex sander, are fantastic and make furniture making much faster and easier

pieces of supreme quality: "That is something I strive for daily in my work; I want each piece that leaves my workshop to be better, more precise and more unified than the last." Craig says he has no desire to simply stop innovating and make work of mediocre quality just because a client will pay for it; he wants his work to excel in every way possible and that's what keeps him going. Here is a craftsman who strives for the very best, and it shows in each and every piece he makes, especially when it comes to his puzzle furniture. These pieces allow him to not only showcase a multitude of skills, but also explore a more technical side, through an understanding of complex mechanical movements and mechanisms. As mentioned previously, Craig's interest in David and Abraham Roentgen's ground-breaking work has also been a great source of wonder for him: "I find it simply amazing that they were able to create furniture so complex yet with so little technology." He recalls completing a simplified Roentgen-inspired cabinet a few years ago and being stunned at how a mechanical moving piece could be built without the aid of McMaster Carr, the internet or CNC software.

Owing to his intrigue in the Roentgens' mechanised work – their 'Berlin Secretary Cabinet' was likely the most expensive piece of furniture in 18th century Europe – and as his repertoire and skillset grew, Craig found himself being commissioned to make more and more pieces in this field, which today are enjoyed and owned by collectors the world over. This highly complex work gives a nod to the past while featuring a modern twist in the form of sequential discovery puzzles, which are incorporated as part of the furniture components themselves. Using his magnificent 'Wisteria Puzzle Cabinet' as an example, these can be in the form of hidden drawers and secret compartments, hidden mechanisms, internal elevators, and even multi-piece keys, which must first be uncovered, assembled, and then reused.

Craig explains that on pieces such as this, he collaborated with well-known puzzle maker, Robert Yarger (AKA Stickman), who in his words "was able to bring a master puzzle maker's vision to the project." Unsurprisingly, aside from the creativity that goes into the automated elements, Craig uses his amazing know-how to adorn this cabinetry with exquisite marquetry imagery, often staying true to his love of nature through the depiction of flowers, leaves, butterflies and birds, for example.

Craig describes his furniture making style as "having the clean lines of more modern Arts & Crafts work with subtle curves added for interest." He says that much of his work also falls directly into the traditional Art Deco realm, which is testament to the luxurious materials, outstanding finishes and precise, highly refined veneer work that goes into their creation.

Industrial workshop

So where are all these wonderful pieces created? Craig works out of a 1,500sq.ft industrial basement, which has 13.5ft ceilings and an abundance of light and power. He says that this allows him the flexibility to, when the need arises, work day and night on projects of nearly any size from small work, such as jewellery boxes, to furnishing an entire house.

In terms of what's in the workshop, he's recently finished a puzzle cabinet featuring Aspen tree marquetry on a curly maple background, and no doubt has various other commissions in the pipeline. Not only is his workshop immense, but it's kitted out with a wide variety of equipment, and Craig's no stranger to tool and machine modification. For example, his shop-made curved edge sander is made from a bench-top belt sander turned 90° and bolted to a wall. He explains: "I placed a curved platen behind the belt and built a table to support my work. I find it's the most useful tool I have and it saves me endless hand sanding and planing of curved edges."

Craig regularly uses a mixture of both hand and power tools and finds that whichever gets the job done quickly and efficiently is the best for that given task. Although a fan of dovetails, he almost never cuts them by hand, but cannot deny that Krenov's are a thing of beauty.

The Craft of Veneering

From talking to Craig, I get the impression that he isn't a maker who shies away from sharing

'Gardenia Marquetry Sideboard' – 914mm high × 406mm deep × 1,829mm wide – wenge, block figured anigre, quartersawn maple, ebony, pau ferro, boxwood, maple, poplar, holly and anigre. A large demilune sideboard in wenge with marquetry imagery of gardenia flowers on a figured anigre background, flowing from a central point in the top down and across the front panels. The piece has anigre feet and anigre inlay in the legs and several mother-of-pearl and abalone butterflies. The interior is veneered in quartersawn maple and the drawers are all maple

his wisdom, but rather someone who derives pleasure from passing on their knowledge and creativity to others. He's been a contributor to *Fine Woodworking* magazine for many years and in 2018 wrote *The Craft of Veneering*, which makes his world-class veneering and marquetry techniques accessible to woodworkers of all skill levels. In his words: "My goal was to compile my many years of veneering knowledge into a single publication in the hopes that it would make the veneering process easier for future woodworkers." And with Craig at the helm, those discovering woodworking and furniture making in particular are sure to not only be inspired, but also provided with the tools required to ensure these skills and techniques are kept alive and continue to be passed down through generations.

In fact, when he's not writing articles and books, Craig likes to use his social media platforms, especially Instagram – **@ctfinefurniture** – to share his work with others. He regularly posts videos documenting the making of a piece or explaining a technique, such as creating some of the hidden details in his puzzle cabinets.

When asked about how he sees his career developing, Craig says he's keen to carry out more exploration into mechanical and puzzle furniture as well as keep pushing his work to higher levels of refinement. Coming from a maker who is already at the top of his game, this may be a difficult feat but we cannot wait to see what he produces next.

In the meantime, to learn more about Craig's pro tips for creating wonderful marquetry designs on your work, turn the page.

FURTHER INFORMATION

To see more of Craig's exquisite pieces, visit his website: **www.ctfinefurniture.com**

'Dogwood Flower Marquetry Cabinet' – 2,134mm high × 559mm deep × 1,244mm wide – wenge, ash burl, curly maple and quartersawn maple. The largest marquetry piece Craig has made to date. The marquetry imagery depicts white dogwood flowers and branches on an ash burl background, which is framed in solid wenge. The dogwood flowers and branches flow from the top cabinet down across the counter and all four front doors. The interior is veneered in curly maple for contrast with the ash burl veneered exterior. There are four maple drawers in the lower cabinet; two that are visible and two more behind the lower drawers

Craig's workshop, which houses most of his tools. "I have a variety of power tools including an 8ft sliding table saw, 254mm Unisaw, 508mm bandsaw, 406mm bandsaw, 100mm edge sander, 2ft curved edge sander, 330mm planer and a 203mm jointer". There's also a 3hp cyclone dust collector on the left just out of camera shot, plus a drawing area and vacuum table, also shown on the left

TIPS FROM A MARQUETRY MASTER

Want to learn some coveted marquetry trade secrets from a pro? Fine furniture maker and marquetry guru **Craig Thibodeau** tells all here and shows us the techniques employed for some of his most well-executed pieces

For the past 12 years I've been incorporating marquetry and parquetry imagery in the form of flowers, branches, animals and geometric patterns into some of my furniture.

Marquetry/parquetry is the craft of covering a structural carcass with veneer, thus forming decorative patterns, designs or pictures. Materials associated with marquetry have included wood, ivory, bone, mother-of-pearl, brass and others. My marquetry furniture combines the structural geometry of a man-made object with the asymmetry of nature represented in flower/leaf patterns and motifs.

Traditional methods

The majority of the marquetry veneer patterns in my work are cut in the traditional 18th century French Boulle method, also known as the packet cutting method. The Boulle method requires cutting all the elements of the design simultaneously with the background. Cutting is carried out on a chevalet de marqueterie, or marquetry donkey, which is of French design and also from the 18th century. The Boulle method can also be carried out using modern scrollsaws.

Specific components are then shaded with hot sand to create the illusion of depth and shadows. The veneer work is then glued to the furniture carcass, using a combination of traditional hide glue and modern glues, including epoxy, urea formaldehyde and polyvinyl acetate.

Natural flow

Incorporating marquetry or parquetry images into a custom piece of furniture can add considerable time to the design and construction process, but it allows the client to possess a piece that is truly unique. Each marquetry design is hand-drawn leaf-by-leaf and flower-by-flower to create imagery that flows naturally and is true to the artistic vision of the project being created. These marquetry designs typically begin with photos of the shapes and patterns of the flower and leaf design that are chosen. The process then progresses into hand drawings that go through many revisions as the lines and shapes of the individual design components are finalised. These final drawings are the cutting template for the marquetry veneer packets and are used throughout the construction process to guide the design to its final finished shape.

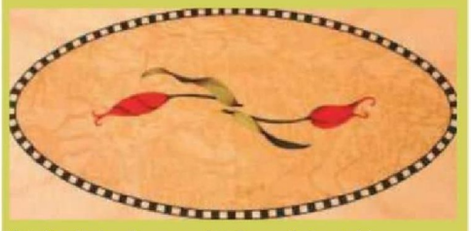
I see the addition of decorative marquetry as a doorway into unique and exciting visual forms and more expressive freedom.

AN EYE FOR DETAIL

I have perfected my technique for creating flower scenes in marquetry, as you can see here

The gladiolus flowers look almost lifelike

My 'Gardenia Sideboard' features gardenia flowers flowing from a central point on the top all the way down the front panels



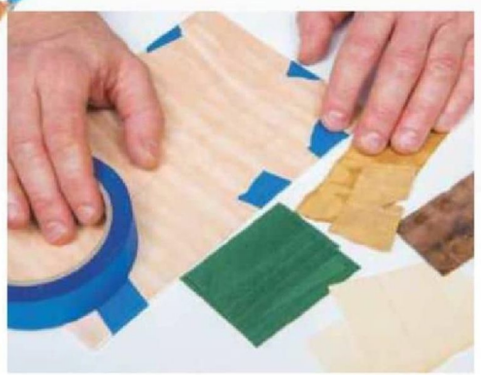
A tulip design from an Art Deco dining table

Flower detail on one of my buffet cabinets

FURTHER INFORMATION

Craig's book, *The Craft of Veneering*, is lavishly illustrated and includes everything you need to know about using veneer – how it's made, why and how you should use it, plus tips for combining various techniques to create exciting new work

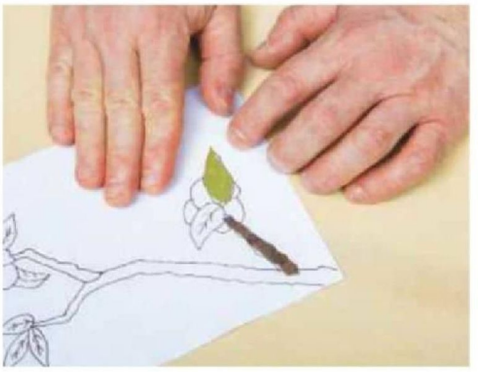
Web: www.ctfinefurniture.com



1 Once you've made a line drawing of your intended marquetry image and glued it down, tape the background veneer onto another piece of cardstock

2 Make sure the small pieces of veneer you use are larger than the piece you're cutting – go for a rule of 25mm larger

3 Using a scrollsaw fitted with a 2/0 blade on a low setting, start with the outside pieces and cut each part, one at a time



4 After sifting through the small stack of cut-out parts, select the one you want to use in the final marquetry picture

5 To add depth to the picture, sand shading can be used. Carefully dip the edges in the hot sand, one at a time

17 STEPS TO PERFECT MARQUETRY

Here I'll take you through the steps for creating a marquetry design found on one of my pieces of furniture – in this case, a dogwood flower

1 Start with a clear line drawing of your intended marquetry image and then proceed to spray glue the drawing onto a piece of cardstock.
2 Tape the background veneer onto another piece of cardstock using pieces of blue tape around the edges (**photo 1**).
3 Begin cutting and taping small pieces of coloured veneer to the background in the exact location they will be on the final drawing.
4 The small pieces of veneer should be larger than the marquetry piece that will be cut. Typically I make mine 25mm larger all round than the piece they represent (**photo 2**).
5 Once all the different veneer pieces are taped in place, tape the cardstock with the drawing on top of the background veneer assembly. Tape tightly all around the edges.
6 I use a DeWalt scrollsaw with the speed set low and a 2/0 blade to cut my marquetry. Start with an outside piece and cut the parts out one at a time (**photo 3**).
7 As each piece is cut, remove the small stack of parts and select the one to be used in the final marquetry picture (**photo 4**).
8 Place the selected part on a copy of the marquetry drawing in the correct location.
9 Once all the pieces are cut, open the taped packet and carefully remove the background veneer.
10 Turn the background veneer glue side up and apply a layer of blue tape to the entire sheet of veneer.
11 Turn the background right side up and begin inserting the cut pieces in their locations until the image is fully assembled.
12 To add some depth to the marquetry picture; individual pieces may be sand shaded in a pan of hot sand.
13 Remove each piece to be shaded, one at a time, and carefully dip the edges in hot sand until the correct amount of burning has taken place (**photo 5**).
14 Dip your fingers in a cup of water and apply them to the shaded veneer piece; this will reintroduce moisture to the veneer.

6 To reintroduce moisture to the shaded veneer, dip your finger in a cup of water and apply to each piece of veneer

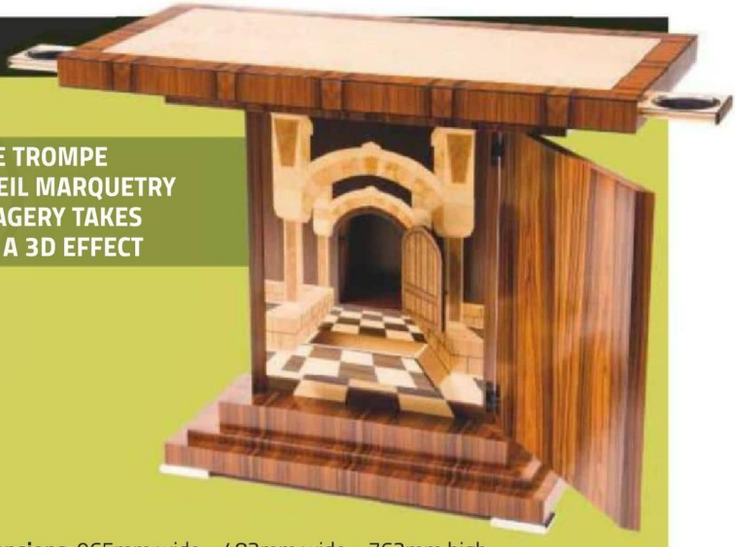
Next, place the veneer back onto the background tape and weigh it down with a heavy board (**photo 6**).
15 Once all the pieces are shaded and dry, apply a layer of blue tape across the entire show face of the marquetry picture.
16 Flip the veneer over and remove the blue tape from the back side.
17 You're now ready to glue the marquetry to the substrate of your choice.

MARQUETRY CASE STUDIES

'ART DECO PUZZLE CABINET'

Dimensions: 1,067mm wide × 457mm deep × 864mm high
Materials used: Etimoe, Amboyna burl, curly sycamore, maple burl, ebony and various marquetry woods
Description: This piece was designed for a puzzle collector and incorporates several puzzles and hidden details in the construction. There is a 25-piece sliding tile puzzle with a marquetry picture of two birds on some flowering branches in the top. It is hidden by a sliding cover, which is opened with a hidden magnetic key. Next to the puzzle is a secret compartment with a hinged lid that opens by pressing a small button hidden under one of the sliding puzzle pieces. The front doors have a series of 13 randomly placed sliding locks; holding them closed and sliding the correct one allows each door to be opened with the magnetic key. Overall, this was a fun piece to build and I'm looking forward to making more like this in the future.

THE TROMPE L'OEIL MARQUETRY IMAGERY TAKES ON A 3D EFFECT



Dimensions: 965mm wide × 483mm wide × 762mm high
Materials used: Pau ferro, quilted maple, Macassar ebony and various marquetry woods
Description: This Art Deco table marked my first exploration into Trompe L'oeil marquetry imagery. The commission itself began as a nice Art Deco style table without any of the extra details. To that base I added two pop-out drink trays in maple and ebony with polished stainless steel inserts. My client and I then began discussing what to do with the interior space of the central column. A variety of ideas were talked through until the client settled on a Trompe L'oeil image hidden behind a secret door with a couple more secret areas hidden in the image. We worked out a system of embedded magnets that would hold pieces in place but also allow them to be opened with a special magnetic key. The door is held closed by four magnets and there are additional magnets buried inside the hidden drawer and the outside face of the secret door. I decided that the special magnetic key should be hidden somewhere on the outside of the table so it could be accessed easily but not seen. The key itself has been veneered to match the surrounding wood and is spring-loaded, so a gentle push makes it pop out. It can then be used to open the main secret door and also to pull out the hidden drawer. The small door in the image leads to an enclosed space with a polished floor and arched ceiling. The veneer for the walls and ceiling gradually change to darker colours as they go deeper into the cavity, thus increasing the sense of depth.

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THE BEE'S KNEES

Peter Benson's 'lockdown' beehive is constructed using a variety of recycled materials in a novel topbar design

"A swarm of bees is in our compost bin!" was the call from my niece, "can you build us a beehive quickly?" She assured me that their chosen design was "simple," having been developed for African bee-keepers. We shared photos and discussed sizes and expectations.

We were at the height of lockdown and there were no shops or wood-stores open near my home, so the hive would have to be constructed from materials that I had on hand. It was a tribute to my old-fashioned hoarding tendencies that I was able to find everything required! Even when COVID-19 restrictions were slightly eased, the only materials I needed to buy were three hinges and stain for the outside (**Fig.1**).

The tub

The tub, or body of the hive, required several boards about 1m long, edge-jointed to build up sufficient width. I went foraging around the workshop, stacking potential planks from various sources – a bed frame, a bookcase, some pallets, etc. I felt that I should be somehow recording the provenance of each piece on the wood itself, but the bees would not notice. Incidentally, only the exterior is stained, as there were to be no chemical finishes on the inside, so there the origins of the pieces are more evident (**photo 1**).

The tub cross-section is a trapezoid, with the bottom the narrow part, and the sides flaring towards the open top. The top will later be closed by the lid or roof, hinged along one side. The bottom is cut a bit longer than the sides, and this creates a protrusion, or landing strip at one end, for the bees to land on. Once the hive was installed, the new owner found that he had to reduce the width of the access slot, to assist the bees in keeping out marauding wasps.

The ex-bookcase pieces came with blind holes for the shelf supports, so I filled these to provide an even surface (**photo 2**). With sufficient pieces

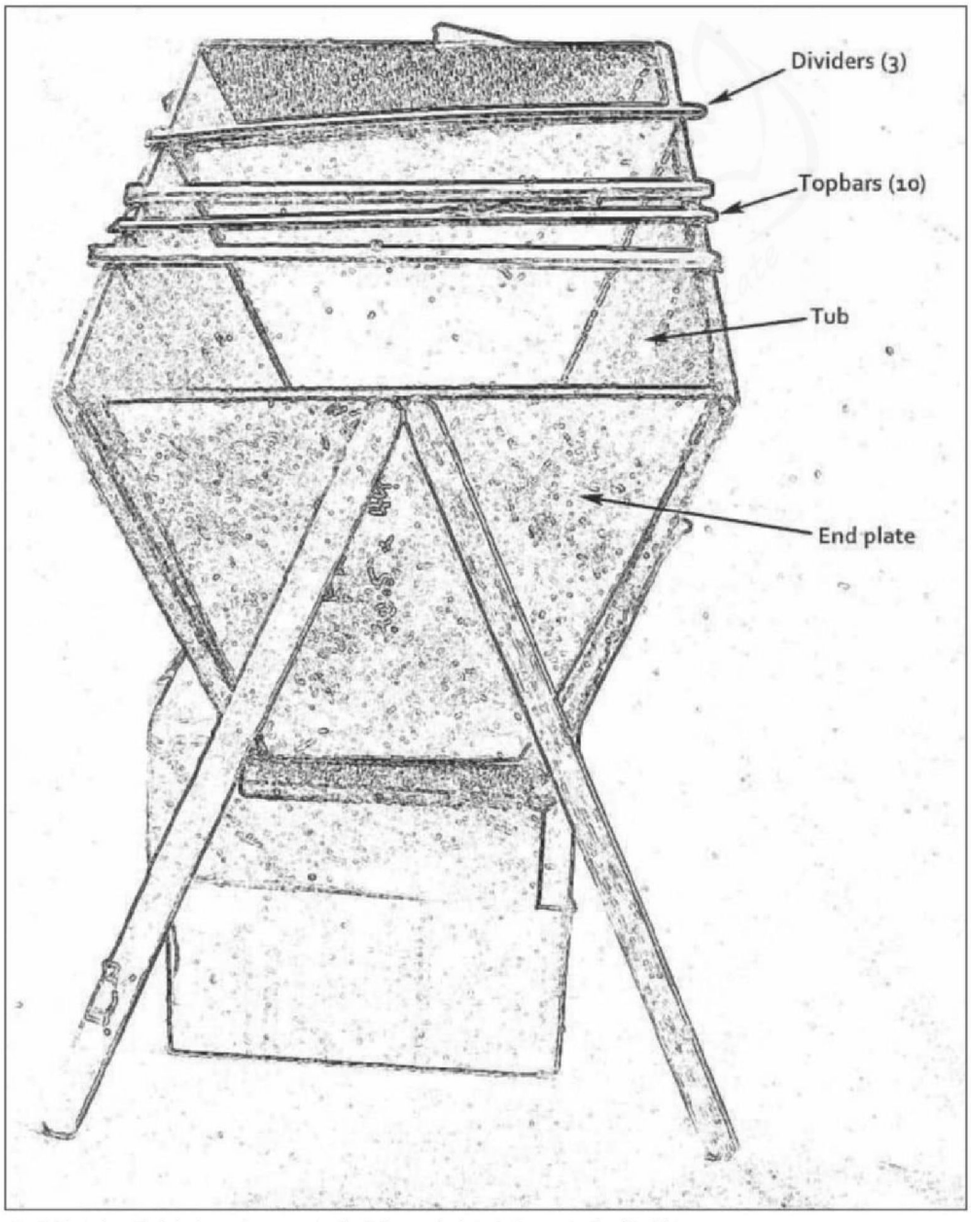


Fig.1 Sketch with labels – please note that the end plate is larger in the final hive

1 Clean up, plane and glue boards

2 Holes plugged ready for re-purposing

3 Side ready for planing

4 Entrance in end panel

selected, I set to planing them down to the same thickness: hand planning is not one of my strengths, but I'm better at it now this job is done! I made sure all the edges of the planks were at 90° with the use of my edge-planing jig. The individual planks were to be edge-jointed to each other: three for each side and two for the bottom. I considered using biscuits, but decided that rub-joints would do the job. Once glued up in trios and a pair, I put clamps on them and set aside for the glue to cure. Exterior PVA was the adhesive of choice (**photo 3**).

The end plates are set vertically, closing in the two ends: they are identical except that one is a bit shorter than the other, thus creating the access slot for bees. The shape and size of the end boards were chosen to provide sturdy attachment points for the legs, and permit them to be extended sideways (**photo 4**).

Before the tub could be assembled, the bottom edges of the sides were angled slightly, to accommodate their taper (**photo 5**). For these angled cuts I used the table saw, setting the blade at 20° to the vertical, then ran the glued up sides through the saw to shape the bottom edges. This is not strictly essential, as the sides sit on the bottom, rather than cradling it.

Assembly of the tub, with its sloping sides, was going to be a bit of a challenge. To help with juggling several components at different angles, I drew accurate lines on the two end plates, showing just where the sides and bottom were to be attached. This outline enabled me to drill clearance holes through the end plates for the No.6 × 45mm wood screws. I also countersunk the outside ends of these holes (**photo 6**).

The sides were screwed to the end plates, then with the tub upside down on the bench, the bottom was laid in position on the sides, completing the tub. I drilled clearance holes in the bottom, countersinking them, then laid it in place on the inverted tub and used the bottom as a pattern to drill pilot holes in the sides where the screws would hold them. These pilot holes were drilled carefully so the screws would follow the angle of the side they were entering (**photo 7**). I didn't

BEEHIVE COMPONENTS

Number	Component	Dimensions (cm)	Material	Notes
Roof				
2	Roof panels	40 × 100	6mm marine ply	Tapered edge
2	Sides of roof frame	4 × 90	2cm pine	
2	Ends & rib of roof	60 × 9 × 2	2cm pine	Peaked
Tub				
2	Sides of tub	33 × 89	Pine shelves	
1	Bottom	23 × 106	Pine shelves	Including landing strip
2	End plates	45 × 31	2cm pine boards	Not as in sketch
2	Battens: front & back	89 × 15 × 15	Pine	Reinforcement
Interior				
15	Top bars	3.2 × 3.2 × 48	Pine battens	Grooved underneath
3	Dividers – trapezoid	30.5 × 44.3	6mm ply	Glued to a top bar
Sundries				
4	Legs	3 × 3 × 100	Iroko posts	
3	Hinges – cranked	75mm	Steel	Recessed
750ml	Wood stain/varnish		Exterior satin	
	Wood glue		Exterior PVA	

5 Angling bottom edge of the sides

6 Marks for positions and angles on end plate

7 Angled pilot holes through the base

use any glue here as the structure is very rigid, and slight air circulation is a good thing, plus drainage may be helpful.

The long sides of the tub are reinforced along their tops, to anchor the roof-hinges at the back, and at the front in case anyone presses against or rests a heavy object on it. For these reinforcements I attached battens of 15 × 15mm pine (**photo 17**). The hinge mountings are covered in the 'roof' section.

The roof

Several of the designs online employed flat roofs, but we elected to give it a peak to throw off water. However, some bee-keepers like to place tools and containers on the flat roof, so that would be an alternative pattern.

I cut the end pieces out of 19mm solid pine, then added a third piece in the middle for extra strength. This may be Victorian engineering – I weathered World War II but I'm not that old – but I prefer to err on the side of extra strength rather than risk a failure for lack of it. Next, I cut the side battens, planed and sanded them all. These four components constitute the frame, and are joined at the corners by half-lap joints.

I glued these, assembled and clamped in two dimensions, checking the diagonals to ensure it was square. Finally, I used small clamps at right-angles on the corners, to ensure strong joints (**photo 8**).

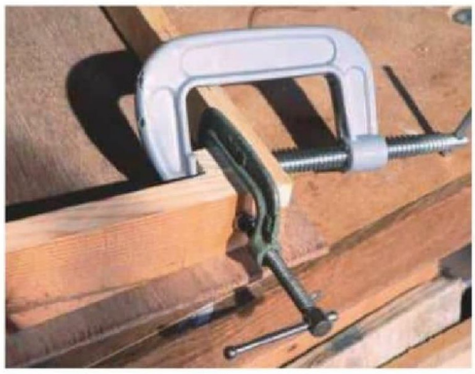
One of the 'treasures', which I found in the back of the workshop, were some offcuts of 6mm marine ply, just big enough for the two roof panels. After cutting them to size, I shaped their edges where they meet down the middle, using the angled table saw. You'll notice that their dimensions provide a decent overhang on all four sides, to keep some of the rain off the sides – and entrance.

I strengthened the frame by adding small glue blocks at each corner, glued then clamped while other things were going on (**photo 9**), then the panels were attached, with the mating edges together down the middle. I used ring-nails with plastic heads – I forget what project these came from. To prevent any splitting, I drilled pilot holes through the panels into the three triangular ribs, then glued and nailed them, so the nails would act as 'clamps' while the glue set, thus creating a strong roof unit. Lastly, I drilled 6mm holes through the side battens into the middle rib and inserted dowels for extra rigidity. Did I mention it may be over-engineered? (**photo 10**). The joint along the top of the roof is rain-proofed by a shaped pole. After cutting it to length I ran it over the table saw (without its riving knife, but with my home-made guard in place, of course), so as to create a V-shape to fit the ridge of the roof – two cuts along its length that met in the middle to create an obtuse angle of about 120° (**photo 11**).

Legs

The legs were made using four iroko poles destined for a blueberry netting frame, which never got built – strong hardwood with straight grain. The would-bee-keeper at the other end suggested that the best height for the top of the hive would be about the height of a kitchen counter, or 36in, to keep it away from damp ground and for convenience of working. I put the completed tub on the workbench, and held the legs in position to measure how long they needed to be to hold the tub at this level. I wanted a fairly wide stance, to resist the wind forces (**photo 12**). I then cut the four poles slightly over-length, as the bottom ends needed to be shaped to sit flat

8 Half-lap joints in the roof frame



9 Clamping roof glue blocks

10 Roof middle rib with dowels

11 Roof ready for mounting

12 Wide stance of legs for stability

13 Staining the legs

14 Bolting the legs in place

on the ground. Next came quite a bit of planing, as the poles had been rough-sawn, plus removing the arrises with abrasive to avoid splinters. The legs would have to be removed for transport, and must be sturdily attached, so I inserted two M6 carriage bolts for each leg, as the smooth heads would not provide anywhere for water to collect. A concrete slab had been promised for the hive to stand on to avoid the legs from standing on damp earth or grass (**photos 13** & **14**).

Dividers & topbars

We had agreed on 10 topbars and three dividers. The topbars, which give this design its name, are straight battens with a 3 × 3mm groove cut along the underside of the bar: this is where the bees will anchor their hanging combs. As an aside, in case you're wondering how this simplified design differs from the more traditional shape, the common design provides square wooden frames inside the hive, for the bees to fill with honey; my simpler design requires the bees to make their own combs, which uses up some of their honey. So the topbar design therefore produces less honey. Next, the three dividers are used to restrict the space, which the bees can use for storage, allowing the bee-keeper to open up more space as the need arises. I made the dividers by adding a trapezoidal piece of 6mm ply, slotted into 6mm grooves, which I routed along the three battens. I glued the ply pieces in place.

15 Roof attached with hinges

Finishing touches

The 75mm cranked hinges required recessing, which I did with the router, using a home-made jig (see sidebar). This enabled me to cut just the right size and depth, then screw the hinges in place. I arranged two boxes to support the opened roof in position while I attached the hinges (**photo 15**).

The hinges are subject to a lot of stress if the roof is opened carelessly, allowed to hang down, or the wind catches it, hence the extra batten screwed along the back of the tub to add strength. To further protect the hinges, I added two short chains – also from carefully preserved materials – to restrict the opening to just beyond vertical. The chains can easily be removed if alternative support can be provided for the roof, or if it needs to be removed (**photo 16**).

No chemical treatments were used inside the hive, in the interests of bee-health and well-beeing (sorry!) However, I thought it best to protect the wood from the elements. Also, since the wood came from such a range of previous lives, a uniform stain would make the appearance more attractive in the owners' garden, so we went for a Ronseal Light Oak stain, which contains a varnish providing wood protection. It was easy to apply (three coats) and I'm happy with the finished look (**photo 17**).

16 Roof chains on reinforced back

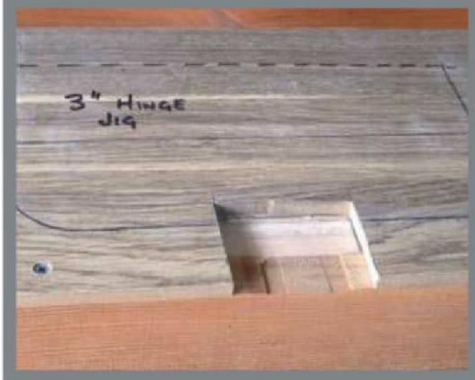
17 Ready for topbars and dividers

ROUTING JIG FOR RECESSING HINGES

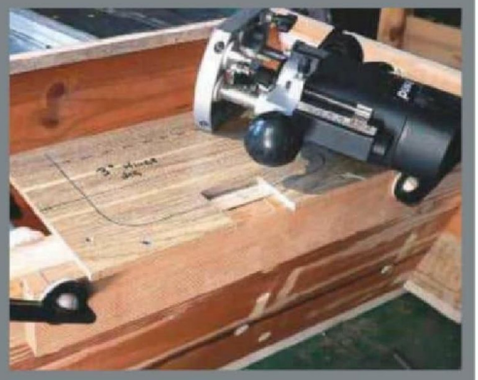
My router jig consists of a flat board attached to a batten, which clamps along the edge where the hinge is going (**photo 1**). Using the hinge, I cut the outline into the top board with a Stanley knife, then cut the opening with a fine pull saw. The cutter doesn't have a guide bearing, so I mounted a bush onto the bottom of the router; this requires the hole to be slightly larger than the final recess, to allow for the thickness of the bushing collar (**photo 2**).

To stabilise the router while cutting, I mounted two small blocks of 6mm ply on the underside of the router base – these 'skis' help to keep the router steady, and the two-sided tape allows easy removal when the job is done (**photo 3**). I set the depth stop on the router, using one leaf of the hinge between the screw and the turret.

If you'd prefer to use a bearing-guided cutter, Trend make a nice one (**photo 4**) but I decided I didn't have enough use to justify buying something specialised



1 Hinge jig



2 Hinge jig ready for routing

3 Skis on router base

4 Trend Professional ¼in shank bearing-guided trimming cutter

A CLASSIC IN RACING GREEN

Geoff Gray adapts an existing design for a fall front wooden toolbox and applies his own personal twist, while overcoming a few problems along the way...

I had actually started this build before I made my bench bull work surface, and I soon realised that I needed something better than a Workmate for this project! As well as a safe place to keep my tools, the aim was to try new techniques and practise existing skills. As with most projects like this, there's an overwhelming number of design options out there. My requirements were that the toolbox needed to be:

1. Big enough to fit all my hand tools. I don't have a huge amount, but there's enough to get in the way if not stored properly: saws, chisels, planes, marking tools, mallet, etc.

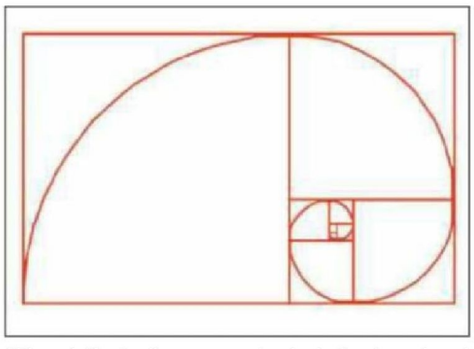
2. Small enough to be portable so I could move it around and keep it out of the way. It was going to have to be a bit nomadic due to general space limitations.

3. (Reasonably) pleasing to the eye. I wasn't attempting fine cabinetmaking, but it would be nice to end up with something decent to look at.

4. Achievable. Complicated enough to be challenging without being impossible to finish at my current skill level.

After looking around, I settled on a slightly modified version of the old fashioned joiner's box, based on a Paul Sellers' design. These were originally portable wooden toolboxes with a fall front lid and one or more drawers inside. They were designed to accompany full-sized workshop tool chests for when work had do be done away on site. Traditionally painted matte black, they were built to various standards of construction, from glue and nails to fine dovetails. My version would simply be slightly larger than normal, being built to hold almost all my tool collection instead of being a carrier accessory for a larger stationary toolbox.

Paul Sellers describes building his version of this style of box on **www.getwoodworking.com** (search for 'Mint & boxed' by Paul Sellers) and covers some useful techniques. I was also fortunate enough to get a good look at an original in the flesh and work out how it was put together. I found the toolbox's final design straightforward while at the same time containing some



Although the toolbox uses a simple design, I employed the Golden Ratio (1.618) formula to work out the front face measurements

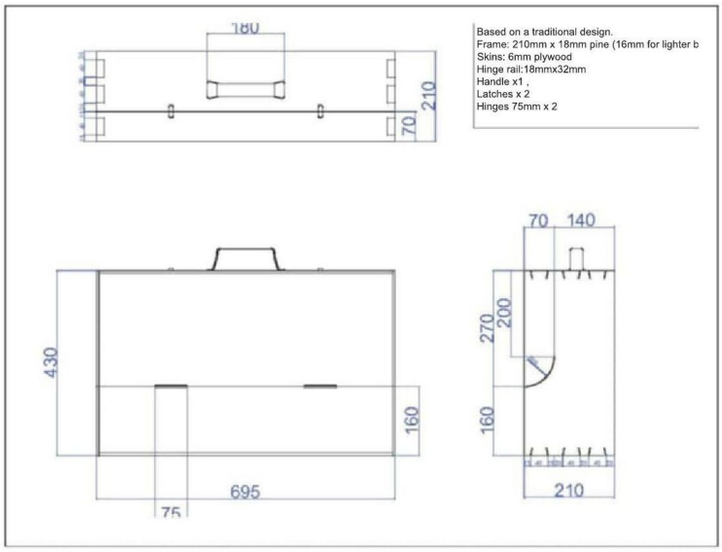


Fig.1 Toolbox design

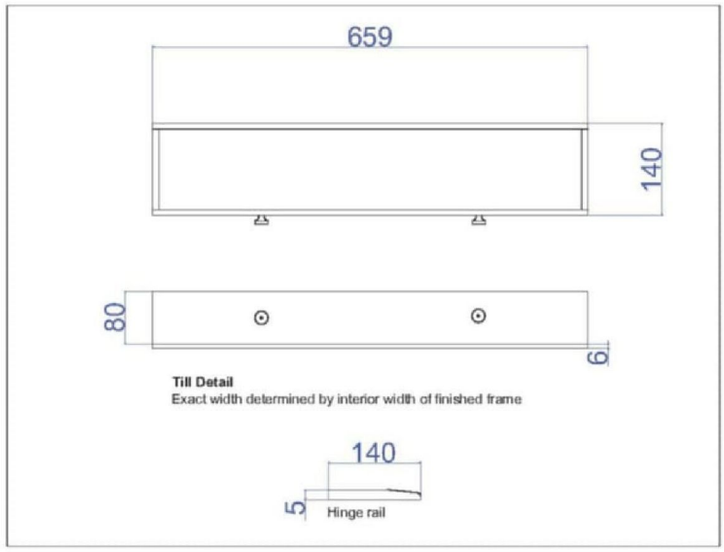


Fig.2 Till detail

challenging elements: dovetailing, rebating, resawing, hardware installation and finishing. **Spoiler alert:** I made a good number of classic beginners' mistakes along the way with this project, all of which I will share here. At least they ended up being good learning experiences – there's nothing like wasting a few hours of work to help you remember to do it right next time!

MATERIALS & DESIGN

Design

Having settled on the form, I measured out and selected materials. The finished article is essentially just a basic rectangular box skinned with plywood. I did get a bit fancy and used the Golden Ratio (1.618) to work out the front face measurements. Based on a height selection of 430mm, the width was supposed to be 695mm or so, which would be pleasing to the eye. Depth is 210mm, dictated by the width of the board used. Unfortunately things went a bit wrong further on, so actual final dimensions were 430mm high × 675mm wide × 210mm diameter. Note that in **Figs.1** & **2**, measurements are as originally intended before the dovetailing incident!

Materials

Materials are a pretty short list. I bought 2.4m of 210 × 18mm planed pine for the frame to allow for some loss from cutting and squaring. I used a spare piece of floorboard offcut for the till, which I then resawed to a thinner size; it ended up around 9mm thick, with the base 6mm. The frame size is thick as I was going for a larger and less portable version.

For a smaller or more portable version, 16mm or less would probably be better. The skin is 6mm plywood, and as I intended to paint the finished article, I bought a fairly low grade of ply. I would have used a nicer faced Baltic birch if I'd been going for a natural looking finish. Two panels of slightly less than 430 × 695mm were all that was required. Two strips of wood are also needed for the hinge rails. I used a strip of 18 × 32mm white pine, and two offcuts for the till rails.

Hardware

I chose to use brass for its looks: 2 × 75mm hinges, and 2 × latches. I couldn't find a comfortable brass carry handle, so I ended up using a black pressed steel gate handle instead, which was strong, comfortable and very affordable. The finished box is big enough for lifting handles at either end and is quite

1 Showing the rebate required to accept the plywood skin

2 A quick test fit with dovetails – with one end cut and no pins

3 Here you can see the gap where the rebated grooves meet; this will need filling in the next step

4 On the left-hand side you can see the rebate. All looks OK this end…

5 … oops! Here you can see where the dovetails went wrong

6 The only thing to do was to suck it up, cut them both back and try again!

7 Everything glued up and clamped together

heavy when full, so I might end up adding them at a later date.

Tools

Aside from standard basic tools, I used an old Record 048 rebate plane and a homemade shooting board. Making a rebate for the plywood skin to sit into is optional – it could simply be surface-mounted to the edge of the pine board. The boards for carcass construction needed to be square for dovetailing, so I put together a basic shooting board using an offcut of IKEA worktop and a spare MDF shelf, which was rescued from a skip. I use hand tools for noise and dust considerations (I do most of my work at our kitchen table) but mainly because I just like the feel of doing it that way. Any or all of this can of course be completed using power tools if desired.

- Cross-cut saw
- Rip saw
- No.4 Stanley plane
- Rebate plane (optional)
- Tape measure
- Chisels
- Marking knife & pencils
- Coping saw
- Paint and brushes, etc.
- Hammer
- Pins
- Filler
- Wood glue

10 Half a sheet of plywood was used for skinning the frame

8 Here the dovetails have been trimmed flush

The frame

The frame of the toolbox is just four boards cut to the selected length, which are then dovetailed together. There is a rebate cut into the edge of each board to accept the plywood skin when the frame is complete, but this is optional: the skins could just be pinned and glued on. I bought the wood a few weeks before and let it acclimatise before getting going.

The first step is to cut the board into the four pieces that make up the frame – in this case 430mm long × 695mm long. I marked and cut a few millimetres longer to allow them to be squared up to the correct size. I also marked each board up to indicate where it was going to go and which face would be pointing where – e.g. bottom outer face, top inner face, etc. This is important to make sure the rebates and dovetails go in the right places and match up.

Next, flatten and remove any twist with the Stanley plane. There are lots of good online guides that clearly show how to do this, so I won't repeat the information here. A sharp plane and possibly winding sticks are needed. I was starting with fairly smooth, straight stock so there wasn't much to do. You can then square up the ends with the shooting board if necessary. The ends will be planed flush so a rough finish is OK, but everything needs to be square. The next step is to cut the rebate into the edge to accept the skin when the frame is assembled. Paul Sellers recommends cutting the rebate in one go on

11 The plywood skin, roughly cut to size

9 The curved lid edge is cut with a coping saw, matched on both sides, and the dovetails are spaced to allow the lid to be cut free

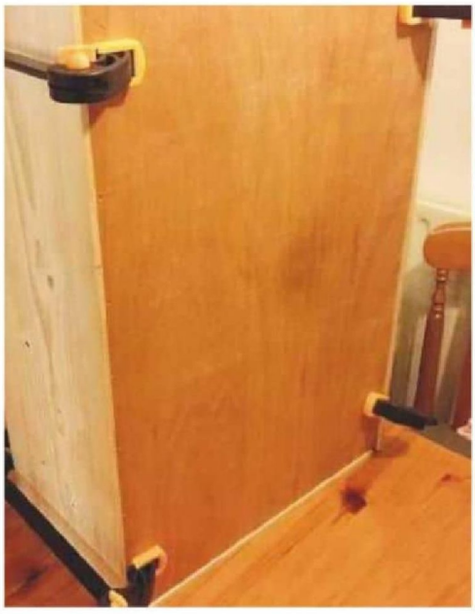
the board before it's reduced to the four sections, but I didn't have the space for that so I cut them individually instead. I cut each one down to about two-thirds the thickness of the 18mm-thick boards.

The plywood is glued and pinned into place so the depth of the rebate needs to expose enough of the board edge to accept the pins without splitting. The lip left behind is mainly to hide the edge of the plywood, so doesn't need to be very thick. The width of the rebate is determined by the thickness of the plywood, e.g. 6mm plywood requires a 6mm width at the very least to make sure it's down flush with the frame. I went a few millimetres wider again, to 8mm, with the intention of flattening the resulting 2mm pine lip down to the plywood level. The rebates also create a gap where the boards meet; this will need to be filled later.

It's now time to dovetail the boards. Again, there are a great many excellent guides on how to do this by hand, so I won't go into great detail except to say I used the Paul Sellers' method from his book. This is also where I made my first big mistake, which resulted in shortening the frame width from 695mm to 675mm. As before, the boards could simply be butt jointed or screwed together to make things easier, but I wanted to have a go at creating dovetails. I spaced the dovetails slightly differently so that there would be one large dovetail in the centre of the lid edge and two spaced evenly in the body. The cut for the lid passes in between these two sets.

My mistake was getting the front and back of one of the long pieces mixed up while cutting the pins, despite having marked them. I didn't discover the problem until I went to test fit

12 Hammer, punch, pins and glue – ready to attach the lid



13 Here you can see the corner gap, which needed to be filled in, the plywood lip to be planed down, and the pin holes, which were still to be filled

everything and found that I had cut the pins backwards on one end of a long edge – meaning they wouldn't accept the dovetails (the fat end of the dovetail was trying to squeeze into the thin part of the pins, if that makes it clearer). The only thing to do was to cut off the faulty pins along with the corresponding set of perfectly good pins on the other long edge, in order to keep them the same length. This took extra work to correct and unfortunately meant I lost about 20mm width from the final product...

You're then ready to glue everything together and clamp up. I did one corner as a test run then applied glue and clamped up the rest in one go. I made sure the frame was square by checking

14 A slightly wider pin was needed to accommodate the lid

15 The box is cut to release the lid

that the diagonal measurement was equal across all four corners and kept it on a flat, level surface while the glue dried. I gave it a few days to dry and avoided disturbing it, and once dry, I trimmed and planed the joints flush.

The next step is then to cut the lid curve. Once the skin is on it would be much harder to cut the curve for the fall front lid, so I drew on the dimensions and cut a 90° curve for the lid in both short ends using a coping saw. Of course, this could also be a straight line but I think the curve looks effective.

Skinning the frame & cutting the lid

The first step is to size the skins. I cut the plywood roughly to size and planed it down to fit closely. I still managed to end up with some small gaps, but these would be filled so weren't a problem. For attaching the skins, I used glue and 10mm panel pins to attach them and sank the pins below the level of the plywood with a punch. Once all was dry, I planed down the pine lip to the level of the plywood and filled in the pin holes with wood filler. I also filled any gaps between the plywood and pine lip, of which there were a few. As I was going to paint everything afterwards, I wasn't worried about using filler.

I was then ready to fill the rebate gaps, so I cut small scraps and glued them into the eight rebate gaps where the boards meet on the corners. Once dried, I cut them close with a saw then pared them flush with a chisel. Finally, I marked the lid by joining the curves cut at either end with a long steel ruler. I then cut along the top, down the sides and along the plywood front to release the lid. I smoothed the cut surfaces down a little to remove saw marks but not too much as I didn't want to create gaps.

When installing the hinge rails, I realised the plywood alone wouldn't be strong enough for the lid hinges so a hinge rail was needed. I cut two lengths of the 18 × 32mm strip slightly oversize then used the shooting board to square the ends and bring them down to a tight fit. They were then glued flush with the edges on both sides of the hinge join.

Hardware

Hardware installation was straightforward. I drilled pilot holes for everything and waxed the screws before driving them – splitting something at this point would certainly have been disastrous!

Positions for the brass hinges were marked onto the rails and rebates cut to the thickness of the flanges with a chisel, then the lid was installed and everything checked for level. It was slightly out on one end as the rebate on one of the rails wasn't quite deep enough, although this was easily corrected. Bolts for the handle couldn't protrude down as they would interfere with the till, so bolt heads were countersunk into the inside of the top surface, the handle attached to them on the outside and the nuts tightened. I was going to trim off the bolts but they didn't cause an obstruction, so I just left them. Then, with the lid fitted, it was just a case of marking and screwing on the catches.

Till & saw holders

I decided on a single till in the end. I had a piece of leftover pine floorboard, which I resawed down to two thinner boards. I measured the interior of the frame to get the actual dimensions required, then cut and squared the four pieces for the till. For the base, I resawed a thinner piece and bookmatched it together. It wouldn't really be seen on the finished article but it was good

16 The bottom hinge rail, cut and glued in

17 Clamping the lid hinge rail

18 The hinges once installed

19 With all the hardware in place, the toolbox is now ready to paint

20 The sides ready cut for the till

21 Loose joints due to sawing on the wrong side of the line

22 The sides and ends are then clamped up

practice with thinner pieces, and I like knowing it's there! I then dovetailed the till walls together and made my next mistake by not marking my waste. I accidentally cut on the wrong side of the line for one set of pins, which resulted in a loose fitting joint. I didn't discover this until I came to assemble, however. Luckily, I'd been using a thin kerf saw and was able to get it together with plenty of glue – the white glue swells the joint together a little as well, which helped matters – even a bad dovetail is still very strong! After the outside was together I glued on the base, and once it was all dry, I trimmed off the excess base with a saw leaving a 3mm lip before planing everything flush.

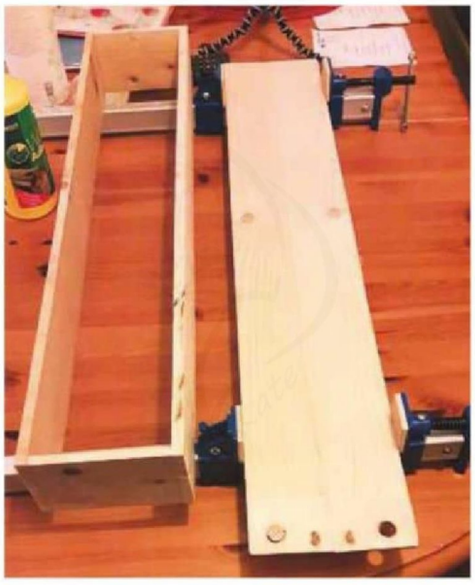
I cut and glued in two small rails for the till using offcuts from the hinge rails. The front of each is slightly sloped to help when locating the till back in after taking it out. I sanded and waxed the rails and ends of the till to smooth things out. The test fit looked good and no major adjustments were needed, so the final step was to fit two small brass pulls to the front. I got a spare pair of pulls to match the ones I installed, just in case I ever add a second till below the first.

For the saw holders, I experimented with a few options but ended up using magnetic holders paired with a wooden locating slot. The magnets were glued in holes drilled into strips, which were glued onto the lid with the magnets placed face down. As a result, there was no chance of them escaping or marking the saws and still plenty of pull to hold everything in place.

Painting & finishing

This type of toolbox was traditionally painted matte black but since mine was going to have an easier life than its ancestors, I went with a different option. I took off the hardware and after sanding down the outside and easing the edges and corners a little, I painted on a coat of Rustoleum All Surface racing green, which promises paint and primer in one. I was pleasantly surprised by the coverage and colour saturation – one coat was indeed all that was needed. I still have half a tin left so may add a second coat at some point, but it's not really needed. Other than the rail and the ends of the till, I didn't add any finish to the interior in order to let the bare wood surfaces breathe. It's likely to get a bit grimy over time, but I shall consider that to be development of character.

And that's it! The finished article holds all my hand tools together in one place – well, almost; I still have a few planes which are never going to fit – and seems to keep everything nice and dry. It looks good and was a great learning experience; the only downside is the extra weight that comes with the bigger size, especially due to the amount of iron kept in it!



23 Gluing up the base for the till after squaring both edges

24 Gluing on and clamping the base

25 Well attached but the base is protruding

26 The completed fall front tool box, painted using Rustoleum All Surface racing green

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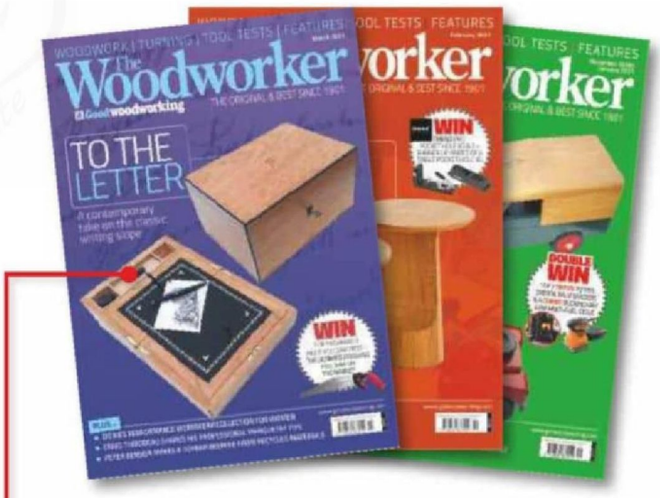

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GLOSS WORDS

Les Thorne shows you how to turn a bowl from plywood and give it a shiny finish

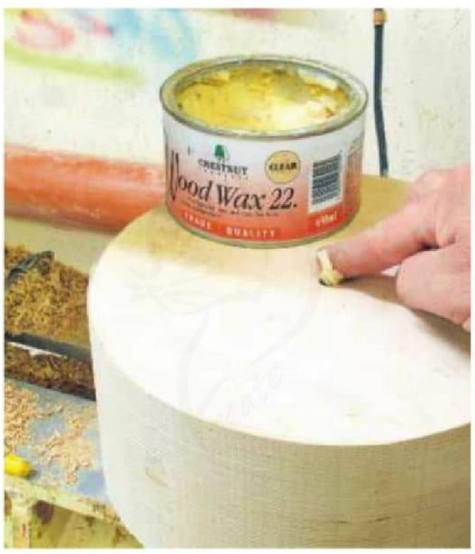
Every now and then I get an urge and this bowl was born from one of these. When I saw Peter Berry making a rocking horse at a woodworking show a few years ago, from good-quality plywood, I got to thinking that I could make a decorative bowl from it. The idea that I wanted to try was to make the outside of a bowl high gloss black and the inside high gloss blue – my favourite colour combo. The choice of plywood is important; do not try and make one from shuttering ply as it will be doomed to failure. Until I started investigating what I needed I never knew that there were so many different types available. I wanted birch ply sanded and free of voids, but my local supplier didn't stock this type so I went for the best that was available. It's not cheap, with a sheet over twice as dear as the equivalent in MDF. I bought mine from Lathams Ltd but you will find it at any decent timber supplier or even in your local DIY superstore. Most of my work is to a plan, but when starting something like this, I never know how it's going to turn out, and that's part of the fun. This is a project you could make from offcuts left over from another job and obviously you could leave the work without colour.

1 Having a full-blooded cabinetmaking shop with all the latest equipment next door is a huge bonus when it comes to handling sheet material like this

2 I decided to use PVA glue, but I could have used polyurethane; whichever you choose, make sure you achieve a good coverage

3 Use plenty of clamps, even on a small 250mm square block like this; remember, you will be standing in front of this while it's spinning on the lathe

4 I'm going to stain the inside; whenever you enter the unknown it's always worth having a little practice; even with the plywood unfinished I've achieved a very good colour

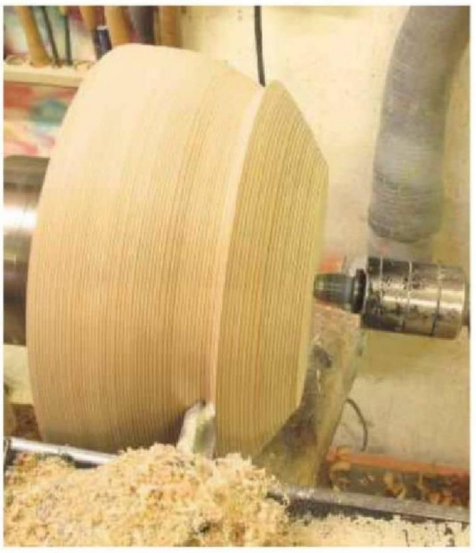


5 I drilled a hole in the top of the blank to accept the screw chuck that fits in my scroll chuck; If you put a little paste wax into the hole it will cut a decent thread and afford you the best grip

6 I'm wearing a glove on my left hand to protect it from plywood splinters; do not touch the wood with the glove on in case it becomes caught up

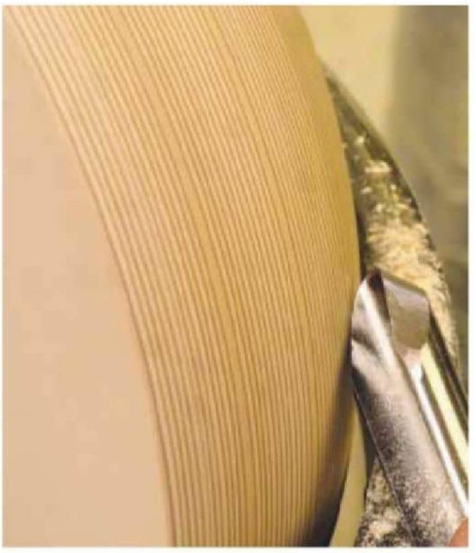
7 I didn't expect such good shavings from this project; here I've put some of them aside for a flower-arranging friend

8 Uh-oh! The first problem, a void; I will have to deal with any that are left in the finished surface



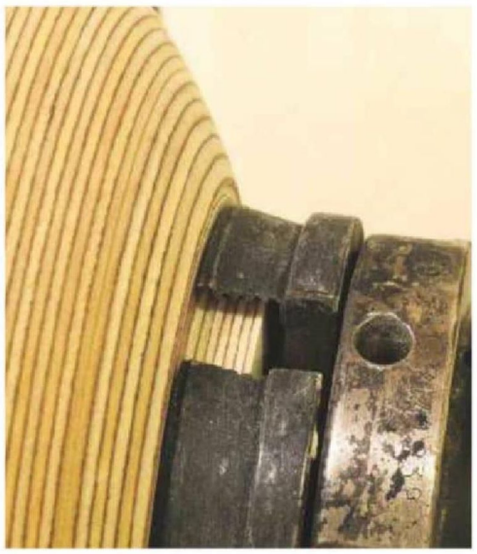
9 When working in ply it's easier to remove large quantities of material off the back of the bowl from the larger diameter to the small, contrary to working in natural timber

10 I want a simple curve on the outside; this stainless steel curved toolrest works as a guide for the bowl; just keep removing wood until it conforms to the shape



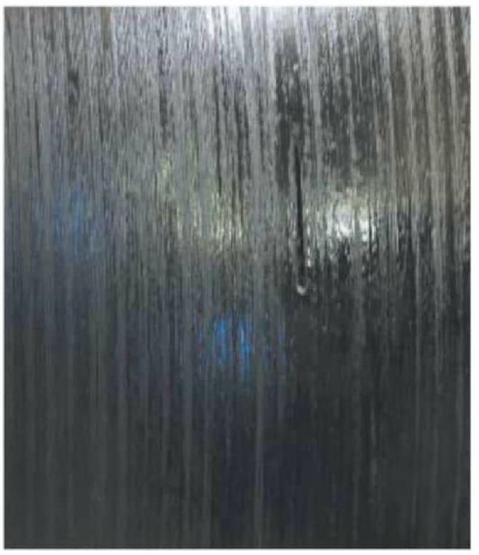
11 I found the best way to avoid tear-out of the grain was to do a shear cut; roll the flute off the tool as you can see here and pull the tool towards you

12 This photo shows the difference between a heavy stock removal cut and the lighter shear cut; the tool will blunt quickly when working on composite materials



13 I've turned the spigot to fit my No.3 jaws, which are one size up from standard; the flat next to the spigot sits on top of the jaws for strength and accuracy

14 Sanding the outside will show me whether I need to do anything else to the surface prior to spraying



15 The first coat of spray has penetrated at a different rate

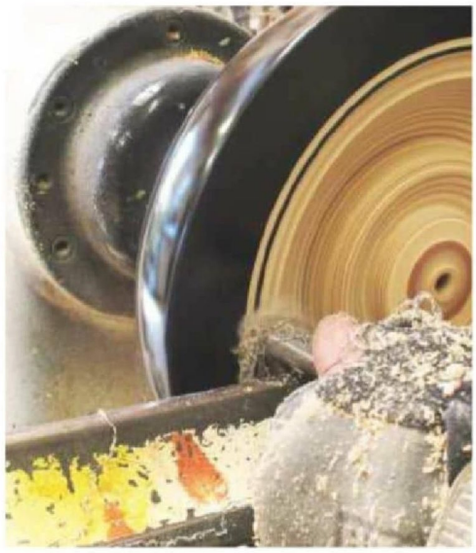
16 Thank goodness for Polyfilla! Apply it sparingly all over and then sand it back with the lathe off

17 Super gloss! After a dodgy start and about 10 coats of black followed by a few coats of acrylic gloss lacquer, I've achieved a wet-look gloss finish

18 Now it's time for the inside: this gouge from Thompson Lathe Tools in the USA – **www.thompsonlathetools.com** – is made from super-durable steel

19 The removal of wood on the inside starts with me making simple sweeping cuts with the flute of the tool pointing towards 2 o'clock

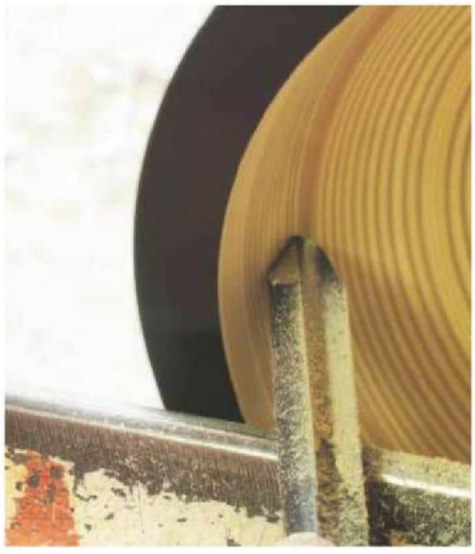
20 Removing stock from the centre will require repositioning of the tool so the bevel is in contact with the bowl; as the wood is revolving slower, smaller cuts are required



21 The black edge on the top will tend to make the bowl look thicker than it actually is, so I'm going to take the thickness down a little more than usual

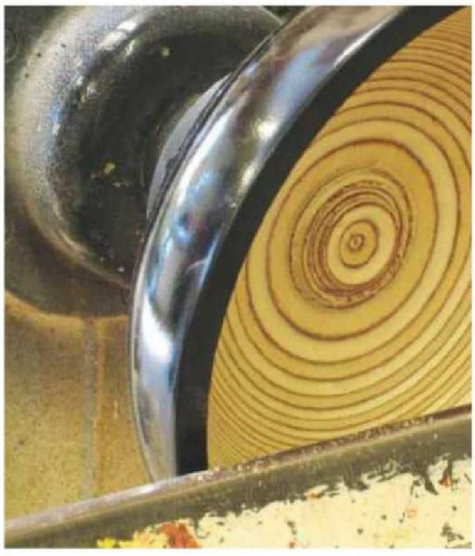
22 As you go deeper inside the bowl, the handle of the gouge will need to be dropped to position the gouge's bevel onto the surface that is to be cut

23 Even the Thompson gouge will need to be sharpened regularly; a jig gives consistent results and tends to remove less precious steel

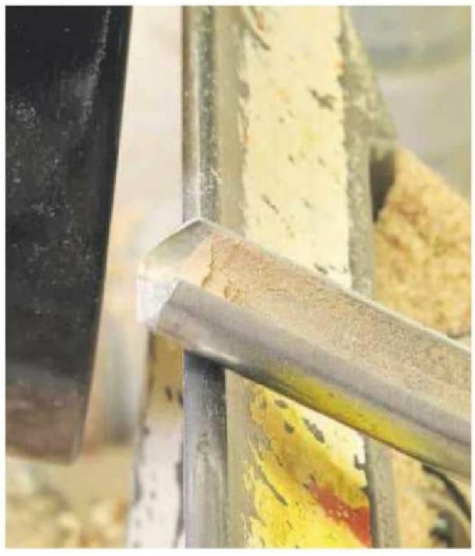


24 I opted for about 12mm for the rim; a light cut with the freshly sharpened tool gives me a good, clean surface ready for sanding

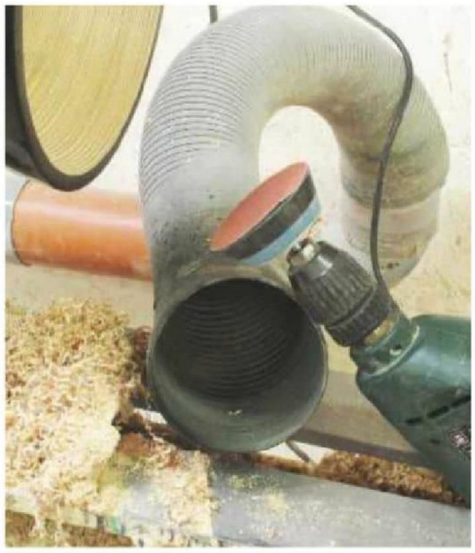
25 I like to finish an area of the bowl before moving down the inside curve; the wall thickness is checked periodically using a pair of figure-of-eight callipers



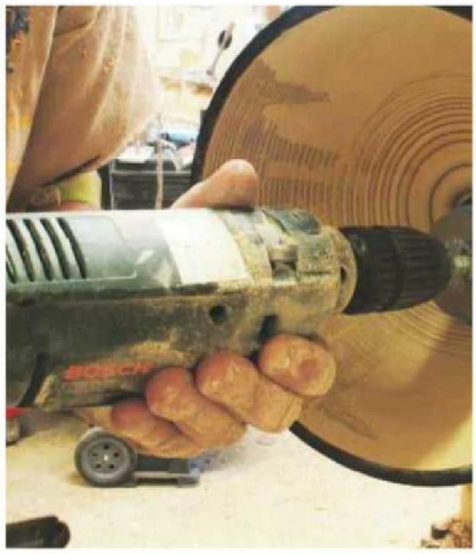
26 The only bit left to do now is the dreaded lump in the middle; this is always difficult to cut well with a standard bowl gouge sharpened to a 45° angle...



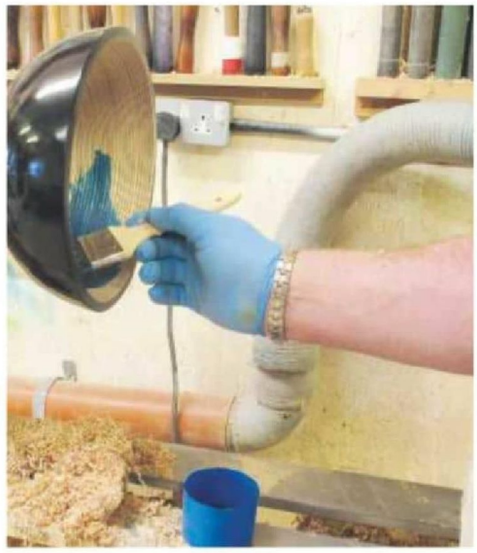
27 ... but here's the answer: this 10mm bowl gouge has an angle of about 60° and is very easy to use so long as you present the tool horizontally



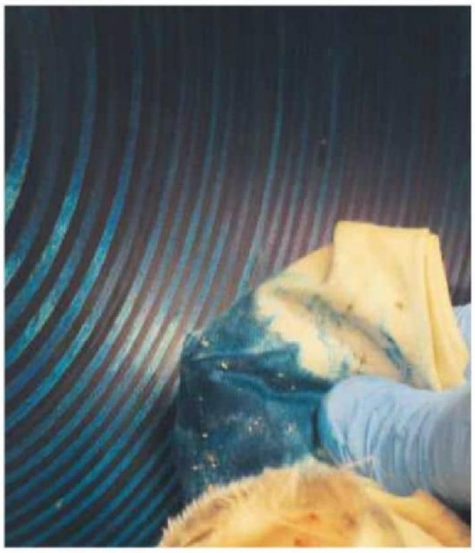
28 The big guns are out in the shape of the 75mm Simon Hope sanding pad with 80 grit; the corded drill works quicker than my cordless so that should remove even more wood



29 When sanding, especially with the coarser grits, don't let the drill go below the centre, as here, because this will sand the bowl unevenly, undoing all your good gouge work



30 The blue stain should give a really good contrast against the black, though it would have looked good left natural in the middle with just an oiled finish

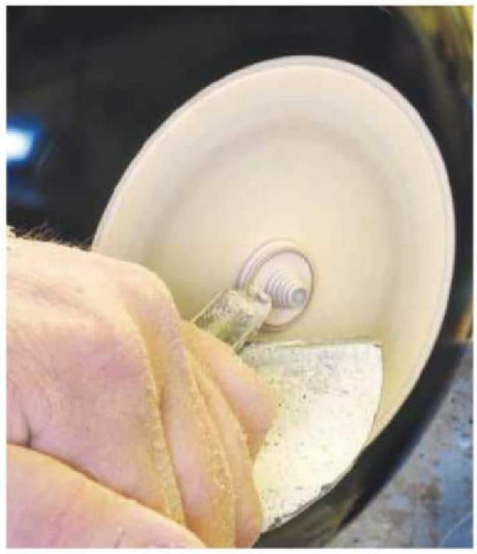


31 After brushing the stain onto the wood, remove the excess pigment from the surface with a rag; I now cut the stain back with an artificial wire wool, such as Nyweb

32 Because of the amount of black I sprayed on the bowl, I've ended up with a paint-covered chuck; this must be wire-brushed back until you can see the chrome again

33 My vacuum chucking system enables me to remove the foot for the bottom of the bowl – it works a treat on plywood

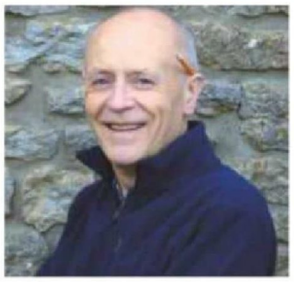
34 Leave the tailstock on for as long as possible even when you are getting a good fixing from the vacuum, so as to take larger cuts more safely



35 The final cuts are made with a small tool; I work on the basis that a mistake with a small tool will normally be less problematic than one with a large tool

36 The completed plywood bowl should look something like this

AROUND THE HOUSE WITH PHIL DAVY



For several months I've been deliberating about the type of timber cladding to use on my open porch and garage. I toyed with the idea of using Western red cedar, until I estimated the cost! A more sensible option was Siberian larch – not quite so attractive but pretty durable and more affordable. Because this timber is only stocked by a few specialist merchants, finding a small quantity during lockdown wasn't easy. Several suppliers won't sell less than 100m of cladding, much more than I needed. And quality varies, with so-called prime grade often somewhat knottier than you'd expect. Fortunately, I didn't need to trek halfway across the country to find what I needed, though some boards turned out to be cleaner than others. Trying to avoid knots when cutting them to length was a challenge, though it kept me busy for a couple of days.

USEFUL KIT/PRODUCT
PINIE DEEP JAW CRAMP

This type of hardwood cam cramp has been around for many decades and is actually a German design. Like previous tools we've tested from Pinie, these are made in the Czech Republic and are great value. Jaws are made from unlacquered beech (traditionally hornbeam), one of which is fixed to the end of a galvanised steel bar with pins. The opposite adjustable jaw has an elongated slot, enabling it to slide along the bar. Another pair of steel pins prevents this jaw from jamming against the bar when tightening.

Lightweight design

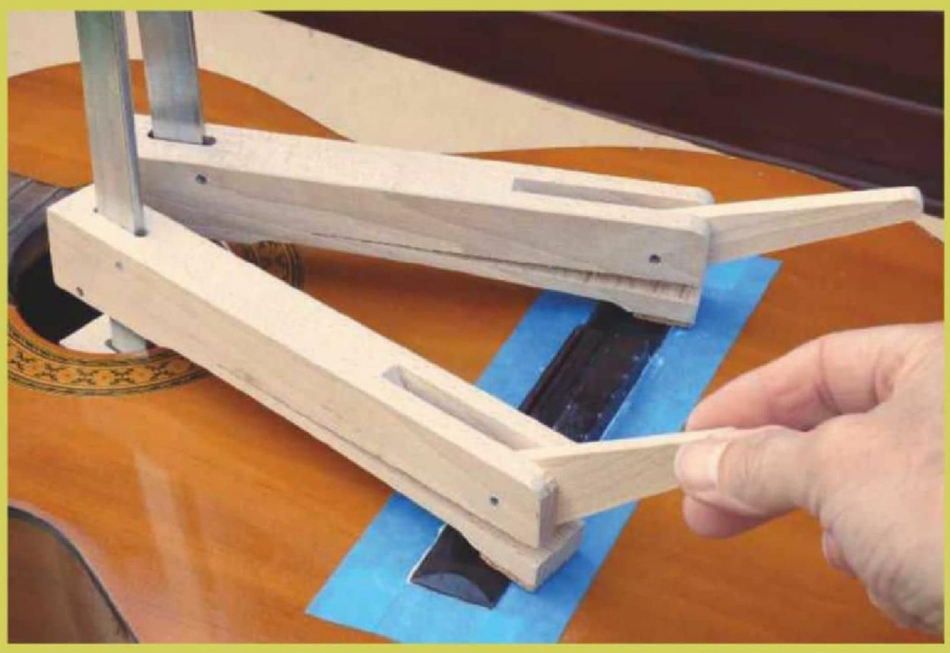
At the business end is a cam lever, which opens out a bandsawn slot along the jaw when activated. Both jaws have cork pads to prevent surfaces becoming marked when applying pressure, which can be considerable.

The great thing about these cramps is that they're relatively lightweight (this weighs just over 500gm), which is essential when gluing up delicate items such as musical instruments. Similar F cramps with this sort of capacity can be pretty heavy and could easily lead to damage. These are also quick to adjust, with no screw mechanism to fiddle with.

Cramp range

Seven sizes are available, with maximum capacity of 1,500mm on the largest. Throat depth (jaw tip to rear bar) is the same for every size at 190mm. I tested a pair of cramps with 200mm depth capacity, the smallest in the range, using them to glue a bridge on a classical guitar. This size was perfect for what can be a tricky job, which means getting the lower jaws inside the sound hole. I found the jaw pads didn't always quite line up with each other when operating the lever, but this didn't seem to affect the performance. Keeping an eye on this could be important when gluing up small components, though.

These cramps are hard to beat when you need sufficient pressure but without the weight of a metal version. Pinie also produce them with shorter jaws, though with similar depth capacities.



Using the 200mm depth capacity pair of cramps to glue a bridge on a classical guitar, which involved getting the lower jaws inside the sound hole

SPECIFICATION

Typical price: From £10.99
Web: www.quality-woodworking-tools.com

THE VERDICT

PROS

- Lightweight but effective cramping; great value

CONS

- Jaws don't always align

RATING: 4 out of **5**

GIVE IT A TRY!

WINTER PROJECT: TRY SQUARE

Takes: One weekend
Tools you'll need: Planer/thicknesser (optional), drill, hand tools

If precision and accuracy are important to you, then why not have a go at making your own try square, says **Phil Davy**

A large try square is a particularly handy tool when setting out large items of joinery or furniture. For marking sheet materials the longer the square's blade the better, assuming this is accurate. I have an old Wolfcraft metal square that's a decent size, though it's not terribly reliable these days. Having been dropped a few times it's now slightly bent and only good enough for rough work. When working in a joinery decades ago, I remember that one or two of the old timers had their own hardwood squares (made of beech, I think) which they swore by for accuracy. These may have been made during apprenticeships or handed down from previous generations.

I'd often considered making one, so when I needed to mark out some veneered plywood sheets recently it seemed the ideal opportunity.

This is a good way to use up suitable offcuts as it doesn't really matter what hardwood you use. I used a piece of utile for the stock while the blade was ash, though I'd initially made this from sapele. Size is not too important either, though the longer you make the blade, the more awkward the tool becomes for smaller work. You can make it as decorative as you like, using contrasting timber for the stock and blade, or maybe inlaying pearl dots over shorter dowels. I used a length of 10mm walnut dowelling, which reinforces the bridle joint. If using figured timber, the only requirement is that this should be stable.

Make the blade about one-third the thickness of the stock. For easier cleaning up of the bridle joint, make the open mortise a fraction wider than your chisel. For a 6mm chisel, cut the mortise about 7mm wide.

A planer/thicknesser will save you a lot of preparation work, though this is not essential. Although you may think it's just the outer edge of the blade that needs to be dead square to the stock (for marking out), the inner edge needs to be, too. If not for drawing lines, you'll need this inside reference edge to check ends of boards are square before working on them.

Don't forget to check both edges of the blade and stock with a steel straightedge before you glue them together. When the glue has dried you should check the square for accuracy. With the stock held tightly against the completely straight edge of a board, draw a pencil line down the length of the blade. Flip the tool over and draw a second line to coincide with the first. If the two lines don't match exactly, you'll need to true up the blade with a long bench plane. The inner edge is more difficult to trim, however. If you like to hang your tools from hooks in the workshop, drill a suitable size hole near the end of the blade.

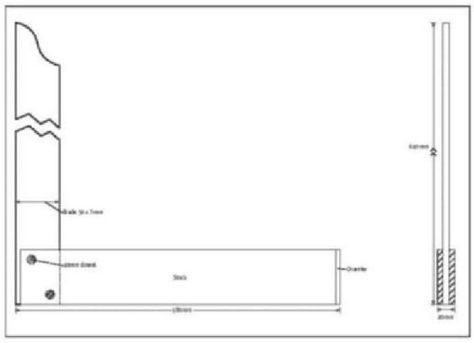
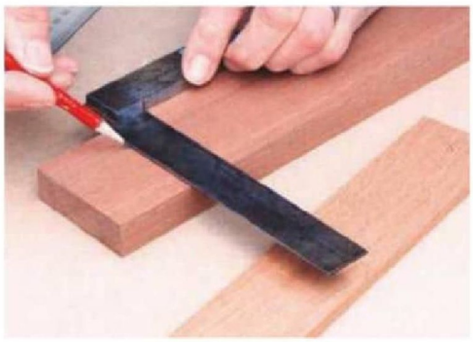


Fig.1 Try square

1 Prepare the material to finished size on a planer/thicknesser. Make sure the fence is square before surface planing

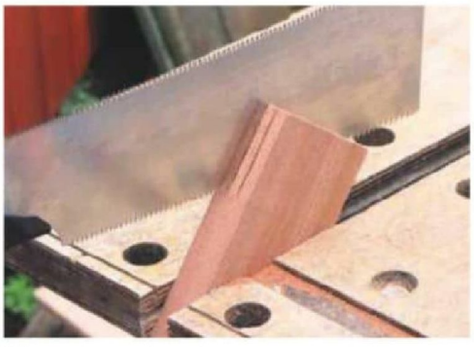


2 Mark the stock to length, allowing for the bridle joint. The blade of the square should be left overlength at this stage

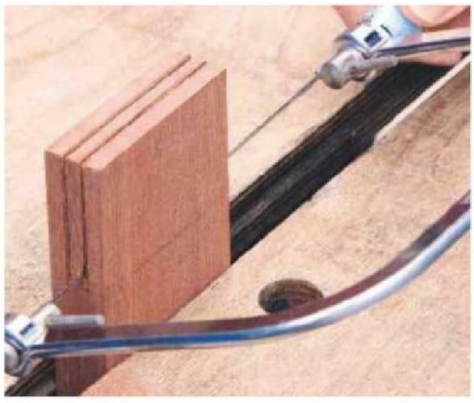
3 Cut the timber to length, either on a mitre saw or by hand. Packing at the rear will prevent breakout when cross-cutting

4 Then, trim the ends of the stock with a bench plane and shooting board if you've used a hand saw

5 Set a mortise gauge to the thickness of the blade material. Mark around one end of the stock



6 Carefully saw down the open mortise to the pencil line, keeping to the inside of both gauged lines



7 Remove the waste material from the stock with a coping saw. Alternatively, cut the mortise on a bandsaw

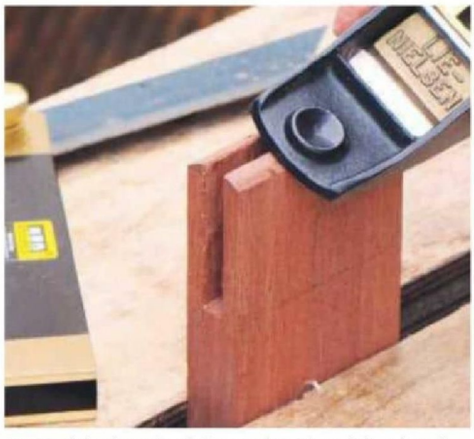
8 Chop back the bottom of the mortise with a 6mm chisel. Pare down the sides carefully with a wider blade

9 The blade component should be a snug fit in the stock. Check the joint for accuracy using an engineer's square

10 Mark the overall length of the blade, then draw around a suitable diameter tin to create a pleasing shape

11 Cramp the blade firmly, then cut out the curve with a coping saw, keeping on the waste side of the line

12 Clean up the curved end with a sanding drum mounted in a drill stand. Alternatively, use a rasp or file for shaping



13 Mark both ends of the stock with a sliding bevel, then create decorative chamfers using a block plane

14 Brush PVA on the joint and cramp together. Cramp an accurate square in position while the glue sets

15 Mark out centres for 10mm diameter dowelling. Test for fit in scrap, then drill right through the stock

16 Next, cut two lengths of dowelling over size. Apply glue and insert both pieces through the stock

17 After the glue has dried, saw off excess from the dowels on both sides. Trim flush with a block plane

18 After sanding with 180 grit abrasive, wipe on a couple of coats of finishing oil, such as Rustins

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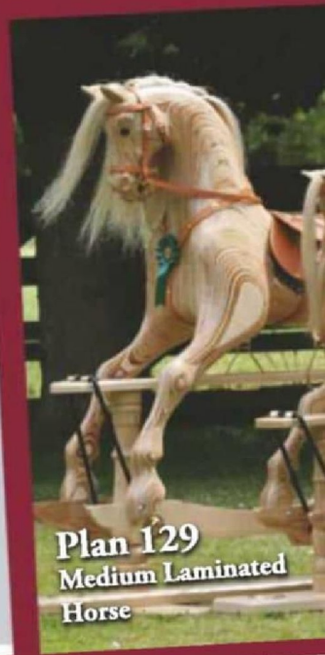

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Coming up in the next issue...

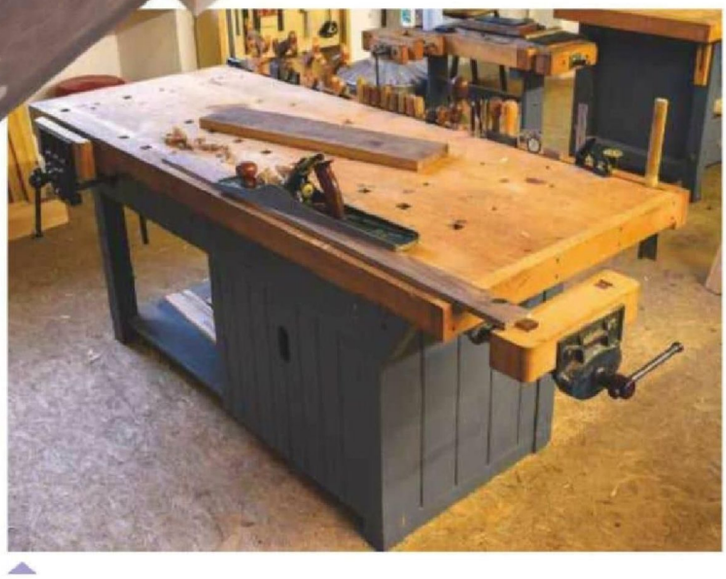
The Woodworker & Good Woodworking
April issue –
on sale 19 March

BIRTHDAY BOX

Wanting to make a special gift to mark his sister-in-law's 60th birthday, Geoff Ryan comes up with this stunning design for a jewellery box in maple and walnut, which includes corner post dovetails

veritas

SEND IN YOUR TOP WORKSHOP HINT/TIP/ POINTER OR PIECE OF ADVICE & YOU COULD BE IN WITH A CHANCE OF WINNING A **VERITAS APRON PLANE FITTED WITH PM-V11 BLADE**



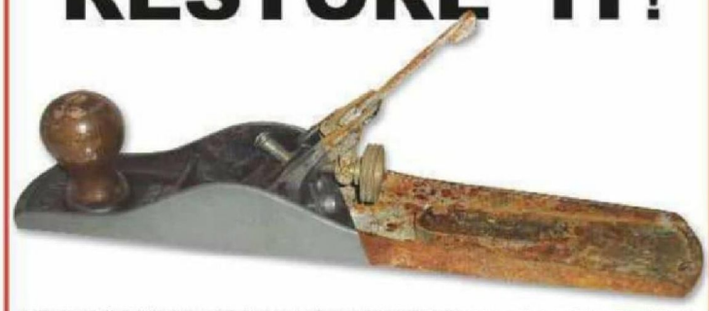
FUNCTIONAL ART IN WOOD

Entirely self-taught and deeply inspired by form and function, Brian A. Hubel believes a piece of furniture should stand on its own and be something you never tire of viewing. We find out more about this inspiring maker and his creative processes

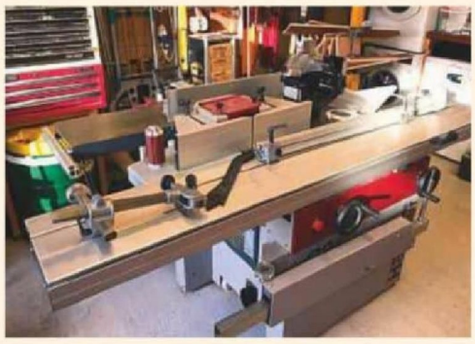
ESCAPING THE CHAOS: HOW TO DESIGN YOUR IDEAL WORKSHOP

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!)

PLUS ▪ CNC-routed simple stool ▪ Cello podium ▪ Bird whistle ▪ Turned platter with apples
Understairs storage ▪ All about wooden pencils ▪ **Record Power:** made in Sheffield



FOR SALE



Hammer C3 31 Comfort combination machine with outrigger; purchased in August 2008 from Felder UK. Extras include rolling carriage and lifting bar; factory-fitted scoring blade; trimming shoe; digital wheel for planer; eccentric clamp; dado cutting set; sanding attachment; sanding paper and top; Euro curve moulding fence and workpiece feed guide; three new sets of planing blades; extension with workpiece roller for the outrigger; Record Power universal cutter head; 10 unused sets of cutters, plus rip saw blade. All light use; spindle turner not used at all. Manual and instructions included. Retired seller downsizing; £3,300 (original pallet available for fork lift) Derbyshire (**07836 585 984**)

Startrite saw bench with tungsten-tipped 300mm blade; light use and in good condition – buyer collects; £200
07957 304 087 (Faversham)

Record Power lathe with screw chuck and four-jaw chuck; £100
01908 510 618 (Milton Keynes)

Little used **Sharpenset whetstone** horizontal irrigated tool grinder with jig for chisel/plane irons. Coarse and fine wheels; 240V with 1,480rpm motor; open to offers
07311 215 885 (Selby)

Melhuish carving/joiner's workbench with brass fittings and 6 drawers. Rising bench top and 2 side cabinets – patent No.735; offers around £475
01778 394 081 (S Lincs)

Over 300 past issues of *The Woodworker*, dating from January 1966 to July 1995. Collection from France, or email **jetled13@gmail.com** to arrange postage

DeWalt DW712 mitre saw – DIY use only and complete with spare blades; £150
07831 164 363 (South Yorkshire)

DeWalt thicknesser – DIY use only and includes various spare blades; £100
07831 164 363 (South Yorkshire)

Two workshop spaces – 61sq.ft; 9'2 × 6'6 × 7' ceiling and 48sq.ft: 7'5 × 6'4 × 7' ceiling – the latter self-contained. Would suit hobbyist, musical instrument makers, etc. Within a larger open plan railway arch workshop, which is home to a friendly community of an inventor/manufacturer and two furniture makers. Access to woodworking machinery. Mile End, East London. Tube eight minute walk and adjacent to fabulous Cemetery Park. It's basic – no running water – but there is access to a washroom and toilet. Secure off-street parking and 24-hour access; £240 PCM
Mark Gould (**07790 781 498**)

Record sliding bed router table fitted with 2,100W Ryobi ½in router. Little use; in excellent condition; £240 – buyer collects
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Graduate lathe with 40in bed – three-phase switchgear removed; includes toolrest and faceplate. Sensible offers only – buyer collects
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Record Power DML/24 lathe; £100
01908 510 618 (Milton Keynes)

Timber suitable for a cabinetmaker – retired antique dealer is selling; call for details
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WANTED

Kity combination machine (or similar) – must feature saw, planer, mortiser, spindle moulder, etc. Carriage paid
+087 2275266 (Ireland)

Australian made Symtec woodturning lathe – in sound condition; must be complete with toolrest – excellent price paid
01454 260 395 (Berkeley)

Three-jaw chuck for mortiser attachment Kit K5. Attaches to planer cutterblock with left-hand thread – both 12mm
01302 817 889 (Doncaster)

Robert Sorby ProEdge sharpening system – any condition considered
01912 685 387 (Tyne & Wear)

Fence plus guide rails for a Wadkin 10in AG5 table saw
07724 386 061 (Wrexham)

Stanley No.1 and No.2 planes – one of each wanted by novice collector
01572 723 976 (Rutland)

Dust extraction spout for DeWalt 1150 planer/thicknesser
023 8089 8123 (Southampton)

Spiers/Norris/Henley planes wanted by private collector; any quote beaten. Ring Ron Lowe on
01530 834 581 (Leics)

Woodworking hand tools, especially old wood and metal planes, wanted by collector. Write to Mr B Jackson, 10 Ayr Close, Stamford PE9 2TS or call **01780 751 768** (Lincs)

Woodworking tools: planes by Norris, Spiers, Mathieson, Preston, Slater, etc. brass braces, interesting rules and spirit levels; top prices paid, auction prices beaten **01647 432 841** (Devon)

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TAKE 5

This month's selection of woodworking delights from **Instagram** includes stunning cabinetmaking with a smattering of feline fun

1 Nakashima-inspired love seat by Ronan Morrison – **@ronan.morrison.furniture** – made in English walnut with ash spindles, posted by **@williamsandcleal**

2 'Walnut & Oak Times Of Tree', posted by **@wood_moment_official**

3 Leaf boxes by **@weberwoodshop** – finished with a thin coat of durable polyurethane and finally hand polished with wax

4 Rotating bookshelf table by **@smithandlawless** – solid oak, oak veneer and marquetry design in various exotic veneers

5 'Steampunk Cat' by **@johnmorrissculptor**, posted by **@woodesignspiration**

Follow us on Instagram – **@woodworker_mag** for regular magazine updates and posts

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