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October 2022

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OCTOBER 2022

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FEATURES

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Timber Suppliers Directory – October 2022

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Web: www.aharrisonwoodturning.co.uk

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Tel: 01277 205990
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sales@hardwoodoffcuts.co.uk

Horndon Timber Products
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Wentwood Timber Centre (South Wales)
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What's new from **MAKITA**: the **latest XGT 40VMAX products**

Leading power tool manufacturer Makita UK has expanded its XGT 40VMax portfolio with the launch of the DK0014G two-piece combo kit, DK0172G XGT two-piece combo kit, KP001G planer, HS011G circular saw and VC005GL, VC002GL and VC004GL dust extractors.

DK0014G & DK0172G XGT 40VMax two-piece combo kits

A must-have for any tradesperson, the DK0014G and DK0172G combo kits both feature two of Makita's most popular professional cordless power tools in a convenient storage solution. The DK0014G includes the TD001GZ XGT 40VMax impact driver and HP001GZ XGT 40VMax combi drill. The DK0172G includes a TD001GZ XGT 40VMax impact driver and HP002GZ XGT 40VMax combi drill.

Both kits also include two 2.5Ah XGT batteries, DC40RA fast charger, and everything is helpfully packed into a type 3 MakPAC case for easy storage and transportation. The kits are also supplied with a 191C10-7 ADP10 charger adaptor, so the DC40RA can be used to charge existing LXT batteries, making it even easier to switch between tools and tasks.

With the TD001GZ close at hand, users can easily remove or drive screws into harder materials, and both the HP001GZ and HP002GZ make screwdriving and drilling applications a breeze.

HS011G XGT 40VMax (270mm) circular saw

Compatible with a guide rail, this powerful circular saw is designed for precision rip cutting and delivers output that's equivalent to corded alternatives. It has a no-load speed of 3,500rpm, bevel cuts up to 1° – left – and 60° – right – and has a maximum cutting capacity of 101mm at 0°, 71mm at 45°, and 51mm at 60°. The HS011G features constant speed control, which works to maintain blade speed and ensure optimum cutting performance. For maximum user safety, this machine includes AWS technology for efficient dust extraction and includes an electric brake to quickly slow down wheel rotation.

KP001G XGT 40VMax planer

The incredibly powerful KP001G is perfect for smooth, rough and thin planing. With a planing width of 82mm and impressive cutting depth of 4mm, it can also deliver a no-load speed of 15,000rpm for maximum efficiency and rapid cutting. With left and right chip ejection, the brushless KP001G also features a foot on the baseplate to raise the machine's base off the bench or material when not in operation, which protects the workpiece from scratches and damage.

To ensure user safety, the planer has an electric brake, which works to quickly stop the blade once the tool is powered down. It also includes Makita's soft start technology in addition to an anti-restart function to prevent accidental start up. Thanks to the inclusion of Makita's Auto-start Wireless System (AWS), the KP001G can also be wirelessly connected to a compatible dust extractor via Bluetooth, enabling the dust extractor to automatically power up when the tool's trigger is engaged.

VC005GL, VC002GL & VC004GL XGT 40VMax dust extractors

All three of these dust extractors have been developed to offer tradespeople a powerful solution for quickly and effortlessly cleaning up at the end of the working day. All machines deliver a maximum sealed suction of 23kPa and have large tank capacities of 8 and 15 litres to prevent the regular breaks required to empty the tank. The VC002GL and VC004GL also include an automatic self-cleaning filter to prevent blockages and ensure optimum efficiency. The VC005GL can be used for dry vacuuming and the VC002GL and VC004GL are both suitable for vacuuming finer, airborne particles.

Kevin Brannigan, Marketing Manager at Makita, said: "Our latest 40VMax products join the wider, expanding XGT range of over 50 models, which can all be powered using the same XGT batteries. This means that professionals can effortlessly switch between tools and tasks to maximise their on-site productivity and efficiency."

For more information on Makita UK, see **www.makitauk.com**.

Just some of the tools collected by 88-year-old Roy Turnage

Woodwork teacher's **antique tool collection** fetches **£35,000** at auction

Valuable antique planes – wrapped in a carrier bag – were among thousands of rare tools and a classic Wolseley car recently found at a house in Kent. The incredible single-owner collection of planes, chisels, rulers, saws, a lathe and more, amassed by a retired woodwork teacher over decades, stunned antique valuers at auction firm, Hansons London.

The house was jam-packed with curious collectables and antiques including around 30 tools made by T Norris & Son, one of the most prestigious makers of hand tools in England in the late 19th and early 20th centuries. The team also uncovered various chisels, distinctive saws, wonderful tool boxes and an extremely valuable Holtzapffel Rose Engine lathe. The collection, amassed over a lifetime by 88-year-old Roy Turnage, recently sold at auction for £35,204.

Chris Kirkham, Associate Director of Hansons London, said: "Roy's collection sparked phenomenal interest and a 99.7% sale rate. Woodwork buyers came out in force to secure these valuable and rare tools. For example, lot 73, an extremely scarce Preston model 1338P adjustable shoulder plane with Preston iron, achieved £520 from a guide price of £120-£180.

"We're delighted for Mr Turnage. It was hard for him to part company with this incredible tool collection, but his treasures are going to people who'll appreciate their quality."

A passion for collecting

Sale of the items was prompted by a house move owing to Roy's diminished mobility, which meant the enormous collection had to be moved. Family and friends rallied round to clear the property, which turned out to be an enormous task.

Roy, who was born in Woolwich, London, in 1933, has always had a passion for collecting, and over the course of 60 years, he managed to acquire a huge range of collectible objects. According to a family friend, Roy used to attend specialist auctions around the country and liked to buy the crème-de-la crème of high-quality tools – including makes such as Norris, Preston, Howkins, Stanley and Marples. Roy admired the craftsmanship and quality of handmade tools, and also used them.

Rare planes

According to Chris Kirkham, this has been one of "the most astonishing house clearance projects I've ever been involved with. Roy is quite simply a phenomenal collector with an eye for quality." Some tools, such as the rare Norris and a distinctive Scottish-made plane, were even deemed worthy of a museum. Other items that went under the hammer included Japanese and oriental jewellery boxes and a Chippendale grandfather clock. "People like Roy are fascinated by all things and we're grateful to have had the opportunity to catalogue the items, which caught his eye over the years. He created a house of treasures."

For further information on the Roy Turnage tool collection and Hansons London, see **www.hansonslive.co.uk**.

TREND T18S/CDB BRUSHLESS COMBI DRILL

Phil Davy looks at this robust, well-built pro tool, which delivers excellent performance in each mode

Cordless drills must be among the least glamorous of power tools, if there is such a thing. Maybe that's because the electric drill was the first portable power tool invented and as such, has been around for a long time. Launched by Fein more than 125 years ago – it was invented a few years earlier – there have obviously been many developments along the way, perhaps the most significant being the switch from mains to battery power. Now, almost every woodworker or DIYer will own at least one cordless drill, maybe several.

Trend recently launched the T18S/CDB, a new combi drill that's part of their 18V Li-ion cordless tool range. A combi has three functions: standard drilling, screwdriving and hammer action drilling – for masonry – so there's not much it can't cope with, whether in the workshop or on site.

Its slim handle is covered in textured rubber, leading to a comfortable grip, while balance is also pretty good. With a 4Ah battery on board, the tool weighs 1.9kg. A sturdy steel belt clip is included, which can be screwed to either side of the tool.

Torque talk

Fitted with a brushless motor, the speed ranges from 0-5,000 and 0-2,000rpm, which is about average for a combi. This is easy to reduce with the variable-speed trigger. Gears are selected via a positive slider button above the casing – sturdy and simple to operate. An all-metal gearbox means increased durability, while electronic braking ensures the motor stops instantly. There's a familiar push-through forward/reverse button above the hefty trigger, while in front of this is an LED worklight.

At the sharp end you'll find a sleeveless, 13mm Jacobs steel chuck, which can be locked with one hand when tightening a bit in place. Two collars in front of the gearbox allow you to select torque or tool function – rotate the inner one for drilling mode, while the outer torque collar has 16 positions for driving screws. Function and torque icons are really clear and neither collar is irritatingly stiff to turn.

In use

To test drilling performance, I bored a series of holes in 50mm-thick softwood with a 25mm flatbit, repeating this in oak with a variety of other bits. As you'd guess, the Trend has more than enough power even with the largest bits, while changing speed up or down is a cinch for those smaller diameters. The speed is nicely controllable when you need to ease off the trigger.

A twist of the collar means driving and removing screws is just as straightforward.

Gears are selected via a positive slider button, which is positioned above the casing

Two collars in front of the gearbox allow you to select torque or tool function

To test drilling performance, I bored a series of holes in 50mm-thick softwood with a 25mm flatbit

I managed to drive 6.0 × 100mm screws into softwood and oak without pilot holes

Maximum torque is rated at 45Nm, slightly less than its competitors, but still pretty efficient. That said, I had no difficulty driving 6.0 × 100mm screws into 110mm deep softwood, and this was only a tad more difficult into oak.

When switching to hammer action, the T18S/CDB easily bored into a dense concrete block with 10mm TCT masonry bit fitted. In this mode it delivers up to 36,000bpm, which is slightly higher than most of its competitors.

Conclusion

This is a robust, well-built pro tool that should satisfy most woodworking or construction drilling tasks. With plenty of guts, it delivers excellent performance in each mode. It may be supplied bare, but is still surprisingly affordable. For those who've not already bought into the Trend cordless platform, shop around and you should be able to buy drill, 4Ah battery and fast charger for as little as £100.

SPECIFICATION

Motor: 18V Brushless
No load speed: 0-5,000/0-2,000rpm
Impact rate: 0-9,000/0-36,000ipm
Chuck: Jacobs – 13mm; masonry – 13mm; wood – 32mm
Max torque: 45Nm
Clutch positions: 16+1+1
Weight: 1.4kg – bare
Length: 210mm

Typical price: £79.97 – bare
Web: www.trend-uk.com

THE VERDICT

PROS

- Solid build quality and performance; user friendly

CONS

- Not the highest torque rating out there

RATING : PERFORMANCE: 5 OUT OF 5

RATING: VALUE: 5 OUT OF 5

TREND T18S/IDB BRUSHLESS IMPACT DRIVER

As **Phil Davy** finds, the T18S/ID is a serious tool that offers fantastic value

Not surprisingly, Trend's new impact driver resembles a more compact version of their drill. It has the same textured rubber grip for comfort, feels sturdy, and balances nicely in the hand. There's plenty of cooling vents at the top and bottom of the body casing, and again, the tool is equipped with a brushless motor. Weight is 1.7kg with a 4Ah battery fitted, which has a charge time of around 50 minutes for this capacity. 2Ah and 5Ah battery options are also available.

The T18S/ID has a standard trigger and forward/reverse selector above, but unlike some 18V impact drivers, this model has two variable speeds: 0-2,400 and 0-2,800rpm. You press a tiny push button at the base of the handle to switch between them, tiny green LEDs indicating status. This versatility is handy if you're installing a variety of screw sizes or bolts and require optimum speed to suit. Impact rate is up to 3,000bpm, while maximum torque is 130Nm.

A third – orange – LED lights up when you select reverse and hit the button. This is a no-load cut-off function, automatically shutting off power to give short bursts when you're taking out a fixing. Clever stuff, though I found it difficult to see the LED in bright daylight.

Like any impact driver, the Trend is equipped with a ¼ are included. You simply pull the spring-loaded, knurled steel collar forward to insert or remove a bit. You can mount the belt clip on either side of the handle, while the LED worklight switches off within 10 seconds of releasing the trigger.

In use

Any impact driver is particularly suited to jobs such as decking installation, laying OSB or plywood sheets for roofing or flooring, or any task requiring driving in quantities of screws or other fixings. The Trend T18S/ID handled these well enough, though don't forget that you should use screwdriver bits designed for impact action, as standard hex bits are likely to break. And don't assume you'll necessarily need a high capacity battery with an impact driver. Even with 2Ah battery fitted, I managed to install and remove an impressive quantity of 6.0 × 100mm screws – with no pilot holes.

The T18S/ID has a standard trigger and forward/reverse selector above

Conclusion

The T18S/ID is a serious tool that offers fantastic value. It may have less maximum torque than some 18V impact drivers, but unless you're driving huge screws or bolts on a regular basis, this is unlikely to be much of an issue. The fact that it features two speeds and auto cut-off makes it more versatile than many pro-rated equivalents.

If you're buying into the Trend 18V system and considering both tools, it's worth comparing prices as you'll save cash sourcing them as a twin pack with batteries and charger. Either tool is supplied with a three-year warranty when registered.

To switch between variable speeds, you press a tiny push button at the handle's base

To insert or remove a bit, you simply pull the spring-loaded, knurled steel collar forward

Any impact driver is best suited to jobs such as decking installation, laying OSB or plywood sheets...

... or any task requiring driving in quantities of screws or other fixings

SPECIFICATION

Motor: Brushless
Chuck size: ¼in hex
No load speed: low – 0-2,400; high – 0-2,800rpm
Impact rate: 3,000ipm
Max torque: 130Nm
Trigger: Variable-speed
Weight: 1.13kg – bare

Typical price: £79.97 – bare
Web: www.trend-uk.com

THE VERDICT

PROS
- Two speeds and auto cut-off in reverse

CONS
- Auto stop LED difficult to see in daylight

RATING : PERFORMANCE: 5 OUT OF 5

RATING: VALUE: 5 OUT OF 5

MEASURING & MARKING TOOLS FROM FASTCAP & AUKTOOLS

Jonathan Salisbury takes a closer look at various measuring and marking tools sent to him for review, courtesy of **Wood Workers Workshop**

Unpacking the boxful of tools for test, courtesy of Wood Workers Workshop

FastCap ProCarpenter measuring tapes

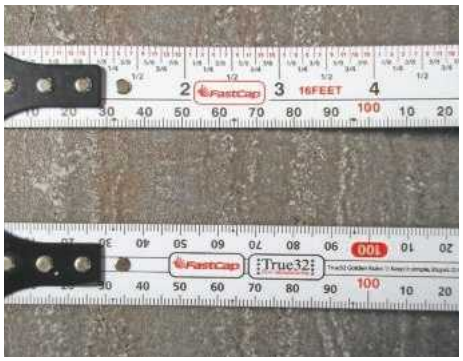
Where to start? There's so much to choose from! The first tools I unpacked were two FlatBack measuring tapes from FastCap – the ProCarpenter Metric/Standard and True32 Metric Reverse. These look very similar to standard retractable tapes, except that when unreeled they lie totally flat against the surface. This allows them to be more easily used on curved surfaces and also rolled around tubes, barrels and other similar profiles to find circumferences.

Both tapes feature clear markings, with white backgrounds and black and red numbers. The 5m Metric Reverse is in millimetres and can be read either way up; if you're into imperial measurements, the 16ft-long Metric/Standard – best used from left to right, otherwise the numbers are upside down, although this isn't a major problem – has feet and inches divided into halves, quarters, eighths and sixteenths, up to 16ft 5in, or 197in. Metric measurements are continuous, with no metre markers, and go up to 5,004mm. Both feature small dots at 32mm intervals; these remained a mystery until I discovered they're actually for the True32 system, which was developed to standardise layout for mass-produced cabinets, such as the spacing of shelf support holes, positioning of drawers, height of units, etc. How did I ever manage to build furniture without knowing that?! The Metric Reverse tape goes one further to include annotations at key points, such as 'True32 Base Cabinet Height', 'True32

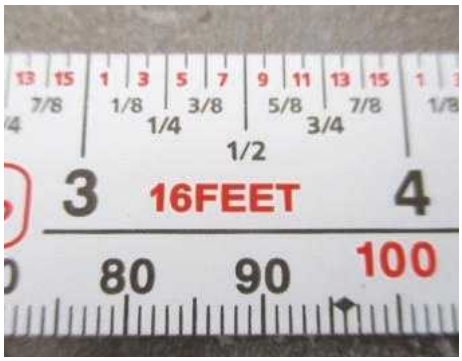
Standard and metric measures from FastCap

The tape lies flat with the surface

Measuring circumferences isn't so straightforward



The numbers are easy to read



Fractions of an inch and millimetres – the diamond is a True32 mark

Lock lever for hands-free operation

Upper Cabinet Bottom Position' and my personal favourite, 'True32 Top of Upper Position for 1,024mm Upper Cabinet'.

Three other notable features of both tapes include a dual locking system, with standard-style push-down catch and smaller button underneath to keep the tape in place only while pressed; a white disc on the side of the body and tape surface, which can be written on with pencil and wiped-clean afterwards; and last but not least, a built-in pencil sharpener.

I was a bit sceptical about these measures at first; the flat tape can't be held straight in mid-air – as with the curved variety – to measure up to walls or ceilings, for example, and the hook doesn't move, so internal measurements are 1mm out at the origin and a further 76mm (3in) needs to be added for the base. Although nice to use, their flexibility over longer distances can be a bit frustrating, especially when the hook slips off the end of whatever it is you're measuring, and because of the hook, it's not always possible to see the exact circumference when measuring around objects. Having said that, a tape that lies flat provides advantages when aligning joints,

A stadium-shaped dotted button grips the tape when pressed

The handy wipe-clean surface is ideal for making notes

setting up a square to transfer lines onto wood, or marking points for drilling.

AukTools MaxAwl & Automatic Center Punch

Talking of which, two centre-marking devices were also included in the box – the AukTools MaxAwl and Automatic Center Punch. Both would make useful additions to any toolbox, particularly the latter. Even though I already own several centre punches and have no problem using them with a hammer, the auto punch has been excellent, allowing me to hold a measure in place with one hand while aligning and pressing down on the punch with the other. This really speeds up marking out and produces a wide, rounded dent that's ideal for use with a standard twist drill. It's adjustable, so you can make a smaller indent, and produces more of a mark compared to

You'll never misplace this pencil sharpener!

The large belt clip can be removed

The automatic centre punch is a time-saver

Neat marks can be created in a surface...

... which are the ideal size for a twist drill

The MaxAwl is a premium tool

The sharp, tapered tip is ideal for wood screws

A comfortable, secure grip for easy use

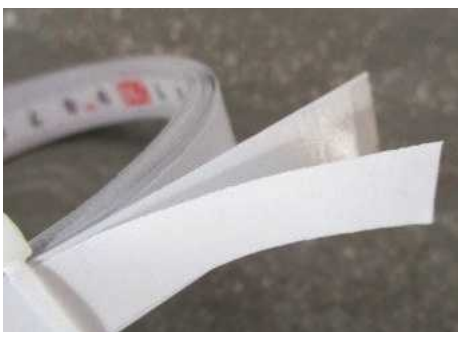
A neat result

the same manual pressure on a solid punch.

The MaxAwl is ideal if you need a narrower or deeper hole to locate a panel or veneer pin, a pilot for wood screws, or a smaller dent for a brad-point drill. It's much heavier than any bradawl I've ever used and since the point continues to taper almost half the tool's length, it's possible to make holes that are a suitable shape for larger wood screw threads. The shaped handle fits naturally into the palm and provides grip for pressing down hard without the risk of slipping; the super-sharp point is ideal for aligning with the edge of a measuring tape and there's a small plastic tip protector, just in case. Good as it is, compared to other awls, the MaxAwl is quite expensive, but would nevertheless prove a worthwhile investment.

The 3m tapes are easily long enough

Left-to-right or right-to-left – the choice is yours



The easy-peel paper backing is convenient

AUKTools self-adhesive steel tape measure 3m

Occasionally, I need to keep a tape measure in place on the bench while I work, except that one hand is holding a tool and the other is on the workpiece. You could glue it to the worktop, or use an AukTools self-adhesive tape! These are available in three metre lengths in both left-to-right – i.e. 0 at the left – and right-to left versions. They're quite narrow – 13mm to be precise – with millimetre markings on both top and bottom edges, just like a standard tape measure or rule. Units between the 10cm marks are always 1-9, so after 10 it counts 1, 2, 3, etc. until you reach 20. Made from steel, they stay straight when fixed in place and can be trimmed to length, with a very sharp knife or tin snips. They're ideal for adding to jigs and are the right size for aluminium T-tracks; the black and red figures on a white background are easy to read. The only downside is that 3m is probably far longer than required, so you're likely to end up with spare tape, but could you cope with the offcuts starting at 0, then counting on 8, 9, 40?

SPECIFICATION

Typical prices: FastCap ProCarpenter FlatBack measuring tapes – £11.95 each; AUKTools Automatic Centre Punch – £4.96; AUKTools MaxAwl – £19.96; AUKTools self-adhesive steel tape measure 3m – £4.96

Web: www.woodworkersworkshop.co.uk

THE VERDICT

FastCap ProCarpenter FlatBack measuring tapes

PROS

- Lies flat so easier to use with other measuring tools; high contrast markings makes it easy to read; write on/wipe clean with a pencil

CONS

- High flexibility makes measuring inside rooms more difficult

RATING :
PERFORMANCE: 4 OUT OF 5

RATING:
VALUE: 5 OUT OF 5

THE VERDICT

AUKTools MaxAwl

PROS

- Super-sharp point for accurate marking; long, tapered end produces holes for all types of wood screw

CONS

- Cost

RATING :
PERFORMANCE: 5 OUT OF 5

RATING:
VALUE: 4 OUT OF 5

THE VERDICT

AUKTools Automatic Centre Punch

PROS

- Easy to set up and use; fast one-handed action speeds up marking

CONS

- Blunt end may be too wide for some

RATING :
PERFORMANCE: 4 OUT OF 5

RATING:
VALUE: 5 OUT OF 5

THE VERDICT

AUKTools 3m self-adhesive steel tape measure

PROS

- Easy way of adding an accurate measure on any surface; available in both left-to-right and right-to-left measurements

CONS

- Not available in shorter lengths; using offcuts provides odd measurements

RATING :
PERFORMANCE: 4 OUT OF 5

RATING:
VALUE: 5 OUT OF 5

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1 of 2 Trend T18S/BJ cordless biscuit jointer kits – complete with 1 × 4Ah battery & Fast Charger – worth over £350 each!

In conjunction with **Trend**, we're giving two lucky readers the chance to win a new **T18S cordless biscuit jointer kit**, featuring six biscuit settings and supplied with 4Ah battery and Fast Charger

The new T18S/BJK 18V biscuit jointer – part of Trend's new cordless range – features a high performance motor that's built for power and endurance. Benefitting from six cutting depths for No.0, 10 and 20 biscuits, there's also additional 'Maximum' Duplex and Simplex settings. 0-90° cutting angles cover multiple jointing applications and a 35mm fence adjustment allows cutting up to 35mm from an edge for setting biscuits into thicker stock.

There's tilting fence indents at 0, 45 and 90° settings, which allow for fast positioning on common angles. Milled reference faces ensure accurate positioning on all jointing styles and an anti-slip rubber cutter aperture prevents slippage as the cutter engages the workpiece. The top-mounted sliding switch is easily accessible for left- or right-handed operation and it's supplied with CR/BJB100T biscuit jointer blade, attachment plate, dust bag and adaptor, plus vacuum adaptor, which fits T35 and T32 dust extractors.

In terms of runtime claim, the T18S/BJK can machine up to 731 No.20 biscuits, 121 fitted worktops or make 10 cupboards – based on a 4Ah battery in chipboard.

Tilting fence and adjustable cutter height fence setting for traditional jointing styles and bespoke constructions

Anti-slip rubber cutter aperture prevents cutter slippage for accurate slotting

FEATURES

- **TREND HIGH PERFORMANCE MOTOR** – built for power and endurance.
- **SIX CUTTING DEPTHS** – for No.0, 10 and 20 biscuits plus additional 'Maximum' Duplex and Simplex settings.
- **0-90° CUTTING ANGLES** – covers multiple jointing applications.
- **35MM FENCE ADJUSTMENT** – up to 35mm from an edge for setting biscuits into thicker stock.
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A: Up to 731
B: Up to 121
C: Up to 550

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D&M TOOLS

MAKITA DBO480Z 18V LXT CORDLESS PALM SANDER HOOK & LOOP + CLAMP – BARE UNIT

MANUFACTURER: Makita
D&M GUIDE PRICE: £89 (inc VAT)

This new 18V LXT cordless orbital finishing sander from Makita has two speed settings – 11,000 and 14,000opm – and is engineered for a flawless finish. Powered by an 18V LXT battery – not included – the ergonomic palm rest grip is designed for comfortable handling. It has a 1.5mm orbit diameter for efficient removal of workpiece material and a large clamping lever for quick and easy abrasive paper installation. The DBO480 is compatible with both hook & loop and clamping-type abrasives.

MAKITA RT001GZ21 40V MAX BRUSHLESS TRIMMER XGT

MANUFACTURER: Makita
D&M GUIDE PRICE: £224.95 (inc VAT)

The new Makita RT001G 40V XGT Brushless router trimmer is compatible with 6mm (¼
speed range of 10,000-31,000rpm, and includes an electric brake and LED job light with pre-glow and after-glow functions. The Auto-Start Wireless System (AWS) allows connectivity to compatible dust extractors via Bluetooth. The trimmer is supplied in a MakPAC case, as a bare unit, with trimmer guide, straight guide and dust nozzle.

TOUGHBUILT TB-H4S2-03 RELOAD UTILITY KNIFE

MANUFACTURER: ToughBuilt
D&M GUIDE PRICE: £21.99 (inc VAT)

ToughBuilt leads through innovation, and the reload utility knife is a breakaway example of how the company continues to reinvent those markets that have remained unchanged for many years. The patented quick-reloading blade mechanism is actuated by a positive, smooth, rail-driven thumb button. After removing a used blade, depressing the slider, and returning it with a flick, a new blade is loaded from the magazine. Internally, each mag holds five blades of any type, while the lower chamber reservoir contains room for an additional 10 blades in storage, giving each mag a category-leading 15-blade payload. Includes two magazines with five hook blades and five standard blades.

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Now in its 27th year, The North of England Woodworking & Power Tool Show – affectionately known as the 'Harrogate Show' – is the longest established, highest attended retail woodworking event in the country.

Visitors will see many of the top demonstrators who will be in action throughout each day in the five 'mini' theatres, including Pat Carroll and Les Thorne, plus various hand tools, power tools, carving, turning and furniture making demonstrations on the stands, plus over 80 companies exhibiting on trade stands.

The 'Harrogate Show' really is a great day out for all! The dates for this year's event are 11-13 November. Following a three-year hiatus, we look forward to welcoming you back to Hall 1 of the Great Yorkshire Showground!

For further information contact

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TORMEK

A DIFFERENT BREED

Established by mechanical design engineer and keen hobby woodworker **Torgny Jansson** nearly 50 years ago, **Tormek** isn't just a global brand made in Sweden, but a name that's become synonymous with innovation, simplicity, quality and sustainability ▸

A global brand made in Sweden and one that exports its products to over 35 countries worldwide, many woodworkers are familiar with the Tormek brand, and those who own a machine can attest to its incredible build quality and unrivalled performance. To understand the true ethos that underpins this remarkable company, however, you need to speak to the people behind it. A family business that continues to go from strength to strength, following his passing back in 2010, founder Torgny Jansson left behind a phenomenal legacy.

What fuels Tormek today is a desire to build on that which Torgny worked tirelessly to create, and owing to the wonderful working environment he created for his staff – many of whom have been with the company for nearly 30 years – they strive to push the brand and grow the business even further. Torgny would certainly be proud of Tormek's achievements to date, and despite global difficulties imposed by the COVID-19 pandemic, how everything has been adapted and maximised – from staff to products to profit – and in doing so, annual turnover increased to some €21 million. Remarkably, this substantial growth – in both turnover and product demand – has only been possible due to the hard work of Tormek's small team of 40 staff – 20 of whom work in the production facility and 16-18 in the office.

From left to right: Tormek Sales Managers, Pontus Gyllby and Sébastien Ehnevid

Doing things differently

We were lucky enough to experience this for ourselves following a trip to the Tormek factory in Lindesberg, Sweden, which provided a rare opportunity to see, first-hand, what goes into making a Tormek product. Remove all preconceptions of a typical manufacturing facility, however – Tormek do things differently. Streamlined, efficient, clean, organised, cutting-edge and employee-focused are just a few key observations that come to mind, and above all, a company that cares. In addition to a new warehouse, investment has also been made in a new canteen, communal seating areas as well as a gym and massage room for staff.

A policy unique to Tormek, and one that sets them apart, is creating an open platform for communication. In this respect, for one hour per week, all staff from various departments meet to discuss improvements and share their insights on a company-wide level. This ensures that everyone is treated equal, regardless of job role/title, and each is given the chance to be heard and have their say. This is a very unusual policy for companies in general, but especially one in the manufacturing sector, which provides the opportunity for factory workers to meet with management and share their opinions on a level playing field. What Tormek has created is therefore very rare indeed: a working environment focused largely on staff well-being.

Innovation, simplicity, quality & sustainability

The factory visit came about following a chance meeting with Tormek's UK Sales Manager, Pontus Gyllby, at the 2019 North of England Woodworking & Power Tool Show. From talking to Pontus and hearing his enthusiasm and loyalty, it became clear that the Tormek story was one that deserved to be communicated and celebrated. Despite the trip being delayed due to ongoing travel restrictions, this actually worked in our favour, as during this time, many developments had been made that we were able to witness first-hand. According to Pontus and another of Tormek's Sales Managers, Sébastien Ehnevid, the pandemic presented the opportunity to re-evaluate existing practices, and following a complete overhaul, they've seen a huge increase in production, which has given rise to further expansion in addition to exciting future plans.

Innovation, simplicity, quality and sustainability are all central in terms of what makes Tormek the brand it is, but in order to truly understand how the company was established and key milestones during its soon-to-be 50-year history, we need to go back to the beginning, when the idea of creating a sharpening system was first realised by founder Torgny Jansson.


The evolution of Tormek: from early beginnings...

... to present day

WHERE IT ALL BEGAN

From prototype to production

Torgny's father, himself a woodworker, was looking for a way to sharpen his tools, and having researched the market and finding no suitable machine, drawing on a wealth of technical knowledge, Torgny decided to have a go at building his own. Following various prototypes and while crude in comparison to later versions, the first machine still resembled a Tormek, despite its red casing. It featured sheet metal, chipboard base, chipboard driving wheel with rubber outer, a natural sandstone and tool

support bar. From the outset, it was intended that the machine made use of a customer's own power drill, which, when switched on, would drive the wheel. Torgny was quite pleased with his initial prototype, so decided to put it into production. As a result, the Tormek company was founded in 1973 – the name being an amalgamation of '**Tor**gny' and the '**mek**anisk' shop in which it was created.

The ST-250

The first real sharpening machine – the ST-250 – was produced in 1973, which again made use of a power drill and chipboard drive wheel. The sharpening stone was natural sandstone, from Gotland, a large Swedish island in the Baltic Sea, but quality issues arose depending on where from a stone the wheel was carved. The water trough was a simple, removable construction with two simple wooden blocks, which moved in and out and held the trough in position. Although cheaply produced, however, it was the work of genius. Despite a machine patent being granted in 1975, Torgny struggled to sell the ST-250 on the Swedish market, which wasn't helped by a competitor company also selling a wet sharpening machine. As such, he had to think outside the box, and from the early beginnings, Tormek machines were exported. Torgny chose to target other markets in the nearby countries of Norway, Finland and Denmark, and in 1976, West Germany and the Netherlands were added to the export list, soon to be joined by Belgium, Austria, Switzerland, the UK, and USA.

The way in which Tormek grew is fairly unique as typically, manufacturers develop their home market before turning their attention to exporting a product. But here, the company gained success by first exporting and later becoming a major player in the Swedish market. To this day, however, around 85-90% of Tormek products are exported.

The SM-250

In 1979, six years after Tormek was founded, the first motor-driven machine – the SM-250 – was launched. Here, all workings were housed inside a steel case, including the belt, which drove the machine. Chipboard was also replaced by metal, but the support bar remained along with a natural sandstone, the same simple water trough, but plastic supports replaced previous wooden ones. Many Tormek customers still own this early model, which is testament to the high build quality that's existed since the company's inception. However, it wasn't long before a new and improved model appeared, and as such, the SM-250 was only in production for three years.

The SA-250

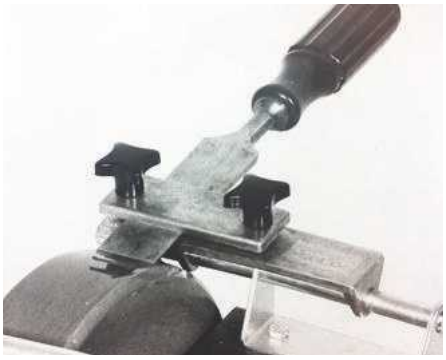
Fast forward to 1982 and the bigger, better SA-250 was launched; it featured the same short support bar, but the newest invention was a belt-driven composite honing and drive wheel, which used the same technology as today. The sandstone wheel remained but the water trough was redesigned. As with later models, this now clicked into position and hung on the side of the

THE TORMEK STORY

One of the first Tormek logotypes

1972: An ordinary portable power drill was used to turn the grindstone; this model rapidly became popular

1975: Tormek's first big order of 200 machines is loaded onto a truck destined for Norway – unsurprisingly, Torgny Jansson documented this momentous event



1978: The first generation Tormek Square Edge Jig. At this time, the Tormek Universal Support was yet to be invented

The Tormek US-105 Universal Support, as it looks today, with Micro Adjust scale

1984: The SA-250 – Tormek's first self-powered model with honing wheel and Universal Support

Tormek founder, Torgny Jansson

Early promotional material...

... for a revolutionary sharpening system

machine, thus doing away completely with previous wooden and plastic support blocks.

In 1985, the ground-breaking US-100 Universal Support was added to the SA-250, but otherwise, construction remained the same. In order for users to be able to true the natural sandstone, however, a new accessory was added – the ADV-50 – which featured a tungsten carbide tip. The SVH-60 jig for planer blades and chisels was later launched, followed by the SVA-170 Axe Jig, which remains unchanged to this day, along with the SVS-30 Multi Jig.

A year later, in 1986, the SVX-150 Scissor jig was launched and today uses the same design, along with three knife jigs – SVM-45, SVM-100 and SVM-140 – all of which were manufactured from aluminium with a longer shaft and handle. As users encountered problems due to incorrectly holding the jig, Torgny rectified this and redesigned it with a shorter handle, which is how the jig remains today.

1985–1986 was more or less the starting point of Tormek as a signature sharpening system, and as such, the SA-250 was marketed in this way, along with the drill-driven ST-250, which went on to receive the Universal Support, allowing all available jigs to be used with it.

Six different machine options

In 1987, the new SG-250 Super Grind stone was launched – an aluminium oxide, synthetic stone and an optional extra for customers to buy – but a Super Grind version of the SA-250 was also available. Demand still existed for the natural sandstone, however, so both machines were therefore sold in parallel.

The Super Grind option was also available for the ST-250, so in total, there were four different machines – two motorised versions with the different stones, natural or Super Grind, and two drill-driven, also with natural or Super Grind stones. By this point, the SA-250 with natural stone became the N-1500, but the SA-250 with Super Grind lasted for another year, until 1989, when the Tormek 2000 Super Grind was launched. The 2000 model always featured a Super Grind stone, but otherwise remained largely unchanged, although it featured a green casing.

In 1992, like the T-3 but without the horizontal base, the Tormek 1200 was followed by the N-900, which featured a natural stone – hence the 'N' – and the 1200 featured a Super Grind stone. At this point, the company had six machines – two of each version in the SA-250 and ST-250 models, plus the Tormek 1200 and N-900. Later that year, various new accessories were launched including the WM-95 AngleMaster, SP-650 Stone Grader, which is still available, and the SVH-320 Planer Blade Attachment.

Up until 1992, the Tormek 2000 was still supplied with a composite honing wheel, but for the first time, the LA-220 Leather Honing Wheel was introduced, and from that point onwards fitted as standard on all machines.

20 years & 67,000 units

From here, the 2000 and 1200 machines – small and large versions with Super Grind stones – took an increasing amount of market share, and the drill-driven ST-250 was discontinued after 20 years in production, having sold 67,000 units.

In 1996, the N-1500 was also retired, but due to an increasing demand for sharpening jigs – today, jigs and accessories form an integral part of Tormek's annual turnover – these continued to be further developed, especially for woodturners, and the SVD-180 Gouge Jig was born. This was later followed by the LA-120 Profiled Leather Honing Wheel in 1997, which allowed the user to hone and polish the inside of turning and carving gouges, plus V-tools.

Major design change

In 1997, the 2000 model saw a major design change, which presented a huge advantage – the XB-100 Horizontal Base for the Universal Support was added, allowing users to sharpen from a horizontal position, on both sides.

In 2001, this became a standard feature on 1200 and 2000 machines. Since users now wanted to sharpen horizontally, this required them to gain closer access to the stone. As a result, the machine's enclosed box-like metal casing was adapted and one of the edges removed to facilitate better access. The design was further modified to feature slanted edges on both sides, which is the same design seen on today's machines.

T-7 & T-3

In 2006, the Tormek 2000 became the T-7, which now featured a blue casing but otherwise remained largely unchanged. The machine was now supplied with a TT-50 Diamond Truing Device and SE-76 Square Edge Jig, which featured a more precise, advanced construction.

In 2007, after 14 years in production, the 1200 was also discontinued, and superseded by the T-3. Largely, however, these machines were the same. Another development was further options for grinding wheels, in the form of the SB-250 Blackstone, which was specifically developed for shaping and sharpening HSS steel, and the SJ-250 Japanese Waterstone, a 4,000

A Tormek employee assembles a machine

Product waiting to be sent out to resellers

grit polishing stone. To this day, both are very popular, and help to make the Tormek system even more complete.

In 2010, the T-7 was upgraded to feature a new, advanced water trough; this was better shaped and offered splash protection. The main shaft now featured a stainless steel construction and was further upgraded to include the EzyLock device – also added to the T-3 – which allowed stones to be changed more quickly.

40th anniversary

In 2011, to mark the company's continued success and to demonstrate recognition of the hard work of their team of – at that time – 20 staff, a 24 Carat Gold Tormek was produced, featuring a Blackstone. The idea was that during assembly, each employee would add an individual component to the special model, with everyone having contributed something towards its production. And yes, we can confirm that, in the flesh, it's as impressive as it sounds!

A year later, in 2012, Tormek celebrated its 40th anniversary, and in addition to a big party for staff, sub-contractors, friends and family, a special limited-edition grey-coloured model was launched; this was supplied with special Tormek anniversary cap and brand-new RB-180 Rotating Base. Only 3,450 units were produced and as such, anyone lucky enough to own one can be assured of having made a good investment.

The following year, Tormek's TS-740 Sharpening Station was developed and launched, which presented users with a unique storage solution for various jigs, stones and accessories, as well as a moisture-proof composite worktop for mounting their machine.

T-4 & T-8

In 2014, the T-3 was discontinued and superseded by the T-4, which was four times more precise. This marked a huge step forward for smaller machines and was instrumental in Tormek's evolution.

Two years later, in 2016, the T-8 joined the product line-up and was the first machine to feature a strong ABS plastic casing. There was also a new water trough with screw lift and magnetic scraper, to collect steel particles, along with the newly-designed SE-77 Square Edge Jig – with more functions and heaver construction – and the SVD-186 R Gouge Jig, which no longer required an Allen key.

Studio setup for recording live sharpening content

The TS-740 Sharpening Station

T-4 Bushcraft

In 2017, the limited-edition T-4 Bushcraft was launched and the 4,000 units produced proceeded to sell very quickly. Aimed at the hunting and outdoor market, it featured a green casing and supplied with knife and axe jigs. In 2019, owing to considerable demand, it subsequently became a permanent fixture and officially joined Tormek's product portfolio.

T-8 Custom

In 2020, the T-8 Custom was launched. Supplied without grinding or honing wheels and jigs, it was intended to allow customers to build their own machine suited to individual needs and requirements. The CW-220 Composite Honing Wheel was next, providing further sharpening options, as well as the TC-800 Tormek Case, allowing customers to keep their jigs and accessories organised, and presented an effective, transportable solution.

T-1 & T-2

To complete the line-up to date and in a bid to diversify and branch into the culinary market, the T-1 and T-2 were launched. The smaller T-1 – aimed at the home cook – is much smaller in size, whereas the T-2 – designed with the restaurant sector in mind – is a professional model. Rather than being water-cooled, the T-2 features a diamond wheel, to deliver maximum sharpness.

INSIDE THE FACTORY

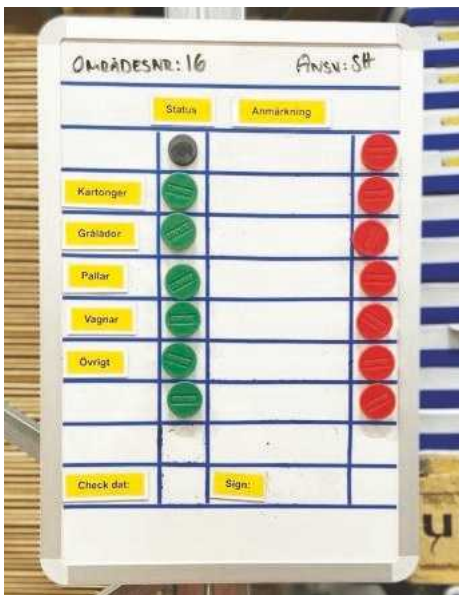
A winning formula for success

Having discussed Tormek's evolution, given a potted history of not just the machines but also the extraordinary range of jigs, wheels, accessories and kits, let's now take a look at how and where these are made, which involves going behind the scenes. Before being shown the factory production line, however, we were asked to sign a disclaimer, which helps to protect the many patents Tormek holds and ensures their winning formula for success is kept firmly under wraps.

In terms of how production works, it all starts in the order department; once an order is received, everything is created for that particular job. Each is dealt with in turn and may include just one machine or multiples, in addition to various accessories, jigs, etc.

There are three different assembly lines in the factory, one for each of the main models – T-1, T-4 and T-8 – which ensures that the manufacturing process is as efficient as possible, from start to finish. The production line is divided into four stations, with each responsible for completing a different task. These rotate throughout the day, which provides employees with job variety as well as equipping them with new skills

Inside the expanded warehouse



Processes are carried out with precision

The new staff canteen is sleek, modern, and above all, clean and tidy

A selection of available grinding wheels

and helping to alleviate boredom and monotony. Here, a team approach is taken once again and staff are encouraged to help one another and problem solve together, which further reinforces Tormek's forward-thinking mentality.

Quality control

In terms of the assembly line and how products are constructed from beginning to end, this starts with the individual components – including electronic ones – which are all checked for quality and tested prior to manufacture. This level of care and attention underpins the Tormek philosophy and as such, these premium products, made using the highest quality parts, benefit from being supplied with an eight-year guarantee.

Due to the machines' high build quality, these aren't intended to be disposal items. Rather, Tormek encourages customers to refurbish their existing machines as opposed to just throwing them away. As they're designed to last indefinitely, however, many customers often buy a second or third machine, rather than upgrading and getting rid of the old one, which cuts down on recycling, disposal and waste. Tormek's aim is to create a customer for life – one who's satisfied with the brand and aware of the level of quality they're buying.

Pontus tells us that 86% of Tormek machine components are actually made in Sweden – some within a stone's throw of the Lindesberg factory. A main concern is to ensure these are sourced as locally as possible, which helps to feed back into the local economy and further differentiates Tormek from the competition.

Warehouse & stock room

The new warehouse, which is less than five-years-old, comprises an assembly area for product packaging – i.e. the cardboard box a machine is supplied in – which is carried out by a number of summer staff, many of them children of Tormek workers. In the stock room, pallets are packed up, labelled and sent to the designated country – for the UK, this is Axminster Tools, Tormek's UK distributor.

Due to the increase in product being sent out, this area has grown exponentially and continues to do so. To ensure the company can always meet a certain level of demand, however, they must ensure a certain level of stock is kept in-house at any one time, which is constantly monitored.

The sales team in Sweden – Pontus, Wolfgang and Sébastien – are integral to Tormek's growth and each is responsible for the various countries in which products are distributed and sold. For example, as Sébastien is multi-lingual, he deals with the Australian and French markets, and similarly, Wolfgang with the German market. However, there's also a Tormek team in the USA, but they all work together and each know their individual markets inside out.

Sharpening studio

To further illustrate how Tormek has adapted and diversified since the start of the pandemic, in response to staff being unable to travel to events and speak to customers face-to-face, the decision was made to set up a studio within their existing product demonstration area. This way, Tormek could still target their core audience and deliver sharpening content in the form of live demos, classes and Q&As, which are shared online via their YouTube channel. Initially, how these would be received was an unknown quantity, but the channel's popularity has in fact soared and the loyal viewer base continues to grow. Starting out with just a basic Smartphone setup, the studio now houses dedicated audio-visual equipment and lighting, which allows content to be professionally produced. In response to this, the marketing department has grown massively and many new job roles created.

The future

Once products are distributed, however, the journey doesn't end there. Tormek pride themselves on listening to customers, creating an open platform for them to have their say, safe in the knowledge they'll be heard and feedback taken on board. This also involves delivering first-class after-sales and repairs support and dealing with customer enquiries quickly and efficiently, with minimum downtime, to ensure the customer can get back to work as soon as possible.

As 2023 marks Tormek's 50th anniversary, the aim is for the entire facility to be completed by then. Further new additions include a 'Museum of Tormek', which will allow staff to tell their story in a visual manner, from concept to present day, making use of old marketing and advertising materials they've collected. Pontus explains that the original 1972 machine, made by Torgny for his father, is still in their possession, and being able to see this with their own eyes will allow visitors to understand developments made over the last 50 years. Without doubt, the future looks incredibly bright for this global brand, which despite experiencing phenomenal growth and success, remains truly grounded, humble, and with the customer at its very core.

FURTHER INFORMATION

For more information on Tormek, see **www.tormek.com**

To find your nearest reseller, visit **www.tormek.com/uk/en/resellers**

Sharpening explained: Pontus Gyllby demonstrates the Tormek system

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TIMBER ROBOT STUDIO

A LOOK INSIDE 'LESS IS MORE'

Photographs by Simon Eldon

Philip Gay of **Timber Robot Studio** and former **robinson house studio** graduate, discusses the making of his Art Deco-inspired collector's chest, as well as sharing a few other unique pieces

WW PROJECT

Timber Robot Studio was established by Philip at the end of 2021, with the aim of producing limited edition, one-off pieces of furniture and sculpture. Focused on creating objects that people feel drawn to interact with and touch, which are both tactile and intriguing, he's also experimenting with designing small batch homeware products and fine timber boxes, all carefully considered to ensure they follow the same ethos.

Creating a strong visual impact

When asked about his current design style, Philip says: "I'm trying to create fresh, interesting forms and material combinations. I enjoy using timber with other materials, such as aluminium, ceramics or fabrics. The warmness of wood, next to the colder industrial qualities of metal, is an interesting contrast for me." Exploring textured surfaces also interests Philip a great deal, and he explains that at present, most of his pieces feature strong, bold shapes and clean lines. "It's quite an engineered aesthetic," he comments; "they often combine light and dark timbers, or contrasting materials, to create a strong visual impact."

Pieces that stand the test of time

Having previously worked as a prop-maker in the UK film industry for over 10 years, Philip's work has also included building window displays for Selfridges, models for architects, sets and models for advertising stills, and he even had the opportunity to work with toy inventors. In his own words: "This work has provided me with a diverse range of skills, and involved working with many different materials." In 2021, however, Philip found himself becoming frustrated with the fact that most of the pieces he made were temporary, so in a bid to create items that'd stand the test of time, he enrolled on a fine furniture making course with contemporary designer-maker Marc Fish at robinson house studio – **www.marcfish.co.uk** – in Newhaven, East Sussex.

FURTHER INFORMATION

Instagram: **@timber_robot_studio**
Web: **www.timberrobotstudio.com**

Stripping things back

Commenting on the collector's chest shown here and the design premise behind it, Philip explains that this does away with the idea of utilising a big box carcass: "This piece was about stripping things back. I wanted to explore diminished forms and play with negative space. It was partially inspired by Art Deco's strong shapes and focuses on creating contrast and tactile surfaces."

It's a bold form, which comes alive as the light moves around it. The chest features black textured legs and drawer fronts, which were created by scorching the timber, then ebonising it. This presents a strong contrast to the pale body of stacked boxes, in terms of both colour tone and touch. "Subtle shaping to the drawer fronts only becomes apparent as you move closer to the

Philip in the workshop

The piece is mocked up to see how it looks in reality

The piece features a third leg rather than the usual four

Establishing concept proportions

piece," says Philip, "or as the direction of light changes, which encourages you to explore." The drawers are mounted on a push-to-open mechanism, so that every use is an interaction with this tactile textured surface. Once open, the drawers are leather-lined in a cream colour that's soft to the touch. Measuring 350 × 520 × 780mm high and made using solid ash and rippled ash veneer, this limited edition collector's chest, intended to hold prized possessions, is a piece Philip's very proud of.

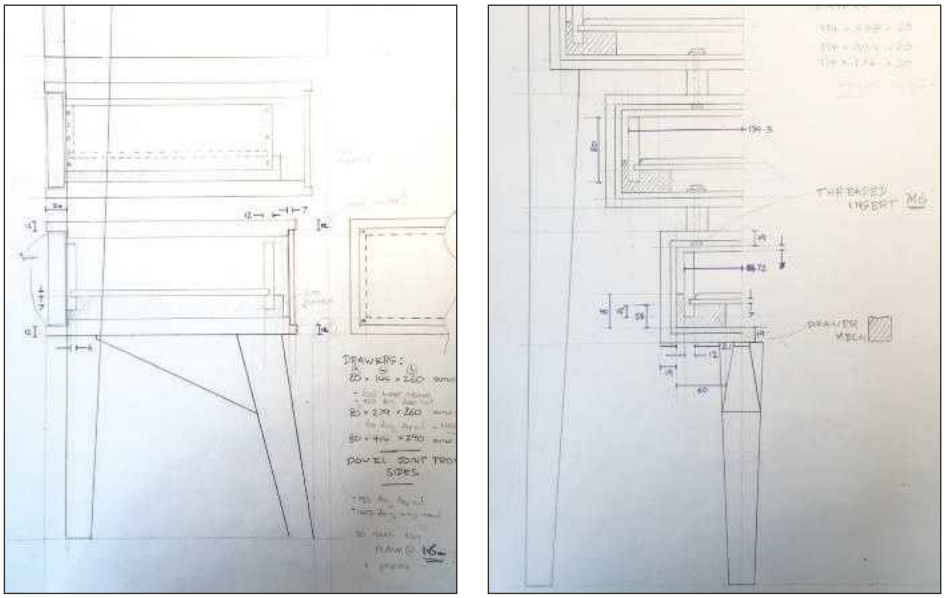
DESIGN PROCESS

Sketch books

For Philip, the design process of a piece usually starts with doodling various 2D shapes and finding a form that seems interesting to him. With 'Less is More', this stemmed from an idea to create three diminishing boxes, all stacked together – reversing a common structure of some Art Deco buildings, which get smaller as their height increases. "There was something about the top-heavy, off-balance shape that appealed to me," he confirms. From this point, Philip moved on to exploring various directions with 2D sketches, and began to settle on one involving three legs rather than the typical four.

Mock-ups

Philip often finds that creating a full-size or scale mock-up really aids a design's development. With this particular piece, he used tape to outline various rough proportions, before playing around with a full-size model, which was easy to adapt and modify. He comments that: "Having something physical to interact with, so you can really get a true sense of its scale, can prove invaluable to the design, both visually and functionally."



The hand-drawn scale plans Philip used as a basis for his design

Working drawings

In this particular case, Philip explains that he produced hand-drawn scale plans rather than opting to use a CAD computer program, such as SketchUp, for example: "As I'd refined the shapes using full-size mock-ups, it was easier for me to grab a pencil and continue to plan rather than opting to build a computer model. This allowed me to start figuring out construction methods and final sizes more quickly."

According to Philip, in some cases certain design elements can develop through the construction process, as he explains: "It took me a while to settle on the drawer fronts' design, but after tapering some test legs and adding chamfers, I decided to try tapers on these, which led to me establishing the final form."

CONSTRUCTION

1 Starting with a grey board and getting to see what was underneath – an exciting part of the build

2 Rough-cutting components from the board: "It's best to cut pieces early and give them time to settle prior to final shaping"

3 Using a plane on its side to shoot veneer, ready for bookmatching. The veneer's joining edge needs to be perfectly straight so that the join is – hopefully – seamless

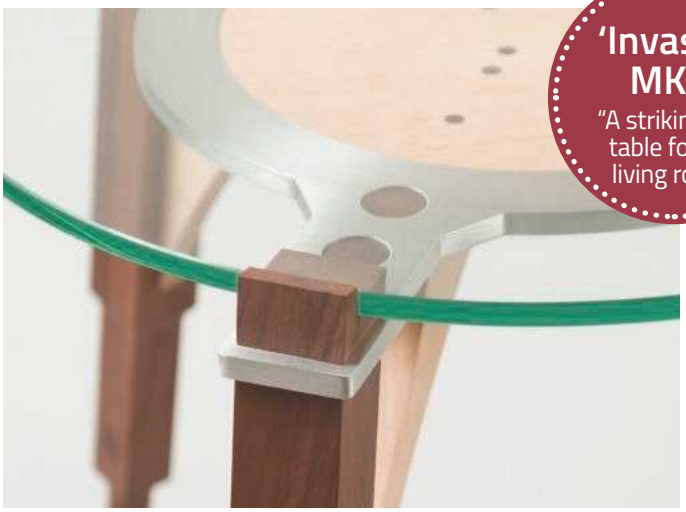
ADDITIONAL PIECES

'Raised intentions'

"A tactile & eye-catching object"

"Taking initial inspiration from ornate French metal caskets, the negative space beneath the box was a key starting point," says Philip. "It became important to draw the eye up to the parquetry, hence the raised quadrants on the lid and slimming contoured sides. This culminates in a tactile object that invites itself to be picked up." Made using pau ferro, ancient bog oak and holly, with high quality cream leather linings and solid brass hinges, finished with a satin Osmo oil – 180 × 180 × 130mm high

Inspired by Philip's work in the UK film industry, the design of this side table was influenced by a discarded piece from a film action prop. Embracing a science fiction theme and an engineered aesthetic, sharp lines and bold shapes provide 'Invasion MK1' with added impact. Made using solid maple and American walnut, aluminium and toughened glass, the aluminium has a radially brushed surface, which creates a soft sheen – finished with Danish oil – 500 × 500 × 480mm high



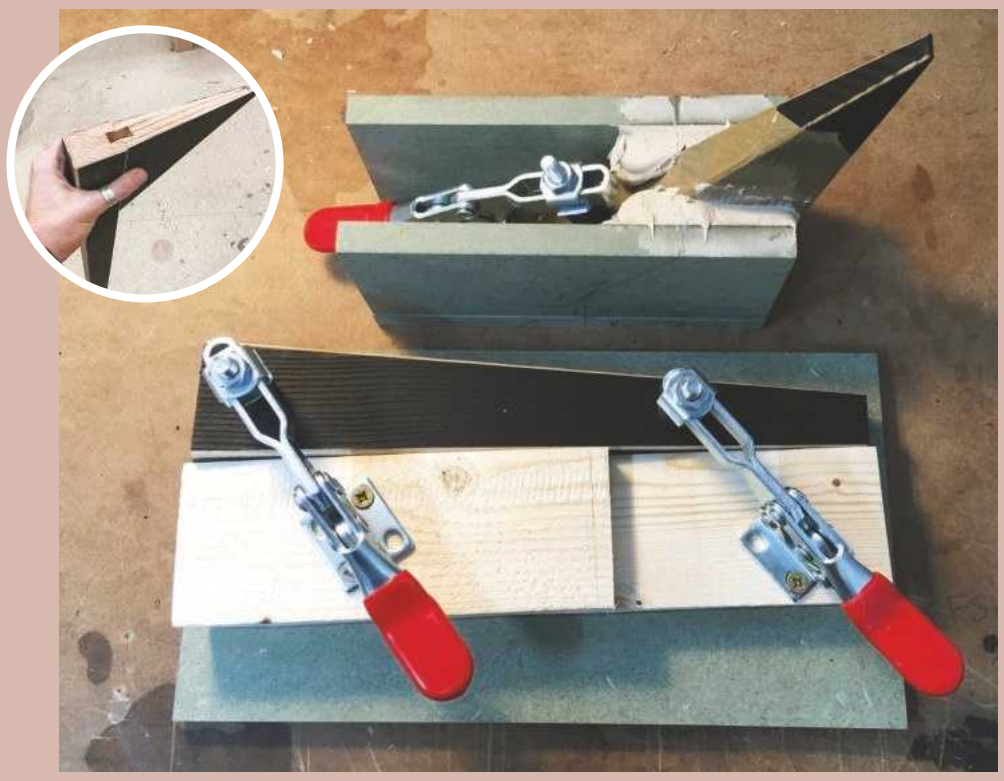
'Invasion MK1'

"A striking side table for any living room"

4 The three boxes are made from 18mm birch ply, with solid wood lippings glued on. These lippings are hand planed flush prior to veneering with the rippled ash. They're purposely quite chunky, to allow for the rebates, so the boards are therefore double-veneered

5 From foam board to timber – initial shaping of the back leg. This is made from two separate pieces to avoid short-grain at the narrow point facing forward; it also provides a better long-grain gluing surface for the chest's bottom

6 Hand planing tapers to create the final shape for the back leg support



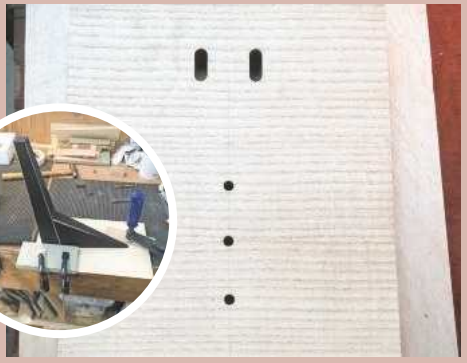
7 Using a sliding dovetail joint to glue the two components together; this should make the leg rock solid. Philip made two jigs, which allowed each piece to be centred over a dovetail cutter mounted in a router table

8 A double dovetail joining block was machined up deliberately smaller; this ensured the pieces were pulled together tightly

9 The veneered boards were cut to size with mitres. Each board allowed for a continual flow of grain across the top and sides. Next, fixing holes for joining the boxes were drilled in and threaded inserts added

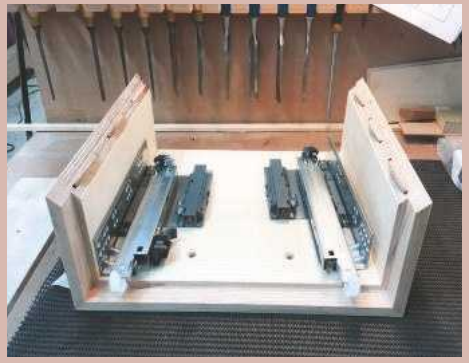
10 Each piece required rebates on the front and back, as the drawer fronts are inset in addition to the back panels. When viewed with drawers closed, this creates a slimmer look to the box carcasses

11 A test drawer in MDF was made in order to try out the final drawer front design. This was useful to see how it all looked and to check that all worked as it should in terms of the runners



12 All fixings for the back leg needed to be sorted prior to glue up. A combination of dominos and mechanical fixings were used; this ensured a good solid glue joint, which could be clamped up using bolts into threaded inserts

13 The back leg required a jig so it would sit square and flat to the pillar drill. The holes were then drilled and inserts fitted



14 For alignment, the boxes were fixed together using biscuits and the runners test-fitted prior to glue up. The reason being that once glued up, it would've been very difficult to gain access using a drill

15 The first glue up. To aid this step, custom mitre blocks were built for each of the boxes

16 All drawers were made using solid ash, then glued with solid wood splines. Here the router table is being used to create the grooves

17 The completed drawers and boxes to hold them

18 Shaping the drawer fronts into tapers for each of the four corners

19 Fitting the drawer fronts with spacers, prior to scorching and ebonising

20 Cutting the tapered legs, and making a jig for the router in order to create a square notch at the correct depth

21 Test fitting domino joints on the legs prior to scorching

22 The legs are scorched using a blow torch, then ebonised

23 Adding chamfers to the legs to create a smooth spot amid the texture

24 Fitting back panels and runners

25 The finished piece

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Some leaded light reading

The December 1906 issue of *The Woodworker* stirs **Robin Gates** to boldly go

Isn't one of the joys of woodworking how it throws up opportunities to explore different crafts and broaden life's experience! Swapping joiners' aprons for lab coats, we might dabble with extracting natural dyes for colouring wood or don the fire-proof mittens to have a bash at forging a wrought-iron hinge. But I suspect that's more the view of the whimsical amateur than one held by professionals. With carpenters, boatbuilders, bakers, engineers and goodness-knows-what-else in the family tree, I must be genetically hard-wired to bite off what I don't yet know how to chew, and the little project I began today already looks like it'll stretch to Christmas.

A veritable craft universe

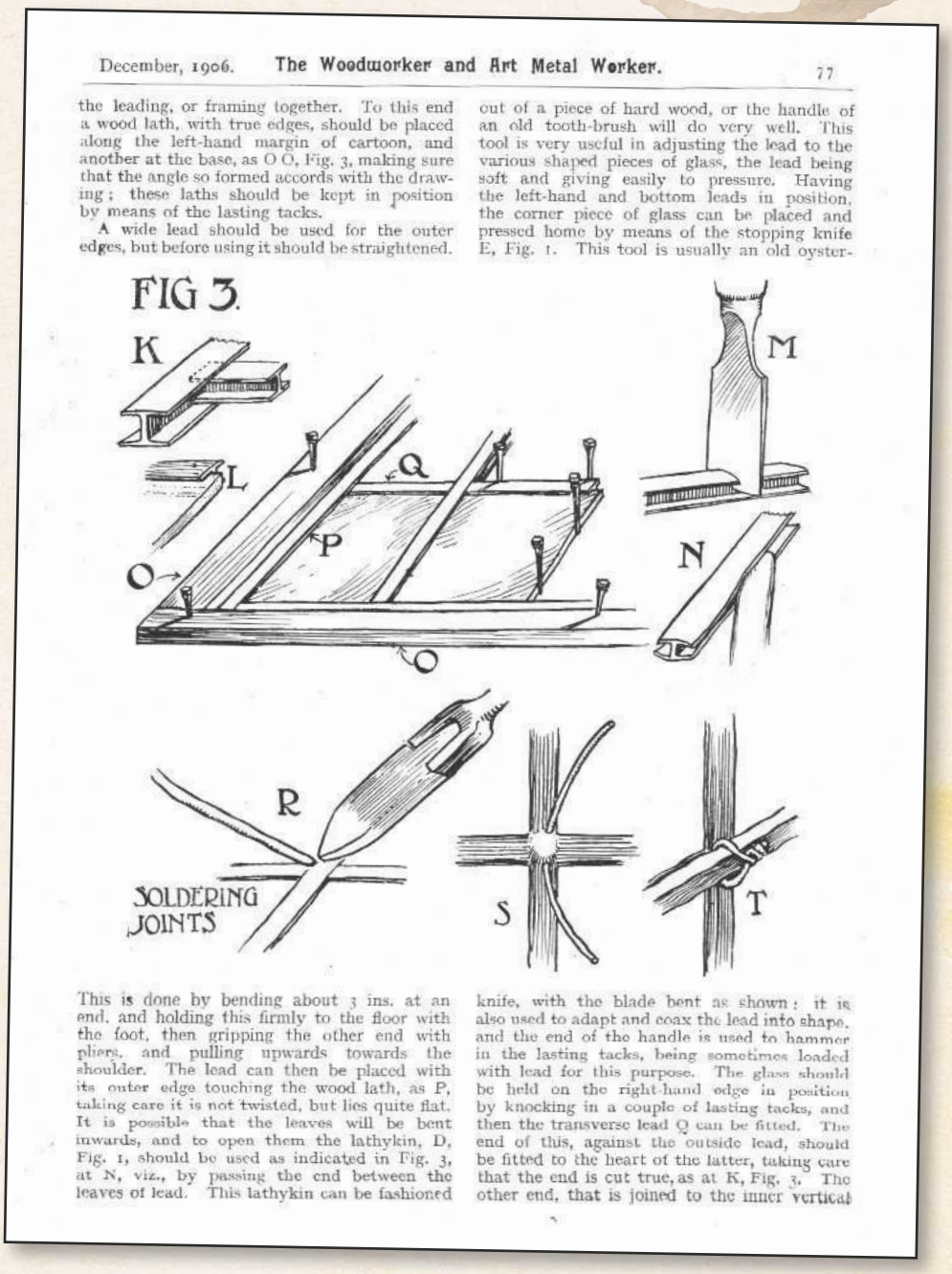
Surely the wise and well-tutored professional gets to be skilled, efficient and not least stay in business by specialising. The pattern for how this works can be pieced together from historical evidence of the furniture-making industry once thriving in the East End of London. Carpentry, turning, chairmaking, carving, foundry work, gilding, upholstering, French polishing, etc. were each handled by specialists in a veritable craft universe. One worker didn't attempt handling every detail from felling trees through to delivery of the finished piece. Yet what fun there is in trying it all, to boldly go where we've not been before, and on that rare occasion when everything goes so undeservedly well – what achievement! What celebration! Everything done with this one pair of hands!

It's a fragile issue of *The Woodworker* from December 1906 – then known by the all-encompassing title of *The Woodworker and Art Metal Worker and Allied Crafts Journal* – which sends me off on this tangent. Despite the breadth of subjects tackled in just 28 editorial pages, there was a modicum of serious woodwork in hand, from setting out ovals and designing a sideboard to the making of a medicine chest, and also a beautiful oak hymn board made by a reader. 'This excellent piece of work has been made and carved by Mr H.S. Beresford Webb, of South Godstone, Surrey,' reported the magazine, 'and is now in use in Tanbridge Church, Surrey.' Prompted by these details, I contacted today's church team asking if the board is still used. Sadly it isn't, perhaps having been removed during the 'updating' of the 1930s when the taste was for less decoration, but I'm told the search for it among 'old, precious junk that churches collect', continues.

Shaping glass

Elsewhere, the magazine explained the making of beads for jewellery, and in part two of a series on bronzing and lacquering, the use of leather 'buffs', calico 'dollies' and costly agate burnishers is described. But the article of particular interest to me concerned leaded lights, those charming windows of small glass pieces set in malleable lead channels or 'cames', each turned subtly by the passage of time until the whole thing glitters like faceted crystal. I wish I'd read this while restoring such windows for the shed, cautiously persuading their loose lights back into position.

Author A. Fenn first covered the tools, glass cutter, knife, square-nosed plier for 'grozing' – don't you love that word for shaping glass! – lathykin, tacks, etc., then the fret leads – as 'cames' are called here – which are round, beaded or flat and sized to leave just sufficient room for cement. The glass too has its own delicious terminology – 'muffled' showing a rolling or uneven surface, lens-like 'Prior's Early English' and 'Norman bottle', undulating 'Venetian', and semi-opaque 'opalescent'. The description of technique omits nothing and is too lengthy to reiterate, but you get the gist of it from Fig.3. I'll just mention points 'R', 'S' and 'T' because they show something I've noticed in the 17th Century Old House in High Town, Hereford, how wires soldered on at intervals and twisted around iron bars – called saddle bars – lend support in larger windows.



December, 1906. The Woodworker and Art Metal Worker. 77

the leading, or framing together. To this end a wood lath, with true edges, should be placed along the left-hand margin of cartoon, and another at the base, as O O, Fig. 3, making sure that the angle so formed accords with the drawing; these laths should be kept in position by means of the lasting tacks.

A wide lead should be used for the outer edges, but before using it should be straightened.

out of a piece of hard wood, or the handle of an old tooth-brush will do very well. This tool is very useful in adjusting the lead to the various shaped pieces of glass, the lead being soft and giving easily to pressure. Having the left-hand and bottom leads in position, the corner piece of glass can be placed and pressed home by means of the stopping knife E, Fig. 1. This tool is usually an old oyster-

FIG 3.

This is done by bending about 3 ins. at an end, and holding this firmly to the floor with the foot, then gripping the other end with pliers, and pulling upwards towards the shoulder. The lead can then be placed with its outer edge touching the wood lath, as P, taking care it is not twisted, but lies quite flat. It is possible that the leaves will be bent inwards, and to open them the lathykin, D, Fig. 1, should be used as indicated in Fig. 3, at N, viz., by passing the end between the leaves of lead. This lathykin can be fashioned

knife, with the blade bent as shown: it is also used to adapt and coax the lead into shape, and the end of the handle is used to hammer in the lasting tacks, being sometimes loaded with lead for this purpose. The glass should be held on the right-hand edge in position by knocking in a couple of lasting tacks, and then the transverse lead Q can be fitted. The end of this, against the outside lead, should be fitted to the heart of the latter, taking care that the end is cut true, as at K, Fig. 3. The other end, that is joined to the inner vertical

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1 The dovetail joint has to be perfect

DOVETAIL DILEMMA

Join us as we weigh up the merits of **hand-cut dovetails** over their machine-made counterparts, discuss saws, then show how to sharpen one

Following a recent spruce up of a Taylor Brothers dovetail saw, I gave it a sharpen before setting with a tweaked No.77 saw, so it was in tip-top condition ready to cut some 'show' joints.

For maximum effect they must be well executed and really do look good in contrasting timbers (**photo 1**). The downside, of course, is that no matter how well you've made the piece, the eye will be drawn to anything that's not as it should be. So with this in mind, it's got to be, or as close as possible, to perfect.

With dovetails, it's the eye-candy impact that jumps out at you. Jigs do exist which speed up and simplify their making, but the results shout 'machine'. That said, however, plenty of hand-cut ones don't make the mark – yes, they may be strong, but their looks let them down.

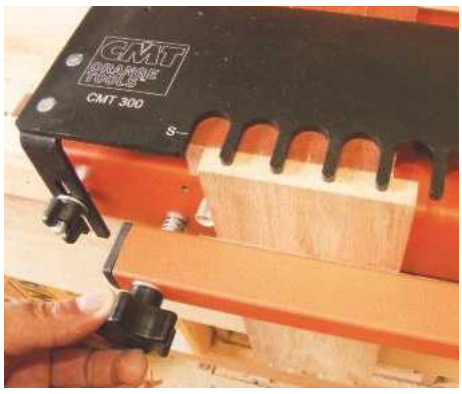
In many instances, dovetails are a means to an end, joining components that'll be under load, the classic example being a drawer where the front is subjected to constant pulling stresses and strains. Introducing a dovetail joint, the front can be locked to the sides, eliminating the chances of the front becoming detached from them.

If that's all you need, then a joint made with a budget jig, or a speedily constructed hand-cut joint that may lack overall finesse, will do the job. In order to witness the skill of a true craftsman, however, look to the disciplines of high-end furniture and box-making.

Machine or...

Hand skill and dexterity are pretty much a given for hand-cut joints, but to try and get a similar 'hand-cut' look with variable spacings and different pitches, you have to take into account the cost of buying an expensive jig, plus a router and required cutters. Factor in the learning curve of using more complex jigs with adjustable finger combs and you may find that it's worth honing those hand skills after all. Cheap jigs work on a fixed comb, which usually cuts the joint in one hit, a single cutter and a half-blind uniform joint, equal-sized pins and tails, with some having the option of additional combs for smaller dovetails and finger joints (**photos 2** & **3**).

There's a variation to this, however: while still a fixed-comb jig, it uses the method of more expensive adjustable combs, so the joint is cut



2 A budget jig isn't easy to master and usually works on a fixed comb...

3 ... to produce a strong but obviously machine-cut result

4 Another version of the fixed-comb jig, however, cuts the tails with a dovetail cutter and a straight for the pins...

5 ... to give a more acceptable result – and it's also easy to use

6 The original Leigh jig offers real versatility...

7 ... not to mention a great result

in two hits via a dovetail cutter for the tails and a straight one for pins. Tail size and pitch are still determined by the comb, but it does give a more natural-looking joint, and is also easy to get to grips with (**photos 4** & **5**).

... hand-cut joints?

The hand tool route is certainly the cheapest option. A dovetail can be cut with just a few tools; a square, saw and chisel are all you need to 'eye in' the dovetail angles, then chisel away the waste.

The tail's angle isn't overly important, although I think the slender angles associated with hand-cut joints do look better than the more pronounced pitch found on those produced with some jigs.

However, the squareness is vital. If the parts of the joint that should be square aren't, the joint can split or there'll be visible gaps. Of course, there's those skilful enough to cut squarely without a square, but for most, squaring across the tails and down the pin faces ensures the joint goes together correctly, providing the cuts are accurate.

An 'eyed' approach guarantees a handmade look to the joints, and you can still achieve a 'bus ticket tight' finish, but the showpiece hand-made joint tends to have fine pins along with perfectly uniform pitch angles.

Once you begin to achieve success and consistency, hand-cut joints give so much variation not to mention immense satisfaction, so it's worth persevering with them. And going for the bare minimum of tools is really detrimental to such a striking joint, so go the whole hog and splash out on a square, coping or fretsaw, to remove the bulk of the waste and a bevel or gauge for pitch angles. And at the same time, ensure to acquire a decent chisel or two; while you can slightly over-cut the tails to make cleaning out easier, a chisel with fine 'lands' – to pare tight into the corners – will keep the joint 'showy'.

Case for jigs

Having used pretty well every jig, I know that the more they do, the more you have to learn and remember. It's the need to get the manuals back out that has me leaning towards hand-cut joints in the first instance.

On a dovetail intensive project, however, the jig option appeals; speed alone is a bonus, but this is counteracted by the noise and dust generated by a router.

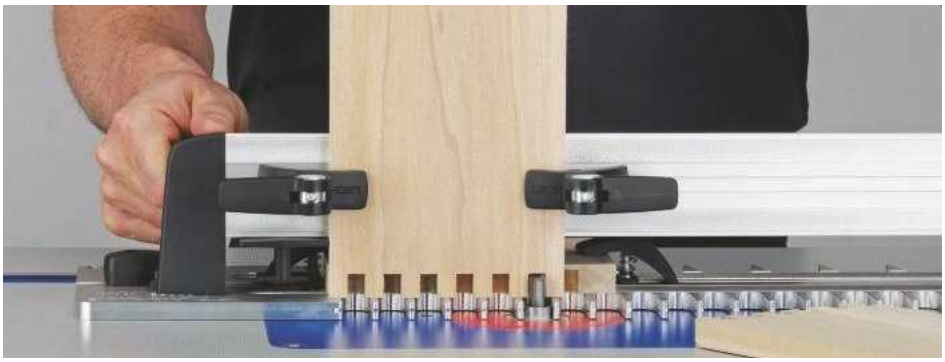
One of the more adaptable jigs has to be the original Leigh with its fully adjustable fingers for an infinite range of tail and pin profiles (**photos 6** & **7**). Today, a wide range of other, similar options exist, including the Leigh RTJ400 dovetail jig (**photo 8**). Badged as an exceptionally easy method of achieving perfect joinery, it allows you to make three types of joints on one template, without any jig adjustments.

As an alternative to the original Leigh, Trend introduced the DC400, but with interchangeable fingers that clipped in and out of a cogged retainer. Since then, further advancements have been made, including the CDJ300 and CDJ600 dovetail jigs (**photo 9**) – measuring 300 and 600mm respectively – which allow the cutting of pins and tails in one operation to ensure accurate results every time. Featuring a laser-cut zinc-plated steel construction, additional templates are also available, which allow further joints to be produced.

The WoodRat is certainly capable of an unbelievable amount of variation, and for dovetailing especially, this entire jointing system allows you to get as close as possible to achieving fine hand-cut joints, although there's a lot to learn in terms of its various nuances (**photos 10** & **11**).

WHAT TO LOOK FOR IN A SAW

Making a hand-cut joint is very satisfying once you achieve a decent level, so alongside these jigs are my thoughts on dovetail saws. The current fashion with these seems to be



8 The Leigh RTJ400 dovetail jig is capable of producing three types of joints on one template, without any jig adjustments

9 Trend's CDJ300 – "an accurate and easy to use dovetail jig for a variety of elegant dovetail joints"

for progressive patterns, with very fine teeth at the tip going into a uniform coarser pattern towards the handle (**photo 12**), thus avoiding the 'grab' associated with a coarser tooth, although that particular problem is, I believe, more concerned with the aggressiveness of the tooth itself. I've always filed a few degrees back from 90 on a rip-filed saw (**photo 13**), as a trade-off of speed over ease of starting, and find there's little difference in the cutting performance so long as it's sharp.

Tooth size

Depending on the stock you use, there's saw choices with differing teeth per inch (tpi); the finer the tpi, the thinner the stock. Finer saws, often around 20tpi, are certainly capable. Select a decent model and they'll be needle sharp, but once dull, you'll need good eyesight in order to keep them in that fashion.

The coarser end for thicker stock can be as low as 12tpi, so a little easier on the eye when they need sharpening, although I feel a good compromise is around 14-15tpi. Progressive-toothed versions demand a more convoluted process, but knocking back the effective pitch is sufficient rather than acquiring a specific saw set.

Handle design

Pick up a traditional Western-styled saw from around 100 years ago and it's the most elegant, comfortable thing you could wish for. Go back between 15-30 years ago, however, and you'd find they had grips reminiscent of a piece of batten with the corners knocked off.

The 'dumbing down' of quality tools gave rise to corner cutting on things like wooden handles, on saws especially – plastic can be moulded to suit at marginal cost. The likes of Lie-Nielsen, Adria, Wenzloff, Pax and Gramercy (**photo 14**) restored matters, offering saws with superb feel, elegance and performance. It's only the Brits and Gramercy, however, that follow tradition with a folded back to tension the blade, the others using a glued-in blade. It's not necessarily essential to have a stunning-looking saw handle, but the actual grip is key. To my mind, a bit more attention to detail in that area should really be applied to lower-priced saws.

10 The WoodRat WR900 is the Rolls-Royce of dovetail jigs

Top-end saws go for broke on their handles, but they're selling a premium product, and woodworkers may make or adapt a handle to suit. Look at Veritas' take on a handle and there's little in the way of flamboyance, yet it's one of the most comfortable examples you could hold (**photo 15**).

Tenon saws

There's no reason why dovetails can't be cut using a tenon saw. Again, various sizes are available, as well as different tpi, but a mid-range size – say, 300mm long with a 12-14tpi – would certainly be sufficient for handling finer stuff.

Sharpening is interesting here. Dovetail saws are predominantly sold in a rip pattern owing to the work they do, but certainly 'when I were a lad', the tenon saw was always crosscut-filed – I don't think I ever saw a rip-filed one for sale!

I've never really found ripping tenons with a fine-toothed crosscut-filed saw problematic, and, with bigger tenons for joinery, I was actually taught to hand-cut these using a crosscut-filed panel saw. The finer tooth and crosscut-filed pattern afford a cleaner finish to cut surfaces, so, providing the marking and cutting is good, you can fit from the saw.

East or west?

For sawyers, the Japanese method is to work on the pull stroke, the benefit being a much thinner saw plate, so thinner kerf, and the theory is that the saw won't buckle in the cut. That's the case with backsaws anyway – you still have to push any saw back through for the next stroke, so it somewhat negates the thin plate argument if it decides to bind or your stroke regime isn't straight, in line and true with a saw that doesn't have a back.

11 Dovetailed drawers by Paul Kirchner, made using the WoodRat jig

The saw tooth profile is certainly different as well; needle-point profiles are the norm and that throws up a couple of problems, sharpening being the biggest one (**photo 16**).

Some Japanese saws can be sharpened, although the replaceable blade option is probably better. I certainly wouldn't fancy sharpening a Japanese saw, and I'm not

12 Modern dovetail saws tend to have finer teeth at the tip to prevent 'grab'

13 For speedy use, I like to file rip saw teeth a few degrees back from 90

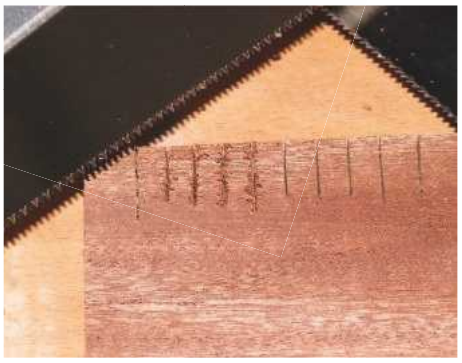
too shabby when it comes to normal ones. The replaceable route is costly, but hardened teeth retain their sharpness for a lot longer. Again however, that can be at the cost of brittleness and the Japanese teeth profile does give rise to a snap or two becoming likely. I've certainly used a fair few Japanese saws where the teeth have snapped quite readily.

But in all of this, it's the actual cutting grip that may be more of a concern. Although the grip's positive, and the long handle sliding along the wrist keeps things rigid, against the pistol-style holding of a western saw, I find it a trickier option to saw with one.

15 There's nothing fancy about this Veritas saw handle, but boy is it comfy!

14 Comfort and elegance have returned with better-quality saw handles designed for form and function

16 The needle-point profiles on Japanese saws are difficult to sharpen



17 You shouldn't have to clean up after saw breakout...

Moreover, on a western saw you mark out and cut through from the face, so the breakout's on the rear, or the side that's not on show. However, a saw pulled towards you breaks through the face, so if you have a cut that requires a clean face, and a dovetail is a good example of such an occurrence, there's a chance of chipping or leaving a ragged cut that'll need planing or cleaning up afterwards. In dovetail work, on drawers especially, you should look to keep things tight and only make minimal adjustments for fit as required, rather than cleaning back to remove saw breakout.

A fine-toothed saw will keep that to a minimum, but working on a timber prone to chipping and pitching the dovetails to a more acute angle, you'll find that breakout can be more prevalent (**photos 17** & **18**).

18 ... but acutely-pitched dovetails can involve a lot of work

19 The grip required by a gents saw isn't dissimilar to that of a Japanese saw...

Gents saw

We do of course have our own take on a Japanese-style saw – the gents saw. The grip is somewhat similar (**photos 19** & **20**), but without a handle extending along the forearm. As with any sawing, western or oriental, extending or pointing an index finger along the saw provides greater stability and control, but as with Japanese saws, I still prefer, and reach for, a traditional saw every time, and I doubt I'm unique in that respect.

Gents saws are normally smaller than dovetail versions and with smaller tooth configurations, so therefore better suited to thinner stock, beadings and the like, but that's the case for any fine-toothed back saw. It can be very easy to get bogged down in terminology and assume you need additional equipment when the majority of tasks can usually be tackled with minimal kit; it's more a case of adapting that which you already have.

Conclusion

I used hand saws in crosscut and panel sizes along with a tenon saw for years, any dovetailing being carried out using the tenon, due to the fact that, for the amount I did, I couldn't justify the cost of a dedicated one.

A decent saw, then, would be equal to the premium saws of today, the only advantage now being that you can pick up the old saws for peanuts at car boot sales, online auctions, etc. but you need to know what you're looking for or you may end up creating more work for yourself in the long run.

If you do manage to get your hands on a good one, however, it could be a dream to use, and somehow, I doubt I could say the same about a Japanese-style saw. You can pay a lot of money for these, but they don't have the finesse and elegance of a top-end Western one, that's for sure – and let's not forget the maintenance involved, either.

20 ... but without the handle extending along the forearm

SHARPENING A DOVETAIL SAW

Setting and sharpening are both minimal on a dovetail saw, but you do need good eyesight and good light and/or a magnifying device. My LED headband magnifier's flip-up lens not only magnifies to 1.75X, but also has a focal point of around 350mm, which is almost perfect for saw filing. I bought mine from Lee Valley – **www.leevalley.com** – but a similar product, the Optivisor Pro-Headband Magnifier, is available from Magnifico – **www.magnifyingglasses.co.uk**.

Setting solution

The saw's thinner plate as well as finer tooth throw up a couple of problems, setting being the obvious one, and on a relatively coarse saw of perhaps 12-14tpi or so, it'll need some set. My own trial-and-error adaptation of an Eclipse 77 has proven perfect for the finer-toothed saws, so I've set it in the normal way, alternate teeth working from toe to heel, spinning the saw and repeating.

I always set first as I don't like putting metal on metal after sharpening, even if it's brass on steel. The exception is if the saw needs dressing, which I'll do first, then set, and sharpen last of all. With such fine teeth and thinner steel plate for the blade, it can be very easy to over-file and go beyond the top of the tooth, so a light touch with a good-quality file is a must.

It pays to highlight smaller teeth with a marker pen, inking right into the gullets; if simply touching up the teeth, it indicates where you've filed, which ensures that no tooth is filed twice.

Topping a saw

For me, the bigger benefit comes once I've topped the saw. Carried out occasionally, this indicates high or low teeth creeping in from previous touch-ups. By marking up the teeth, once topped, those that need most work show up as 'shiners', so you can adjust file pressure in order to work them.

If your teeth do need topping, dress them back to shape and height, then set before touching back in with a pen and taking a final light sweep over with the file to create needle-sharp points.

With a hand-filed saw, you have the option of setting it up to your own specification. On many premium saws, there's a current trend for bolt upright rip teeth; these can be very 'grabby', especially at the start of a cut, but they do cut very quickly. I tend to keep all my rip filing knocked back – to, say, 80° rather than 90 – which gives a slightly slower cut, but one that's much easier to start.

Fine-toothed saws

These saws don't have to be set, especially if you're working in thinner stock as there's less timber to bind the blade. It can be that the burr from the file is sufficient to give a bit of kerf clearance, but a scribble or two of candle wax on the blade allows it to track through more freely.

If you opt for an unset fine-toothed saw, dry non-resinous timbers are usually best. I find progressive teeth less than ideal: not only do you have to file different-sized teeth, but the set also has to be considered. Do you set to suit the teeth and find the coarser ones, then judder as they engage in a finer kerf from the smaller teeth, or overset the finer teeth to allow for this?

Either way, so you can get a feel for the saw, I'd recommend practising making cuts with a standard-filed pattern, and experimenting with dropping the tooth pitch back slightly

1 If the saw requires little work, I set first, but if bad, it may need heavy topping and dressing beforehand

2 Touching in the teeth and gullets with a marker pen makes it easier to see when you start to file

3 A light topping will indicate where the work most needs doing

4 The file must be at least twice the depth of the gullet, but not so big that it deforms the tooth profile

5 For finer teeth, a magnifying visor is well worth the investment

6 The remaining pen marks indicate progress

7 A few test cuts and I'm happy with the performance

8 Despite saying the saw wasn't best suited to a pistol grip...

9 ... I ended up doing a bit of tinkering and made one

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MADAGASCAN MELODY PART 2

In the second part of this instrument build, **Shaun Newman** creates the fingerboard, fits the frets, makes the rosette, attaches the strings, makes the top nut and bridge, before assembling the completed Malagasy kabosy

In part 1, I spoke a little of the origins and uniqueness of the kabosy, and how the soundbox and front were made. I then examined how the neck and headstock were constructed and finally how the soundbox and neck were assembled, before preparing to receive the back.

Making the back

As with the front and sides, the back is made from 4mm ply. It doesn't require any braces as the curve offers considerable strength owing to the fact it's not subject to the strings' pressure. The maker's label can be glued in at this point

36 Label in place on the inside of the back

37 Planing back edges flush with the sides

38 Two pieces of padauk are laminated to make a fingerboard

39 Truing the fingerboard edges

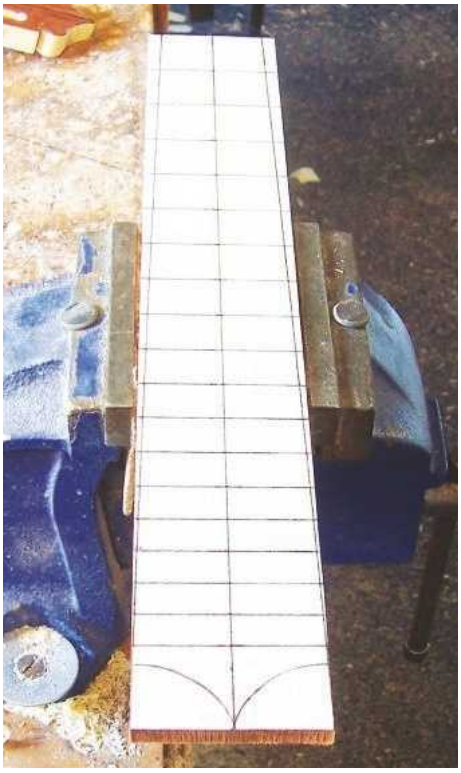
so that it can be seen directly through the soundhole (**photo 36**). Once the back has been attached, the edges are brought flush with the sides. Here, I used my 55-year-old No.5½ Record bench plane (**photo 37**) before moving on to making the fingerboard.

Creating the fingerboard

As mentioned earlier, I'd found a couple of strips of padauk, which measured around 400mm long × 70mm wide, and each 3.5mm thick. Once laminated together, these made up the fingerboard's exact required thickness (**photo 38**). If the fingerboard is too thick, the bridge will need to be made higher than necessary; too thin and the bridge will be too low, but 7mm is about the right thickness for most guitars. Once the edges had been planed square (**photo 39**), the fingerboard's outline and fret positions could be marked onto a covering of masking tape, which makes it easier to see. To ensure an even taper, it's best to first start with a centreline, the width at the nut being 48mm and 58mm at fret 12 (**photo 40**). To begin with, fret slots are cut to an approximate depth of just over 1mm; they will later be cut to the full depth of just under 1.5mm – depth of the fret tang. Once more, a dry fit is undertaken with the fingerboard to ensure everything works and that there's no movement while the board is glued into place. Here, four hardboard pins are used and the holes for these drilled down through the slots at fret 1 and fret 14 (**photo 41**). Small cam clamps are used to fix the fingerboard into place (**photo 42**), which is then sanded flat with a piece of plate glass covered with 240 grit abrasive (**photo 43**).

Fitting the frets

Each fret is cut to a length that just overlaps the fingerboard edges, and once the slot has been brought to the correct depth (**photo 44**) and tested with a home-made gauge (**photo 45**), the fret can be tapped into place. It's best not to use an ordinary hammer for this job as it'll almost certainly damage the fret's crown. Instead, I use a 'dead blow' hammer with



40 Masking tape clearly shows the outline

41 A dry fit of the fingerboard...

42 ... before it's clamped into place...

43 ... and levelled with a glass sanding stick

44 Fret slots are cut to the correct depth

45 Testing the slot depth

46 Tapping in frets with a dead blow hammer

47 Fret ends snipped flush with the fingerboard edge

48 Fret edges are filed to 90°

nylon faces to prevent damage and also to avoid the hammer bouncing back and causing the fret to pop up (**photo 46**). The fret ends are nipped off with flush cutting pincers (**photo 47**), then the very ends filed flush with a home-made 90° hand file (**photo 48**). It's very important to ensure that the crowns of each fret are level with the rest, so a 'fret rocker' can be used here. This quadrangular looking tool has four straight edges – 10, 8, 5 and 3.5cm – and is used to span any three frets at a time. If the tool rocks, then the middle fret must be lowered, either by being tapped in a little harder or filed down (**photo 49**). Although this tool is commercially available, it's easy to make your own by cutting up an old alloy or boxwood ruler.

Once the frets are in place, it's time to give the neck and head its final shape. Flat and curved rasps remove much of the stock (**photos 50** & **51**), and the final shape is achieved by sanding through various grits from 180-400.

MEASUREMENTS	
Nut width	48mm
Fingerboard width at fret 12	58mm
Bridge length	125mm
Bridge height	8.5mm
Bridge width	12mm

The rosette

On many original kabosy examples, the rosette around the soundhole is simply painted on, but I chose to use an unused self-adhesive mock

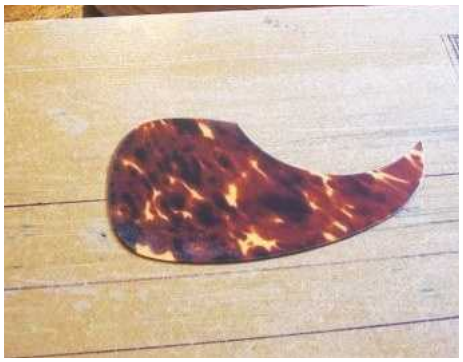
49 Testing the frets for level

50 Shaping the headstock

FRET POSITIONS MEASURED FROM INNER EDGE OF THE NUT

Fret 1 – 29.5	**Fret 10** – 231
Fret 2 – 57	**Fret 11** – 247.5
Fret 3 – 83.5	**Fret 12** – 263.5
Fret 4 – 108	**Fret 13** – 278
Fret 5 – 131.5	**Fret 14** – 292
Fret 6 – 154	**Fret 15** – 305
Fret 7 – 175	**Fret 16** – 317
Fret 8 – 194.5	**Fret 17** – 329
Fret 9 – 213	**Fret 18** – 340

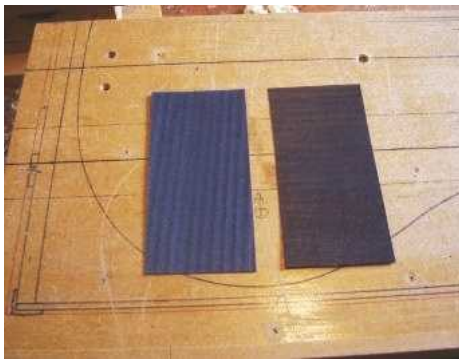
51 A final profile is given to the neck and heel



52 An unused pickguard is used for the rosette

53 The rosette is cut out

54 Testing the rosette's position



55 Veneers for the pickguard

tortoiseshell pickguard I had available (**photo 52**). Before removing any of the backing film, I used an Olaf circle cutter to create a ring that'd fit around the soundhole (**photo 53**) and once cut out, it was a simple exercise to see exactly where it'd fit and trim the ends to correspond with the fingerboard edges (**photo 54**). Before attempting to fit the rosette, it was also time to make up a pickguard. I could have used the mock tortoiseshell one, but it was too big, so a couple of pieces of black tulipwood veneer, laminated together, made a very good alternative (**photo 55**). Once laminated, the pickguard is fretted out and will later be attached using a fine film of contact adhesive (**photo 56**).

56 Fretting out the pickguard

The finish & fitting the rosette

Before all of those stages, however, it was time to apply a finish. In keeping with the traditional approach to kabosy making, I applied a paint finish to the soundbox, but used ordinary polyurethane for the neck and headstock (**photo 57**). Owing to its durability, a cupboard paint seemed appropriate for the body.

From previous experience, I knew that fitting something with a self-adhesive back is a 'one shot kill', so before putting the rosette in place, I marked out where the outer diameter would fit, using small pieces of masking tape. This allowed me to align the rosette with necessary precision (**photo 58**).

Attaching the strings

It was now time to consider how the strings should be attached. As mentioned earlier, the tuners were taken from an abandoned banjo, so there wasn't a problem at the nut end. Usually the kabosy has a metal string holder with hitch pins at the tail end – a small piece of model maker's brass sheet found in a workshop drawer was ideal here. Using this, I made a 75 × 25mm string holder, which was cut from the brass sheet using a pair of tin snips (**photo 59**) and a fold hammered into the holder 5mm from the edge (**photo 60**); this would allow it to sit on the lower end of the top with the overhang protecting the front from the sharp strings cutting into the wood. Prior to fitting, eight holes, each 1.5mm in diameter, needed to be drilled through the holder's wider edge to accommodate six hitch pins for the strings and two further moulding pins to secure the ends of the holder and prevent any sideways movement (**photos 61** & **62**). The hitch pins are tapped into place at a slight angle with the protruding ends pointing downwards to ensure the string loops don't slide off (**photo 63**). A further small task needed to be carried out in order to complete the finish, and involved oiling the fingerboard. Liberon finishing oil was

57 Cupboard paint is applied to the soundbox

58 The rosette in position

59 Cutting out the string holder

60 Folding the holder

61 Holes drilled for hitch pins and attaching the string holder

62 The completed holder ready for fitting

63 Tapping the hitch pins in at an angle

64 Oiling the fingerboard

65 Preparing the bone top nut

used, which not only helps to protect the wood, but also enhances the padauk's colour (**photo 64**).

Top nut & bridge

Here, the natural bone nut is made from a piece measuring 60 × 11 × 6mm, which is first reduced to 48mm in length. Slots are filed into the top of the bone so they're 1.75mm proud of the fingerboard's face. This ensures that the strings clear all of the frets and won't buzz as notes are played up and down the fingerboard. The back of the nut slopes downwards, which helps the strings to sit comfortably as they pass through the tuner barrels (**photo 65**).

The bridge is made from a small piece of rosewood measuring 125mm long × 12mm wide × 8.5mm high. To prevent the strings from cutting into the top of the bridge, a piece of fret wire is inserted into a slot cut along the top (**photo 66**) once the ends have been scalloped (**photo 67**) and is left to 'float' on top of the instrument. This allows for slight adjustments to string length, which in turn can help with correct tuning and intonation. Standard acoustic guitar strings with loop ends were used.

Once finished, my six-year-old grandson, who's a keen follower of Roger Hargreaves' *Mr. Men* books, said: "It looks like a guitar made for Mr. Strong!" (**photos 68** & **69**).

67 Bridge ready for fitting

66 A fret slot is required along the top of the bridge

SUPPLIERS

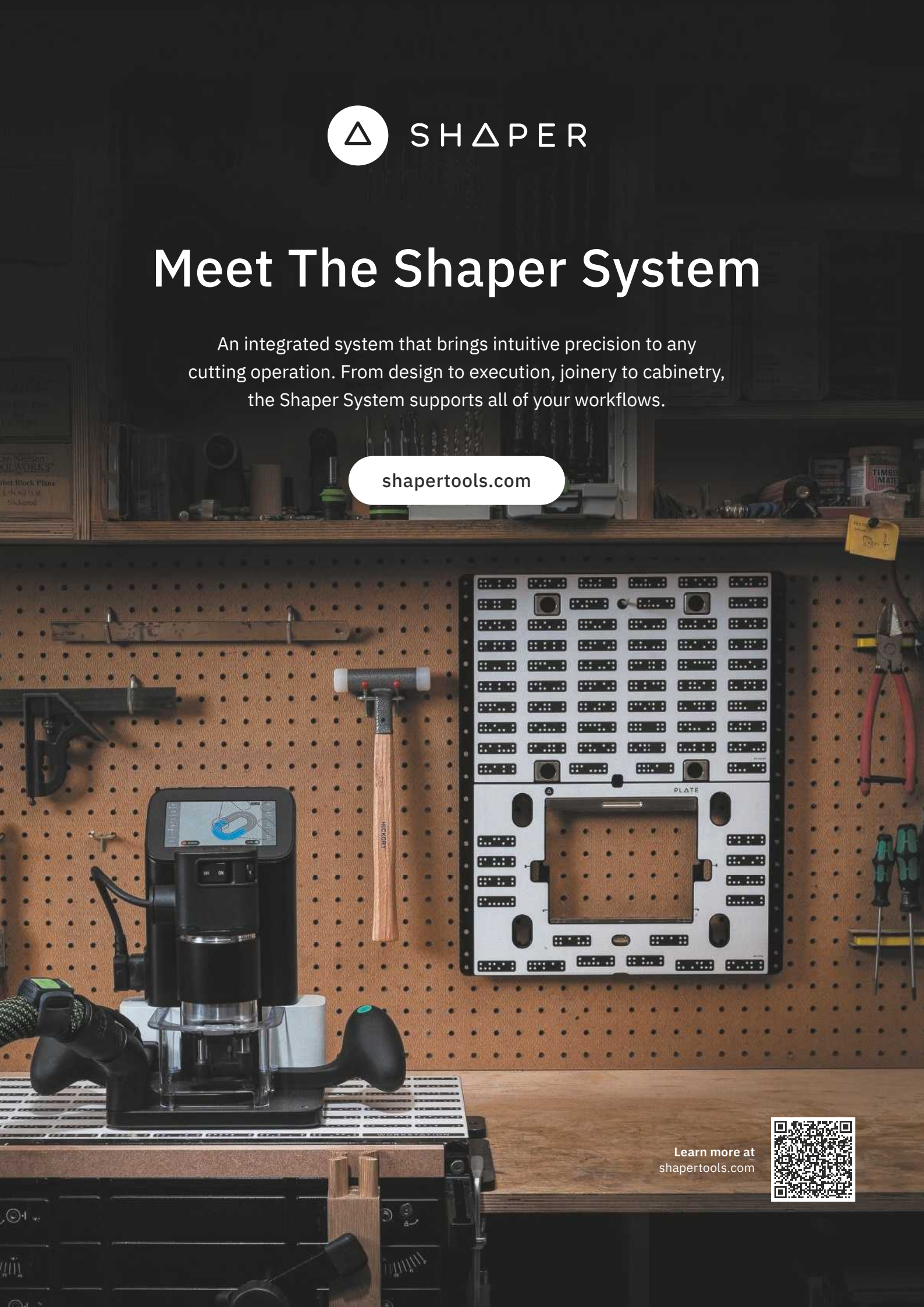
The Guild of American Luthiers – for a working drawing of a Malagasy kabosy – **www.luth.org**

Stewart-Macdonald – timber, tools & fretwire – all things necessary for guitar builders – **www.stewmac.com**

Strings Direct – every type of string required – **www.stringsdirect.co.uk**

Touchstone Tonewoods – as for Stewmac but without 20% import charges – **www.touchstonetonewoods.co.uk**

68 Completed kabosy in the workshop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WESTONBIRT WOODWORKS 2022

1 Spoon carvers, pole-lathe turners, chairmakers and toolmakers alike were happy to chat with punters while demonstrating their skills, most of them relying solely on hand tools

Attending this fantastic weekend event, **Phil Davy** relishes the opportunity to get back into gear and celebrate green woodworking in its various forms

With temperatures hitting 30° the day before the event, you just knew the weather wasn't going to hold. After all, this was what we used to expect from an English summer, but rain didn't appear to dampen the enthusiasm of both demonstrators and exhibitors at Westonbirt Woodworks' celebration back in June.

One of the earliest outdoor woodworking events up and running since the pandemic eased, it was a pleasure to catch up with chairmaker Paul Hayden and his team once again. Having taught more than 2,000 students the basics of this specialised craft over a period of at least 25 years, his six-day courses understandably ground to a halt during lockdown, so, this weekend event was a chance to get back into gear and celebrate green woodworking in its various forms. Spoon carvers, pole-lathe turners, chairmakers and toolmakers alike were happy to chat with punters while demonstrating their skills, most of them relying solely on hand tools.

Carving a living

Lee Stoffer not only creates charming utensils from native hardwoods, but also makes many of the tools used to carve them. Watching him sculpt a willow spoon – initially with a Gransfors axe followed by a scorp and a couple of knives (**photo 2**) – he was clearly in his element creating functional items from material most people would

2 Lee Stoffer sculpts a willow spoon

3 Young craftsman Aghi Merrett...

4 ... made this eye-catching Scandinavian-inspired Windsor in blue milk paint with an oiled finish

5 Traditional, classic double-bow ash rocker by Paul Hayden

6 Woodturner Ralph Curtis from Yew Turn – aka The Mushroom Man

7 Exquisite mallets from Mappa Tools, which feel perfect in the hand

consign to the firewood pile. Beautiful pieces, but my short visit sadly meant I forgot to buy one of these unique spoons.

With chairs on display in the gallery from seven individual makers, those by young craftsman Aghi Merrett particularly caught my eye (**photo 3**). Having attended one of Paul's chairmaking courses in 2021, he's now working at Westonbirt Woodworks over several months, helping out on courses and taking commissions. A pair of stylish contemporary stools with cherry seats and ash legs soon found a buyer, while a graceful, Scandinavian-inspired Windsor in blue milk paint and oiled finish was a real eye-catcher (**photo 4**). Building an elegant ash chair with carved comb proved something of a challenge for Aghi, but was a definite triumph. Meanwhile, I'm sure Paul's more traditional, classic double-bow ash rocker would be pretty relaxing in front of the fire (**photo 5**). With English pattern legs, this was one of several chairs typically for sale in the Woodworks shop. Simpler items made from Arboretum timber included chopping boards, trivets and tables, which are standard fare throughout the year.

A familiar face at many outdoor shows, woodturner Ralph Curtis from Yew Turn – aka The Mushroom Man – must've been the only demonstrator relying on the National Grid for power (**photo 6**). Popular with punters, his effortless shavings appeared to rival his flowing locks!

8 Josh Hayden was giving regular demos of the newly installed Trak-Met horizontal bandsaw mill

Dutch courage

In conjunction with Classic Hand Tools, this was the first chance to take a closer look at some gorgeous products from Mappa Tools, based in the Netherlands. Picking them up, their exquisite mallets felt perfect, even though the style may be less traditional (**photo 7**). With wood options including cocobolo, African blackwood, cherry and kingwood, choosing a combination could take a while. Also on display were their unique poplar and rippled ash mallets, infused with acrylic resin. These superb tools cost from £120, depending on timber species.

Set up by Jaap Bosma and Bas Hemmen, Mappa has only been in existence for a few months, this being their first foray to a UK show. You can check out their range at Classic Hand Tools, which includes resin-infused curly maple and poplar burr blocks, intended for creating your own tool handles or pen barrels.

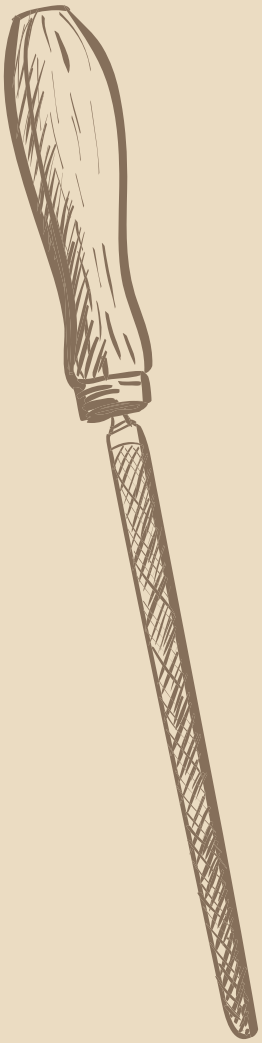
Westonbirt sawmill

If you were missing the whine of woodwork machinery, Josh Hayden was giving regular demos of the newly installed Trak-Met horizontal bandsaw mill (**photo 8**). Built in Poland, this beast of a machine made fairly short work of some pretty hefty logs and was obviously a favourite toy. Previously, Paul had to source much of his chair timber from outside the Arboretum, but now the sawmill is operational, there's no shortage of air-dried boards in a variety of species. If you're planning a trip to Westonbirt, it's worth checking their stock as timber is also for sale to customers.

With plans to expand the event for 2023, provisional dates are 17–18 June; ensure to keep an eye on the Classic Hand Tools website for further details and updates.

FURTHER INFORMATION

Westonbirt Woodworks:
www.westonbirtwoodworks.co.uk
Classic Hand Tools: **www.classichandtools.com**
Mappa Tools: **www.mappatools.com**



THE TOOLS FOR THE JOB

WW TECHNIQUE

Carving tools are a mecca for tool junkies, but which ones do you really need? **Iain Whittington** shares his suggestions

London/Sheffield List

Straight
- Straight (firmer) #01
- Skew/corner #02 (continental #1S)
- Gouges #03-#11 (continental #02-#10)

Long Bent
- Gouges #12-20

Short Bent
- Straight chisel - #21
- Skew - right - #22 left - #23
- Gouges #24-#32

Back Bent
- Gouges #33-#38

Veiner
- Straight #11, curved #20, & spoon #32

Parting or V-Tools

Long Bent
60°V - #40, 30°V - #42, 90°V - #46

Short Bent
60°V - #43, 30°V - #44

Fig.2 London/Sheffield carving tool list

The terminology used to describe carving tools is, at best, confusing, but also arcane with older English terms mixed in with common usage.

The 'London List'

Traditionally, tools are numbered based on the 'London List' (**Fig.2**), where these convey a three-dimensional description. The original 'home' for the manufacture of English carving tools was probably in London – Deptford – where it was allied to shipbuilding and maintenance at the London Docks. Here, you'd probably find the likes of Grinling Gibbons and his workshops.

The London List's history likely also evolved from here, beginning with the Addis brothers' feud in the mid-19th century, where the older sibling remained making tools in London, while the younger Addis – JB – went to the 'new' steel centre at Sheffield to manufacture tools for Ward & Payne, who subsequently sold them around the world.

The confusing nature of tool descriptions was first recognised by Ward & Payne, so in the late 19th century, through to the mid 20th century, they listed the – Sheffield made – 'JB Addis Tools' in their catalogue under the description 'London Pattern' – a description that was probably an attribution to elder brother SJ Addis, which has subsequently outlived the various Addis brands.

Tool descriptions

UK tools are described in three dimensions: first seen from the sharp end; next, from the side; and finally, from above. As viewed from the sharp end, tools come in a graduated range of profiles, each in a number of widths – starting with No.1 – a straight or 'firmer'; No.2 – a flat skew; and curved gouges numbered No.3-10. A mystery that plagues new carvers is that European sweep numbers are apparently greater than those on the equivalent London List; this is easily explained by the Continental lists simply calling a London No.2 – straight skew or corner firmer – a Continental No.1-S, so renumbering curved gouges from No.2-9, one short of the equivalent London List profile – No.3-10.

The widest range of profiles still in UK production are likely those manufactured by Henry Taylor. The use of secondary numbering is well illustrated in their catalogue, although, uniquely, they use the prefix '1' – i.e. 11-3 – in the tool number stamped on their blades, to denote short length 'amateur' tools. Generally, having numbered a tool as seen from the sharp end, the list then goes on to add a prefix digit to describe:

SIDE VIEW:

A) 'Long-bent' or **'curved'** – where the whole tool is curved or bent;

B) 'Short-bent' or **'spoon-bent'** – where just the end is bent;

C) Then, within 'short-bent', another digit is used for 'front-bent' or 'back-bent' where the short end is bent upwards or downwards.

TOP VIEW:

C) 'Fishtail' or **'pod'** – flared either just at the end, or along their length – useful in tight corners as they provide a better view of the area being carved;

D) 'Skew' or **'corner'** – where the chisel end is at an angle to the blade.

Then there's 'parting tools and veiners' including 'V' parting tools – at 45°, 60° and 90° – and 'veiners' or 'grooving tools' – where the U-shaped sweep is a semi-circle with elongated shoulders. Conventionally, the No.1 and No.2, or so-called 'firmers', are sharpened with a double bevel, while the 'chisel' description is still used where a straight tool is sharpened with a single top bevel, such as a carpenter's chisel.

Tool recommendations

In terms of which tools you 'need', a more appropriate question should perhaps be 'which carving tools should you buy?'. This is in the same category as "what car should I buy..." – everyone has an opinion, but both answers are really dictated by their intended use.

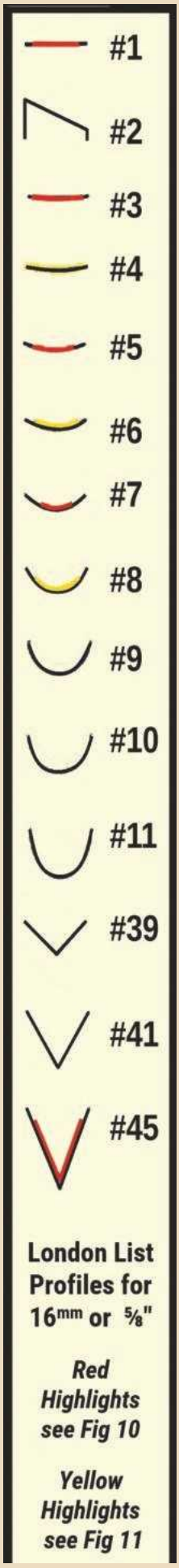


Fig.3 London List profiles for 16mm or ⅝in

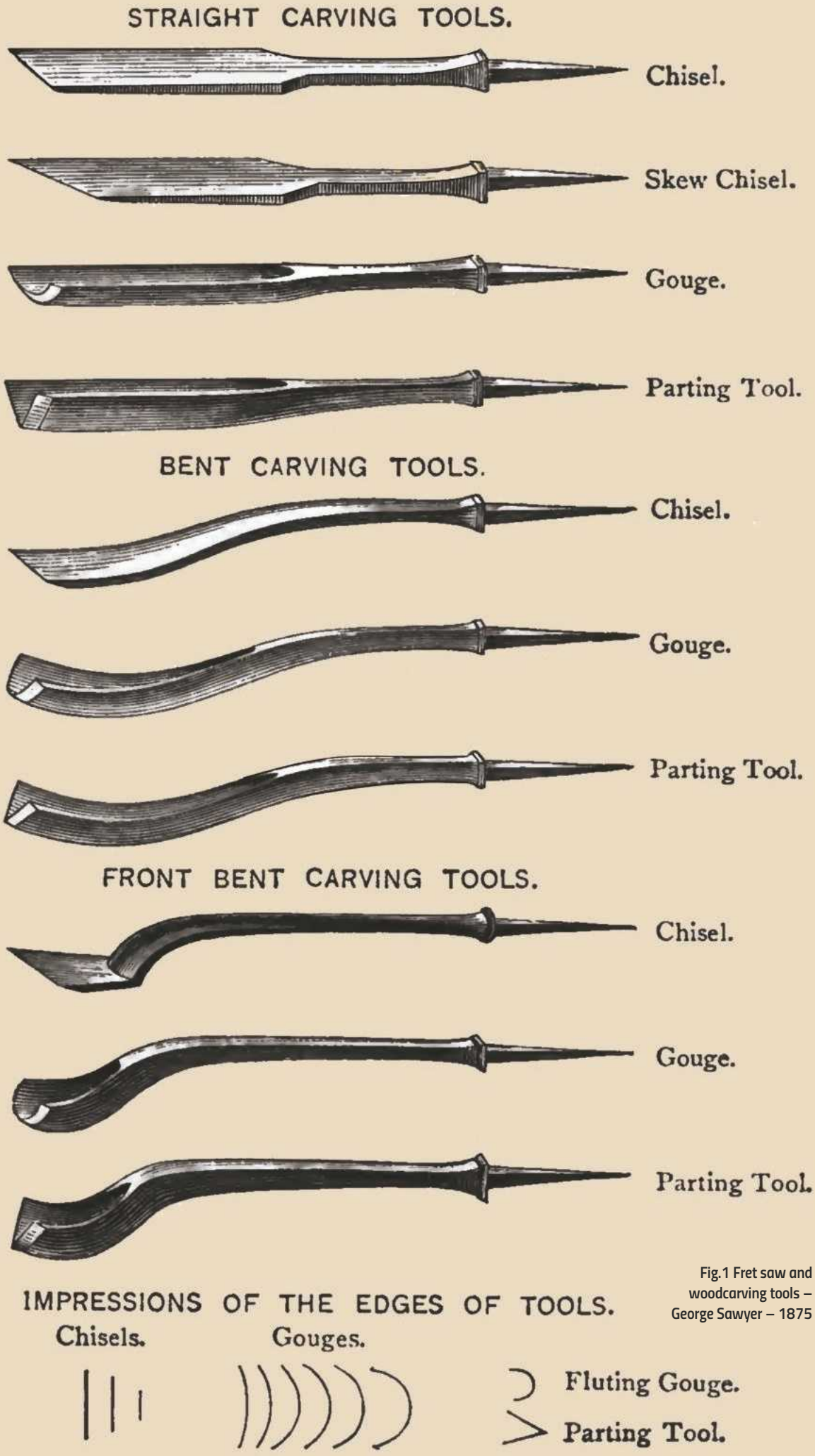


Fig.1 Fret saw and woodcarving tools – George Sawyer – 1875

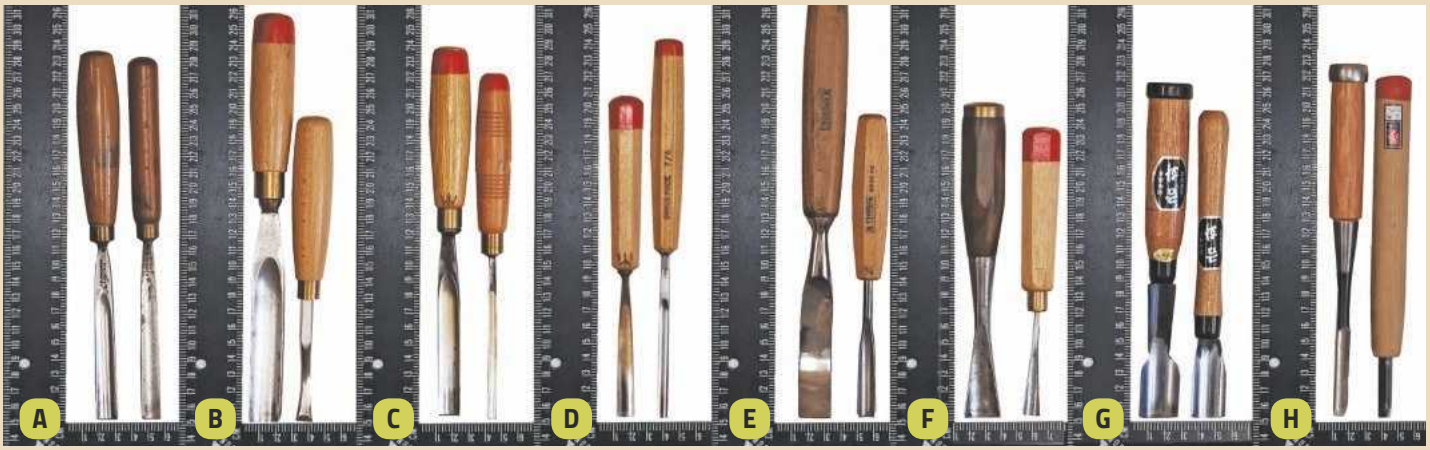
1 Suggestions for a basic set of tools are influenced by my carving training – which was mainly in Europe – for decorative and furniture carving, plus an interest in restoration work, all backed by a reasonably equipped amateur workshop. For example, if I need a straight-bladed chisel, I have a carpenter's toolkit to fall back on. I also have some carpenter's gouges: 'shouldered' carpenter's tools, shown left, and 'un-shouldered' ones, shown right

2 My recommended selection is for use in traditional decorative carving, such as the 17th century acanthus style, so I'm using shorter, lighter weight tools – shown right – than would be required for, say, sculpting – shown left

3 Woodcarving tools are available in a bewildering array of shapes and sizes, so compiling a list of 'best buys' is dependent on your background and what you wish to carve. The handle shapes and available blade lengths can vary, as different parts of Europe – and the Far East – have different traditions from England, where short tools were once referred to as 'ladies pattern'

4 For example, while in England, a carving tool's handle is now predominantly short and round – shown right – whereas elsewhere in Europe, handles tend to be octagonal and longer – shown left – or English – round – shown right. But does it matter? Well, not a lot, although an octagonal handle is less likely to roll off the bench! Another regional difference is in the method of attaching the handle – in the UK and Europe, now almost universally, a tang is inserted while socket types are still more common in Asia where metal 'mallets' are also widely used

5 You'll also need some form of mallet. I started with a regular carpenter's mallet – as that's what I had available – then graduated to a carver's mallet – where the round head more easily makes contact with the tool. Now, however, I primarily use a small brass mallet, as this is ideal for setting-in and tapping gently for ornamental carving

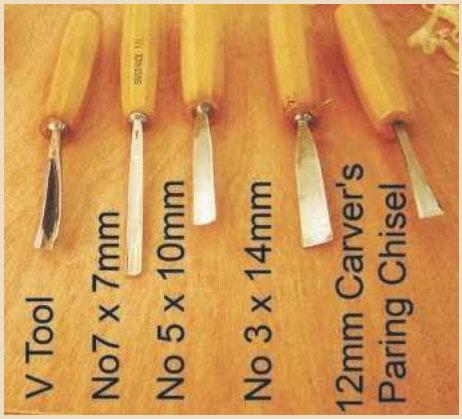


6 What's classed as a 'standard' tool varies. For example – from left to right – in England: **A)** The old Addis tool has a short round handle, which is still the prevalent UK form; **B)** Sorby; **C)** Henry Taylor – although alternatives are given, including the addition of octagonal handles, which is common in Europe and Middle Europe; **D)** Austria – Stubai – and Germany – Two Cherries – are shorter tools – and Swiss – Pfeil – have longer handles; **E)** Czech Republic – Narex – who make both amateur and professional tools – and in the Far East; **F)** China; **G)** South Korea; **H)** Japan. Another regional difference is in the method of attaching the handle: in the UK and Europe, now almost universally, a tang is inserted with a ferrule, while socket types are more common in Asia, although their smaller 'detail' chisels usually have just a tang in a longer, slimmer handle

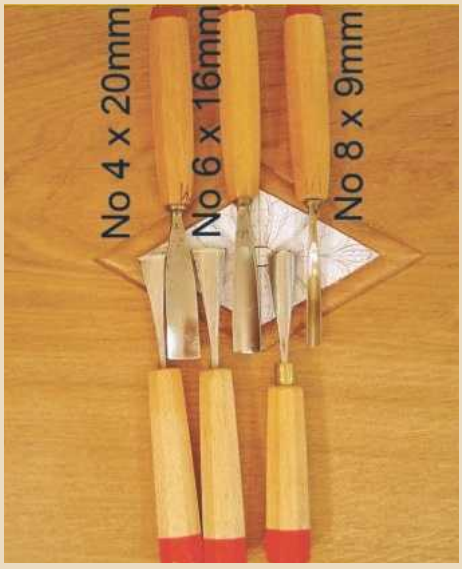
7 In China and Japan, the better carving chisels are still often made from laminated steel, where the cutting edge of a thin layer of high carbon steel is forge-welded with heat and a hammer to a softer steel shaft. These are made with a socket for the handle on heavier-gauge striking tools, with the tang fitting reserved for lighter 'hand' tools

8 Care is required when differentiating between 'value' and 'cheap' – the tool shown right costs less than £5, and is the latter as it's too clumsy to even adapt. 'Real' tools – shown left – are 2-3 times that price and much finer in section with better quality forging and steel

9 Although commonly attractively priced, 'sets' often contain little-used tools, so can therefore prove a false economy. The only one I found irresistible was Dictum's 18-piece Chinese set – Woodwell Tools – which is now priced at around €60. While no replacement for a basic kit, it is, however, ideal as an inexpensive supplementary set



10 The carver's toolbox consists of predominantly curved section 'gouges', where the choice is further complicated by special terminology used within the range of carving tools. In terms of those required for a starter kit, a small collection of six should suffice. For decorative carving, I find a set of just five essentials, plus three supplementary tools, gets you a long way. As you progress, it's important to have a 'set' of the common sweep, such as a No.5 in varying widths, plus a couple of selected complementary sizes, such as No.3, No.5 and No.7



11 While my original three supplementary tools were chosen from the Sheffield makers to fill the gaps, they've been superseded by a No.4, No.6 and No.8 from the Chinese set, which also brings fishtails into the available options

12 Again, with a Continental 'leaning, I'm also of the opinion that having a carving knife in my toolbox is a positive thing, whether it be a chip-carving blade or Slöyd knife, as they can reach into corners others can't access

POWERED CARVING TOOLS

13 Another useful tool that's occasionally indispensable is a small drawknife, which is easier to use than the less expensive double-handled Slöyd knife I started out with. Having mentioned 'toolbox', the only imperative is that blades aren't stored loose, as not only will blade selection prove a health hazard, but their beautifully honed and polished blades are prone to chipping

14 Finally, there's the 'tailed apprentices', which could be said to start with the electric kettle and vacuum cleaner, but those aids more specifically aimed at woodcarving are the power chisel and various forms of powered abrasion, from the numerous Arbortech machines to the Powerfile™ and imitators. For the wood sculptor, power tools are significant labour saving devices, but when it comes to relief carving, it's only the power chisel that's sufficiently controllable to help with roughing out. In my experience, the more compact the device, the better. I've used the old US manufactured Ryobi DC500, which was a relatively light 'in-line' machine and found it effective for roughing-out harder woods such as oak

15 The power chisel only really worked well when equipped with replacement Flexcut™ blades – and also available is an adaptor for using these by hand. While the Ryobi DC500 is no longer manufactured, the use of a compact power carver – as opposed to the modern 'multi-tools' – can be of some assistance when it comes to roughing out. As always, the cost benefit must take into account the full price, as with most reviews. I must also emphasise the need for replacement blades, which must be factored in, so the true price can therefore be established

16 In addition to 'carving' tools, there's also some necessary workshop tools, the first of which is a saw designed for roughing out blanks, and the second, a drill. At the basic level, a hand-driven fret saw and drill will suffice, but in this modern day, you're more likely to already have a power jigsaw and electric drill at home than an old fret saw and hand drill, or brace & bit

17 The power router can also assist, and in addition, there's some drawing and measuring instruments, which should already be common in a workshop, again with their 'battery powered' replacement – the laptop or 'tablet'

18 An early purchase to support my woodcarving, and one I've never regretted, was a small 'table-top' bandsaw. From my experience, I'd recommend buying one and ensuring to invest in a good quality blade, as with one fitted, it then becomes a tool that greatly improves both accuracy and speed of preparation

ALTERNATIVE SOURCES

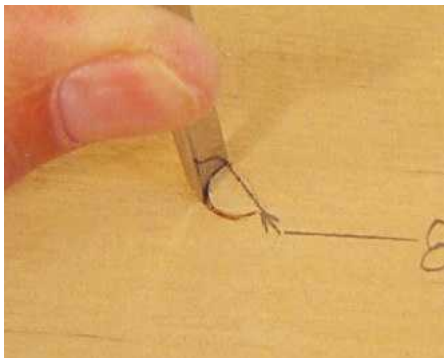
19 Alternative tool sources include 'antique' and 'classic' tools from eBay such as old Addis or Acorn varieties

20 The modern Korean tool manufacturers produce good tools, which, as before, can be purchased via eBay, for example

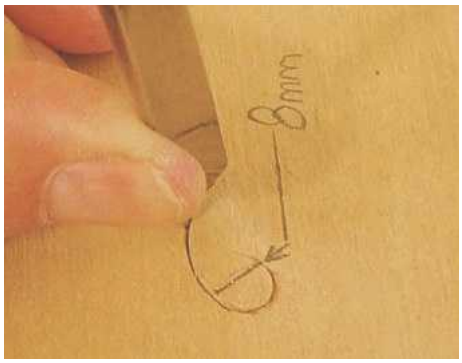
21 Tools made by the traditional blacksmiths of Donyang, China, are widely available online, all of which are assessed in chapter 11 of my book, *Amateur Woodcarving*

SCRIBING AN ARC

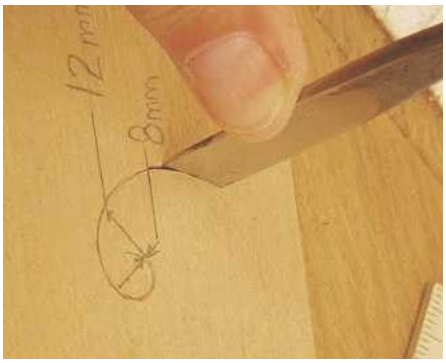
Simplistically, the tool's curve is an arc of a circle; however, it's also said to be an arc of a spline. I suspect that it's actually less to do with mathematics originally and more concerned with hand-forging physics, as the wings of a blade will cool faster than the centre, thus distorting the arc from the shape that was forged. Whatever the science, it makes scribing an arc simple with successive tools



A: To link between gouge profiles – i.e. to carve a classic acanthus scroll – start at the centre with a No.7, then rotate and push it away from you, with the thumb in a slicing cut



B: To continue opening out the curve, change to the edge of a No.5, again with a thumb-powered slicing cut



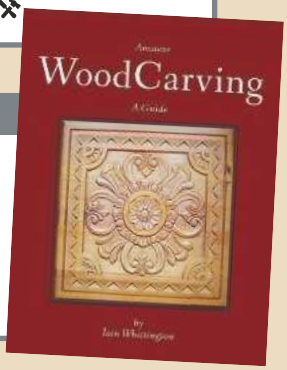
C: End the curve in the same manner, but now using a No.3. This way, using the tool's corner, you can steer it out from its own curve, so that it follows the pattern's line

AMATEUR WOODCARVING – by Iain Whittington

This article has been compiled from original information given in Iain's book. Here, you'll also find detailed instructions on the use of a computer and 'Freeware' for the preparation and manipulation of plans for Kolrosing, chip-carving and decorative carving.

Amateur Woodcarving was published with the support of GMC Publications and all proceeds donated to SSAFA – **www.ssafa.org.uk** – 'The Armed Forces Charity'. It's available in most book shops or online via Amazon: **www.amazon.co.uk/dp/1915191068**

In support of: ssafa the Armed Forces charity



LETTERS

LETTER OF THE MONTH

FUNDRAISING FOR UKRAINE

Raymond has been making and selling various pieces to raise money for the Armed Forces of Ukraine

Dear Tegan,
For some time now, I've been making and selling items to raise money for Ukraine. I've had a little success, sending every penny directly to the Armed Forces of Ukraine. I was advised by friends over there that this is the very best way of helping. I've asked local timber suppliers and various tool companies for help but have been met by a brick wall. My thought is that there must be hundreds of retired craftspeople out there beavering away making small things like me, which could be sold to raise money, but the problem I have is knowing how to contact them and get hold of their masterpieces.

I've met some very helpful people, but a lot of them talk the talk but can't walk the walk, if you know what I mean! If you're able to assist in getting this message across to fellow woodworkers, I'm sure many would be interested in helping with this most important cause.

Thank you for listening and best regards, **Raymond Lord**

Hi Raymond, I'm very pleased you've got in touch in a bid to raise awareness of your valiant efforts. As you say, I'm sure there are many readers out there making items in their workshops, or who have pieces they'd be willing to sell in order to raise money for this worthy, and pertinent, cause. If anyone would like to find out more about how they can help and be put in touch with Raymond, please email me directly: ***tegan.foley@dhpub.co.uk****. Individually, we can do our bit, but working together, we're able to make a much bigger impact. Many thanks in advance.*
Best wishes, **Tegan**

WOODWORKING JOKE OF THE MONTH

Do you have a workshop-based or woodworking-related funny you'd like to share? A comical offering that'll give us all a much-deserved laugh? If so, please email yours to **tegan.foley@dhpub.co.uk** with **'Woodworking Joke of the Month'** as the subject title.

This month's joke is from regular reader, Nathan Clarke:
Did you hear about the woodworker who died when he fell into a vat of varnish? It was a terrible end, but a beautiful finish!

A big thank you to Nathan for putting a smile on our faces! Please keep sending in your woodworking jokes, and we'll bring you another next month

Chippendale International School of Furniture Student of the year 2022 – Alirio Pinilla of Pinali Furniture

ENSURING STANDARDS IN WOODWORKING EDUCATION

Dear Editor,
As a regular reader of your magazine, it's noticeable how often manufacturers are advertising a range of static circular saws without reference to the availability of a suitable roller conveyer, which eases the balance of long and heavy sheets or planks once they've traversed the tipping point being manually pushed through the circular saw blade. Often, the saw operator is alone, and once this 'tipping point' is reached, maximum physical strength is needed to continue accurate cutting by the machine blade.

Having faced this problem in a sixth-form wood workshop, funding was forthcoming to purchase a short roller conveyer from a craft beer brewery. The college had, in the past, been a grammar school with a thriving woodwork and metalwork department. Chances came about and both workshops were reduced in significance and sidelined. I joined the college at this point during their summer vacation. There were three weeks in which to make the wood workshop fully functional. All sanding discs and finishers were clogged due to lack of regular maintenance, and no specialist cleaning materials were to be found. It was essential to clean the sanders and finishers.

By trial and error, I found that Perspex offcuts acted as a surface cleaner. Timber stores also needed attention for the racking of timber planks. The planed timber was usually hardwood – mahogany, cherry, oak and walnut. This wood was intended to construct cabinets and other furniture, but was used in 'projects' and painted.

I'm not suggesting the substitution of Perspex as a material for de-clogging abrasives, but rather commenting on the need to fund education fully in order to ensure standards are high, regardless of the subject being taught. It's a joy to see the level of work offered by students as illustrated in your numerous features on contemporary graduate pieces.
Yours faithfully, **David Girder**

Hi David, thank you for getting in touch and sharing your stories with us. Aside from your observations regarding static circular saws and discovering the diverse uses of Perspex offcuts, you raise another interesting and important point regarding that of education. As you rightly say, the need for funding is crucial in ensuring standards are maintained. In a woodworking context, the work of graduates from various furniture-making schools is incredibly impressive and sets a high standard for the future. Most recently, we featured the Chippendale School's 2022 Graduate Showcase and looked at the work of each student. There are many other examples, however, but as you say yourself, it's a joy and a pleasure for us to feature this work and long may it continue to be produced.
Best wishes, **Tegan**

Chippendale School 2022 Professional Course graduates

SAVED OFFCUTS PUT TO GOOD USE

Tony's take on Peter Dunsmore's Land Rover build

Hi Tegan,
I've recently retired from my job as a wood machinist in a joinery factory. During this time, I've built up a reasonable stock of offcuts including mahogany, meranti and sapele. Being new to your excellent magazine, I decided to have a go at Peter Dunsmore's Land Rover build, which was featured in the Dec/Jan 2021 edition. I hope you like the result, which made use of some leftover pieces I'd been saving, with the thought that one day, they'd come in useful.
Best wishes, **Tony Brooks**

Hi Tony, welcome to the magazine and thank you for writing in and getting involved! As you may already know, this project is one of our most popular to date and even now, readers are still making their own versions of this wonderful build. I passed your photos on to the article author, Peter Dunsmore, and he commented on how smart your version is. In his own words: "It's great to think we've inspired people to have a go at making something." I hope other projects inspire you in equal measure and that you continue to enjoy the magazine. Many thanks!
Best wishes, **Tegan**

Tony's Land Rover makes use of various offcuts saved over the years, including mahogany, meranti and sapele

READERS' HINTS & TIPS

AXMINSTER TOOLS We share your passion

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

To be in with a chance of winning this great piece of kit, just send your top workshop hints, tips or pointers – indeed anything that other readers may find useful in their woodworking journeys – to **tegan.foley@dhpub.co.uk**, along with a photo(s) illustrating your tip in action. For more information on Axminster Tools, see **www.axminstertools.com**

This handy device is ideal for collecting those metal parts that inevitably end up on the workshop floor

MAGNETIC WORKSHOP BROOM

Like many woodworkers, my workshop floor can quickly become covered in not only shavings, but also screws, nails, brads and various other small metal parts, which can soon become lost on this dusty surface. I have a handy trick, however, which allows you to pick up all of these items in seconds, minus the dust. To make your very own magnetic workshop broom, simply screw a 75mm diameter pot magnet onto the end of a wood dowel to create a 'picker-upper.' To use this tool, take a sandwich bag, turn it inside out, place over the magnet and start sweeping the area. The hardware will leap up to the powerful magnet as you perform the 'sweeping' action. To unload and bag the metal pieces in one quick step, just pull the bag off the magnet. Magnets can be readily purchased online – try **www.first4magnets.com** or **www.magnosphere.co.uk** – as well as at DIY or hardware stores.
Brian Henry

Neodymium pot magnet from **www.first4magnets.com**

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@dhpub.co.uk** for a chance to get your hands on this fantastic prize – good luck!

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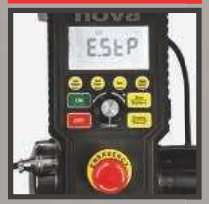

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WHAT A SCORCHER!

Colin Simpson injects glamour into a turned bowl by incorporating metal leafing and scorching techniques

I've been asked on a few occasions whether it's possible to undercut a bowl using just a bowl gouge. The answer is yes, but not by very much. If you want a deep undercut, then you'll need cranked tools or scrapers. Both tools can create torn grain, especially on end-grain, which equates to more sanding.

An undercut bowl usually points towards a sharp curve on the piece's interior at the transition between side wall and bottom. This can cause problems when it comes to using a bowl gouge as it's difficult to maintain bevel support. This article will show you how to overcome these problems and also introduces metal leafing and scorching – three techniques in one!

Shaping the bowl

This project makes use of some reclaimed oak, in the form of a beam, which was removed from Beddington Church and contained a few splits – in fact, this was one of the reasons why I chose to scorch and texture it. Owing to the 175mm diameter, I held it on a screw chuck, but a faceplate would be just as effective. Start by drilling an 8mm hole in the top of the blank and screw it onto your screw chuck, ensuring the blank sits firmly up against it, which will prevent the piece wobbling (**photo 1**).

Using a swept-back bowl gouge in pull-cutting mode (**photo 2**), flatten the base and true up the edge (**photo 3**). Next, cut a spigot to fit your chuck. When it comes to chucking points,

1 Ensure your chosen blank sits firmly against the screw chuck

2 Use a pull cut to flatten the base...

3 ... and a push cut to true up the edge

4 Pop mark the very centre of your spigot

5 Begin shaping from the bottom corner...

I always cut a small pop mark in the very centre using the long point of a skew chisel (**photo 4**). This pop mark is used to align the bowl when it's reverse chucked in order to turn away the spigot. Start at the bottom corner and begin to shape the bowl's exterior (**photo 5**). With each cut, work back towards the spigot and further up the side wall. Aim to produce a continuous flowing cut. **Photo 6** shows the starting point. Continue round the corner and swing the tool handle so that it remains in the cut until you reach the end (**photo 7**). I think it's always more aesthetically pleasing if the widest part of the bowl isn't halfway between the top and base. Try to get this about one-third from the top or bottom of the piece (**photo 8**). Here it's about one-third of the way up the bowl, but the base is still too big, so the shape therefore requires a little refinement before making a few finishing cuts (**photo 9**). For these cuts, keep the handle down low and the cutting edge at about 45° to the wood's surface. Here, you're looking to make very fine spiral shavings. Once you've achieved a good surface finish, use a small gouge to shape the bowl's rim; I cut mine to a gentle radius (**photo 10**).

Scorching

Clear the lathe bed and floor of shavings, turn off the dust extractor, then heavily scorch the bowl's exterior using a blowtorch (**photo 11**). For safety reasons, it's best to do this outside, where you have more space and are less likely to run into any potential problems. Always have water to hand so you're able to extinguish flames if necessary. Next, clean off the excess carbon using a stiff wire brush (**photo 12**). This should create a nice textured surface but may leave the surface a brown colour rather than dark black.

6 ... working towards the spigot...

7 ... and up the side wall

8 Try to ensure the widest part of the bowl isn't situated midway between base and rim

9 Take fine finishing cuts to clean up the surface

10 Cut the rim using a small gouge held on its side

This brown textured effect can look good when oiled, but for this piece, I wanted a black exterior, so applied a coat of Liberon ebony wood dye (**photo 13**). Once dry, give the piece a few coats of Danish oil.

Hollowing

Reverse the piece onto the spigot and begin the hollowing process. Start with the bowl gouge on its side with the flute pointing towards 3 o'clock and the handle over the bed bars (**photo 14**). Use the tool's tip to make an entry cut and as you progress down the inside wall, start to swing the handle towards you at the same time as rolling the flute up to around 1 o'clock (**photo 15**). Continue with this cut, going a little wider and deeper each time until you reach the desired rim thickness. The next task is the undercutting.

Undercutting

Take a look at **photo 16** and notice where the tool's bevel is pointing. The direction of cut will follow that of the bevel, so here, I'm going straight down the inside wall until the transition between wall and bottom is reached. **Photo 17** shows this cut with my front hand removed for photo clarity. This will remove a lot of waste wood to allow for the undercutting. To undercut the rim, make a similar cut but this time with the tool's bevel pointing parallel with the outside wall (**photo 18**). To achieve this, the handle needs to be right the way over the bed bars. Use this method to cut down the inside wall until you reach the inside 'corner'. In **photo 19**, I've marked this corner with green ink; it's only about 6 or 7mm wide. When you reach this area, you need to swing the tool handle from the position shown in **photo 18** to that shown

11 Heavily scorch the bowl's exterior using a blowtorch...

12 ... then brush off the resulting carbon with a stiff wire brush

13 Use ebony wood dye to blacken the surface

14 Gouge position required for the entry cut

15 Gently swing the hand to this position as you cut down the inside wall

16 To increase steepness of cut, the bevel must point in this direction

17 Keep the tool on its side to cut down the wall

18 To undercut, ensure the bevel points under the rim

in **photo 15** – through an arc of around 100° while the cutting edge only moves about 6 or 7mm. You're almost pivoting the tool on the cutting edge. If you do this correctly, you'll most likely keep the bevel in contact with the wood and the cut will be controlled. However, there'll be times when you're not able to swing the handle far enough.

19 Swing the handle through about 100° while cutting the area coloured in green

20 A common problem with undercut vessels: the rim interferes with the tool shaft

21 A steeper bevel angle helps to overcome this problem...

Photo 20 shows the tool shaft hitting the bowl rim's interior. Here, I'm not able to swing the handle any further without coming off the bevel.

To solve this problem, the bevel needs to be changed. **Photo 21** shows two of my bowl gouges: the tool on the left is the one used for this project, which has a bevel angle of around 45°; the tool on the right has a much steeper bevel angle – around 55° – and allows me to go round the inside corner, keeping the bevel rubbing without the shaft hitting the inside rim (**photo 22**); this is because I don't have to swing the handle as far.

You can, of course, achieve the same inside shape using a round-nosed scraper, but it's likely you'll encounter tear-out, especially on end-grain. By contrast, the bowl gouge's cutting action should afford you a good, clean cut (**photo 23**).

Metal leaf

At this stage, you could simply sand and finish the bowl, but I decided to apply metal leaf to the bowl's interior. I thought that this bright, smooth finish would contrast well with the exterior's black texture.

Sand the bowl interior to 400 grit and seal with sanding sealer. Remove the bowl from the lathe and apply gold leaf 'size' – the name given to the glue that sticks metal leaf – to the entire inside area (**photo 24**). Apply the size in an even coat and wait until it goes tacky. Mine was quick drying so I only had to wait about an hour, but some sizes have an open time of considerably longer. **Photo 25** shows the metal leaf I chose to apply. Essentially, it consists of small flakes of different metals and is much easier to apply than conventional gold leaf. When the size is tacky, shake an amount of metal flakes into the bowl and using a very soft brush, gently brush it around until the entire interior is coated (**photo 26**). Leave it to dry completely – preferably overnight – and once the size is thoroughly dry, use a soft brush or cotton

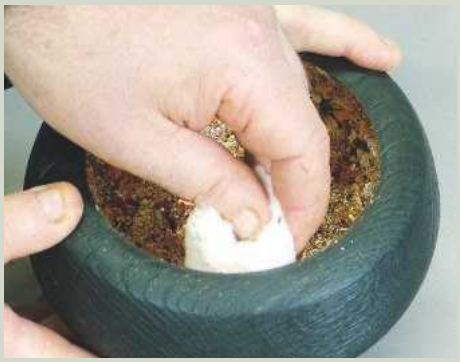
22 ... as the handle doesn't have to swing so far

23 You should be able to achieve a good surface finish

24 Apply size evenly with a soft brush

25 Gold leaf and metals can be purchased from various art shops

26 Gently brush the loose flakes onto the size, ensuring total coverage



27 Use a cotton wool ball to rub over the metal leaf; this will remove any flakes that haven't stuck

28 To ensure the metal leaf doesn't tarnish, spray it with a coat of satin lacquer

29 Reverse chuck the bowl in order to remove the chucking spigot

wool ball to rub over the metal leaf in an effort to remove the bits that don't stick to the size and gently burnish the metal flakes (**photo 27**). Unlike 24 carat gold leaf, this metal leaf tarnishes over time, so seal with a coat of satin lacquer (**photo 28**). Finally, to remove the chucking spigot, reverse chuck the bowl onto a mushroom-shaped dolly (**photo 29**). Overall, I was quite pleased with the finished result.

30 The completed bowl is very striking

ON THE CAMPAIGN TRAIL

Will Holman's modern take on the classic campaign desk is an expansive, super-sleek command centre for the modern knowledge worker

A campaign desk is a nomadic writing table, popularised by officers of the British Empire in the colonial-minded 1800s. Wealthy officers, who often bought their commissions from the Crown – as opposed to actually training as soldiers – furnished their field tents with teak or mahogany chests, cots and desks. Many designs featured clever friction fittings or break-down leg systems to keep the officer's possessions – and person – up off the damp ground. A style evolved, heavy on brass and canvas fixtures, which has now become a commercialised 'look' without any of the original core functionality.

This modern take on a campaign desk restores the portability and simplicity of the original campaign furniture. It also copies a structural strategy used by many early versions. Instead of using an apron – a perimeter run of boards under a table to stiffen the top – desks were built as boxes that held both writing supplies as well as acting as a self-contained structural unit. The sawhorses are a leaner, meaner update on the usual slapped-together workshop workhorses, which are made from salvaged timber. Offset legs make for simple overlay joinery and allow the finished units to nestle together neatly.

The result is an expansive, super-sleek command centre for the modern knowledge worker. There's plenty of space for a king-sized monitor, scanner, secondary laptop, and all the other accessories of digital life. Depending on the grade of plywood you choose, the entire desk can be made for around £40.

Desk top cuts

The main desk comprises just four parts: the surface, two identical sides and back (**photo 1**). Begin by cutting the surface. Use a circular saw and clamped straightedge to cut this down to 1,676mm long. Run the remaining piece through the table saw lengthwise and rip it to 711mm.

1 The main desk comprises just four parts: the surface, two identical sides and back

2 Here's the finished back piece. The dado starts 100mm up from the bottom – left – and is 20mm and, a little under, 10mm deep

TOOLS & MATERIALS NEEDED

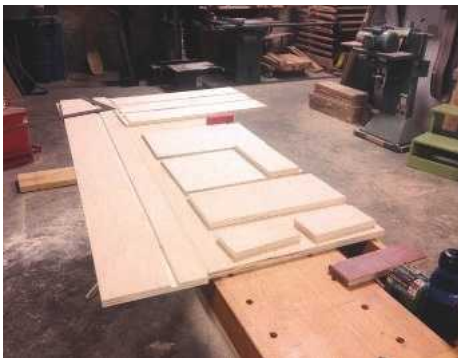
Tools

- Tape measure
- Square
- Pencil
- Table saw
- Cross-cut sled
- Circular saw
- Drill/driver
- Chop saw
- Bandsaw
- Router or router table – optional
- Clamps
- Straightedge
- Orbital sander
- Paintbrush

Materials

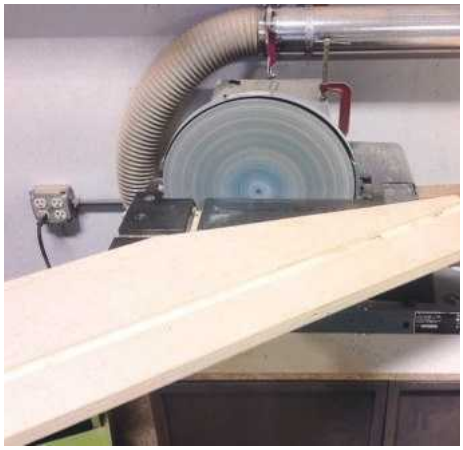
- 45 × 89 × 184mm sheet of plywood – birch preferred
- Roughly 2.7m of reclaimed 38 × 89 material
- Spax screws for MDF
- Wood glue
- Brushing lacquer, polyurethane, or your choice of finish
- Furniture wax

3 A sled allows you to make cross-cuts on the table saw while protecting against kickback – never make cross-cuts on a table saw without one! Here you can also see the 41mm groove



4 Shown here are the two sides prior to tapers being cut, the back and optional shelf pieces

5 Cutting the taper on a bandsaw. Shown at the top of the photo is the 146mm mark and at the bottom right-hand side, the point that's 254mm from the back of the piece



6 Before assembly, sand all the edges. I used a disc sander but a true edge sander is preferable, owing to the long lengths

The resultant piece should measure 1,676 × 711mm. The long offcut should measure 508 × 1,676mm, which needs to be ripped in half to make it 254mm wide × 1,676mm long. Set one piece aside for the back of the desk. Swap out the table saw blade for a dado set, or your preferred equivalent.

For the sides, use a cross-cut sled and dado sled to make a 41mm wide × 10mm deep dado down the centre – at 838mm – of the remaining 1,676 × 254mm offcut (**photo 3**). Next, cut in a 20mm wide dado, 100mm up from one of the long sides on both pieces.

All of the dados will interlock to make strong corners and stiffen the desk surface without the use of a more traditional apron. Now swap the dado set back in. Use a cross-cut sled to cut the side piece in half – at 838mm – right down the centre of the short dado. Measure 254mm from one end, and 146mm up from the other. You can then connect the marks, cut the taper on the bandsaw (**photo 5**), and ensure the sides are made as mirror images of one another. I put a shelf in one corner to accommodate a scanner, but this is optional. If you'd like to add this, cut a 20mm piece of leftover stock to 305 × 100mm and two 12mm pieces at 305 × 406mm and 305 × 387mm.

Desk assembly

Before assembly, sand all the edges. I used a disc sander (**photo 6**), but a true edge sander, at least 1.2m long, would be a better option. Next, smooth the surfaces with a 120 grit abrasive disc mounted in an orbital sander (**photo 7**). The birch ply I used was already

7 Smooth surfaces with a 120 grit abrasive disc mounted in an orbital sander

8 Position the desk's surface so that the back edge overhangs the table and push the back on so that the rear edge of the desk surface seats firmly in the dado

9 Secure the back by pre-drilling and screwing with Spax MDF screws

10 Repeat for the sides, ensuring that the backs of the sides capture the rear piece's edges

11 Add an optional shelf in the corner and drill a cord hole in the centre of the desk surface, close to the back

12 The desk top underside with sides and back in place

13 Working on the tapered legs

14 One of the legs showing the wing nut and slot at the other end for adjusting the angle; the stop block to set the workpiece against, and a simple taper leg jig, with hinge at one end

15 Running a chamfer bit across the edges adds a nice finish

16 The two top plates have a 5° taper on each edge

fairly good quality and didn't require a lot of work; if you're working with a lower-grade plywood, however, start at 100 grit.

To assemble, lay glue in the dado cut on the back. Spread this with your finger to ensure it evenly coats the dado's bottom and shoulders. Position the desk's surface so that the back edge overhangs the table and push the back in place so that the rear edge of the desk surface seats firmly in the dado (**photo 8**). Use clamps and a mallet to persuade the pieces to fit together as necessary. Secure the back by pre-drilling and screwing with Spax MDF screws (**photo 9**); these are designed to go into plywood end-grain without splitting. I left the screws exposed, but if you want a cleaner presentation, over-countersink the screws and plug with a dowel and some glue.

Repeat for the sides, checking to ensure the backs of the sides capture the rear piece's edges (**photo 10**). Next, add an optional shelf in the corner (**photo 11**), and drill a cord hole in the centre of the desk surface, close to the back. Finish with two coats of lacquer followed by one of furniture wax.

Sawhorse cuts

These sawhorses were a collaboration with Professor Arman Mizani (**photo 13**), Manager of the Surface Project at the Station North Tool Library. We made the legs using reclaimed pieces of 38 × 140mm pine. To neaten up the wood, take 6mm off each side of your stock using a table saw, then, using a chop saw, cut into 711mm blanks with a 5° mitre. The mitres should be parallel to one another. You need to make four blanks.

Using tapered legs makes for a sleeker, better looking sawhorse, and is also more materially efficient, allowing two legs to be made from each blank. These taper from 38mm at one end to 90mm at the other. Make a pencil mark across one end at 38mm in from one edge. Do the same at the other end, from the opposite edge, then connect the marks. Set up a taper leg jig to cut that line straight. There's lots of ways to make taper leg jigs, but here's a good, simple one: split all the blanks in half.

An optional, but nice step, is to run all the edges through a router table with a chamfer or roundover bit to clean up any splinters (**photo 15**). Lastly, make two top plates by running 610mm blanks through the table saw set at a 5° mitre (**photo 16**). The bevels should be opposite one another – ensure to take off as little material as possible.

Sawhorse assembly

Lay one leg on top of another with some wood glue in between. Line them up so that the fat ends correspond perfectly, one on top of another, with the cut mitres flush. Secure with at least two countersunk 75mm drywall screws or similar, staggered vertically. I actually used some galvanised hex-head roofing screws because they were salvaged – and free – but deck screws, machine bolts, or lag bolts would also work. Assemble four A-frames in this way. Stand one set of A-frames up, then secure the top plate flush to the top of the A-frame using glue and screws (**photo 18**). The end of the top plate should be flush with the A-frame's outside surface. Repeat on the opposite side with the other A-frame. The finished pair should be able to nest together, one set of legs fitting into the other.

These sawhorses are sturdy enough for this lightweight desk, but the lack of bottom brace or trestle makes them susceptible to some lateral instability. To assemble the desk, place on the ground so the construction is upside down. Screw the sawhorses onto the bottom with two 50mm drywall screws each. With the help of a friend, flip over carefully without pausing to rest on the legs at an angle. Now sit down and get to work!

FURTHER INFORMATION

Will's book *Guerrilla Furniture Design* can be purchased online via Amazon. Find out more about Will and his other work at **www.objectguerilla.com**

17 Secure the top plate to the legs with glue and a few brads; this will hold it steady while you drive in the screws

18 The top plate is flush with the A-frames' outside edges

19 The completed modern campaign desk, ready to be put to work!

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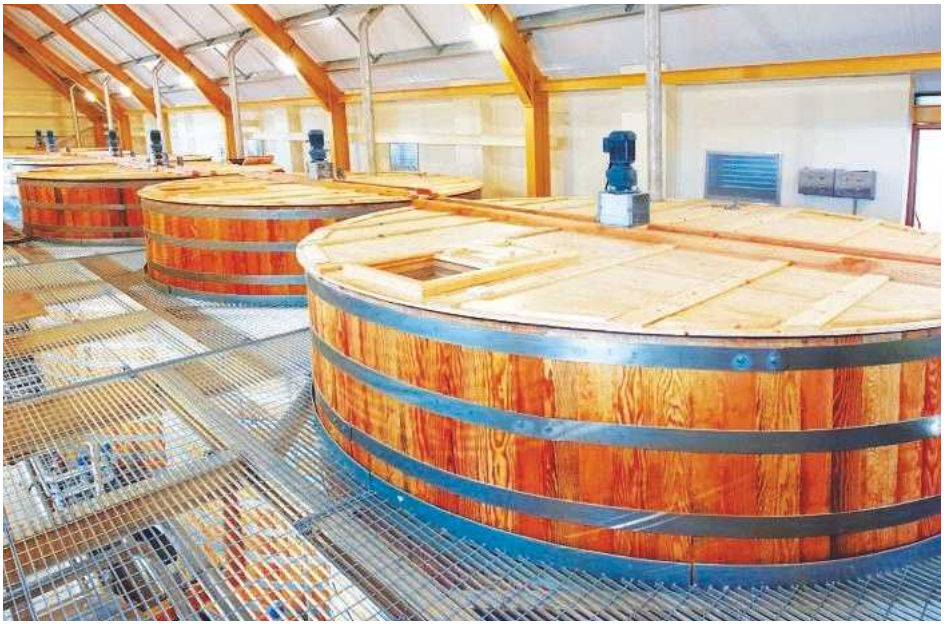
WW PROFILE

HERE'S TO THE WOOD

Many people who enjoy a 'tipple' would doubtless be even more disposed to the above toast if they knew how big a part this substance plays in their pleasure, as **Paul Greer** demonstrates here

How wood is used in the alcoholic drinks industry is usually no more than recognised good practice, but some elements are actually enshrined in law. Whisky casks, for instance, must be made of oak. This is because it's strong, has a narrow enough grain to prevent leakage, but is sufficiently porous to admit vapours from the surrounding atmosphere. The law also specifies that, to be so termed, whisky must have matured in the cask for at least three years.



1 Whisky production vats at The Glenlivet distillery, which are made using Douglas fir and Oregon pine in Joseph Brown Vats' historic workshops

2 A large white oak in New Jersey, USA

3 Various bottles of Scotch whisky

Oak for casks

Oak of suitable quality can be found on either side of the Atlantic, and white American (**photo 2**), Garry American, Sessile European and Pendunculate European, are varieties most popular among whisky producers. Some distillers also state a preference for north-facing trees, as these have a straighter grain, which is advantageous when seeking to achieve particular flavours.

When the wood is especially tight-grained – a feature of many European oaks – the way it must be split sadly results in only about a quarter of the tree remaining usable. By contrast, more open-grained wood – typical of American varieties – can be sawn, thus allowing nearer half the tree to be utilised, which is obviously a more economical method. Whether cut or split, however, the oak is allowed to dry outdoors, which can take from 10 months to five years, depending on a client's preferences or requirements.

The cooper's cask

What are commonly called 'barrels' first appeared in the ancient world, and were used to store various goods and products. Since then, however, many industries have come to favour containers considered essentially more suitable, or just cheaper. They have, nevertheless, been retained for alcoholic drinks, although 'cask' is the correct term when employed for this purpose (**photo 4**). 'Cooperage' is the word used to describe both the art of cask-making, and where it takes place. It's a highly-skilled craft requiring much training, as the finished vessels must meet exacting requirements. The staves in particular, which are broad in the middle but taper towards the ends, allow no room for error.

To most people, even the names of the tools and processes will sound unfamiliar, as the wood is split or sawn using drawknives and a jointer plane. Once shaped, the staves are placed vertically inside a metal hoop, then heated by a small fire lit in an iron basket, called a cresset (**photo 5**). As the wood becomes pliable, the cooper bends each stave, and adds hoops for a tight fit. The combined heating and hooping process is known as trussing.

The staves from which a cask is made must fit perfectly, as no fixing agent is used. The duration of the heating process – called 'toasting' – varies (**photo 6**). A light one would typically last about 20 minutes; a medium one from 30-50. Some staves are heated for as long as three hours, but this is on a very low flame.

Once the staves are snugly in place, supporting hoops are removed, and the ones that form part of the finished cask hammered into place, leaving an open 'tube'. The wooden ends – or 'heads' – are then cut and shaped to fit. A bung-hole, through which the liquid can be poured, is cut in the side, and the bung itself made, normally of the same wood.

Casks for wine

Wine casks vary considerably in size (**photo 7**). The smaller the cask, the stronger the oak influence. A volume of around 200 litres is considered best for wines like Bordeaux or Burgundy, while casks for Rhone Valley and

4 Oak casks for storing whisky, the timber for which is chosen initially depending on its shape and seasoning period

5 Left: A hogshead-sized barrel – 63 gallons – just before trussing – bending of the staves to make a barrel shape; right: Marshall Scheetz, of Jamestown Cooperage, heating the barrel staves to soften the wood so they'll bend when the truss hoops are hammered down onto the cask's splayed end. The fire is contained inside a small metal basket called a cresset

6 The degree to which a new barrel is toasted and/or charred can have a huge effect on a whisky's flavour. Brown-Forman Cooperage makes hundreds of thousands of barrels a year. Photograph courtesy of Whisky Advocate

Alsace, for instance, are much larger and can exceed 1,000 litres. This contrasts with the whisky industry, where vessels mustn't exceed 700.

Within the industry, it's well-recognised that samples of the same wine from different casks can be quite distinct, and some producers work very closely with a chosen cooperage in order to guarantee a 'customised' cask. Celebrated winemakers may even engage several, to turn out containers best-suited to a range of products. However, the casks themselves may be long-lived, individual ones being chosen for second- or third-use, when minimal influence from the wood itself is desirable, as with delicate whites, or light reds. It's not uncommon for the life of a cask to exceed 100 years.

The process by which wood influences the taste of wine is called 'seasoning', and most successfully achieved by the method described. However, two alternatives are available: the first is to place long strips of 'toasted' oak in a stainless steel fermenting tank; the second, to immerse oak chips in the wine. Both are cheaper in comparison to the cask method, but make the influence of wood less predictable.

A centuries-old craft

Storage is an important consideration in the alcoholic drinks industry, and it's no accident that the containers used are cylindrical. This, together with the metal binding hoops, allow them to be rolled, making most moveable by one person despite the large capacity, which adds considerable weight to the majority of casks.

Cask-making in England is a centuries-old craft (**photo 8**), the Worshipful Company of Coopers, based in London, having received its Royal Charter in 1501 (**photo 9**). However, the profession went into decline during the 1960s, when cost-conscious breweries largely replaced their wooden casks with metal ones, despite the adverse effect this was said to have on the beers' flavour. However, a gradual increase in English wine-making, and an explosion of craft beers – usually in small quantities, from microbreweries – fuelled a return of quality over profit, and saw the wooden cask make a comeback.

Alastair Simms (**photo 10**), who completed his apprenticeship and went on to become a journeyman cooper in 1983, is one of a very exclusive international band of master coopers, and possibly the only one still active in England. A master cooper working outside Britain, however, is Ramiro Herrera, at the Caldwell Vineyard, in Napa, California (**photo 11**). He insists on oak from a particular forest in France, and says that making a cask typically takes him around 11 hours.

Grim history

One wine-butt played a grim role in English history. In 1478, during the Wars of the Roses, George, Duke of Clarence, a brother of King Edward IV, following allegations of

7 Capacities of wine casks were formerly measured and standardised according to a specific system of English units

8 Coopers rolling a cask at H&G Simonds

9 Emblem of the Worshipful Company of Coopers

ingratitude and treason, was executed. Three accounts from the period – two English and one French – claim this was by drowning in a butt of Malmsey wine, though it has also been interpreted – less literally – as a reference to his strong alcoholic inclinations.

In Act 1, Scene 4 of *Richard III*, Shakespeare depicts this as an 'insurance policy' after an attack on the Duke by hired assassins.

First Murderer: 'Take that! and that! (Stabs him) if all this will not do, I'll drown you in the Malmsey-butt within.' (Exit with the body).

Another features in Chapter 5 of *A Tale of Two Cities* by Charles Dickens (**photo 12**), which opens with this paragraph: 'A large cask of wine had been dropped and broken, in the street.

'The accident had happened in getting it out of the cart; the cask had tumbled out with a run, the hoops had burst, and it lay on the stones, just outside the door of the wine-shop, shattered like a walnut-shell.'

The spilled wine is quickly mopped up in small amounts by many of the downtrodden local populace, prefiguring the shedding of aristocratic blood in the French Revolution, in which period the novel is set.

Cider & cider presses

Finally, let's end with one alcoholic drink not already mentioned – cider. This is produced by crushing apples, and many cider presses are constructed wholly or partly of wood (**photos 13** & **14**). Hardwoods are recommended, as softwoods – like fir – have a tendency to impart disagreeable flavours to the drink itself. Care must be taken to ensure gaps between the wooden slats are very narrow, lest fragments of apple core or peel escape, thus reducing the flavour. Turning the crank of a loaded press can be physically testing, but cider-making is popular even with beginners, and easy to follow instructions are available online for those wishing to build their own.

10 Master cooper, Alastair Simms – one of Britain's few remaining traditional coopers
Photograph by **Richard Cannon** ©***Country Life***

11 Ramiro Herrera of Caldwell Vineyard is one of a few dozen master coopers in the world today

12 Charles Dickens in New York, c. 1867–1868

13 Correll cider press in American eastern ash

14 A restored cider press in use

BACK TO (FACEPLATE) BASICS

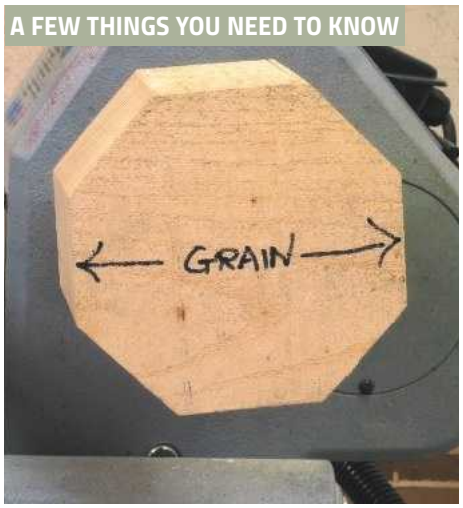
Want to learn more about faceplate turning tools and how best to use them? **Les Thorne** goes back to basics once more and gives you the low-down on this particular turning genre

It's becoming increasingly difficult to pigeonhole turning genres. Once upon a time, if the grain was running in the same direction as the lathe bed, it was classed as spindle turning. Whereas, if the grain was running at right angles to the bed, it was classed as faceplate turning – even though modern chucks have greatly reduced the use of these. Nowadays, with multi-axis turning – boxes, hollow forms and the like – who knows what to call it?

As with spindle work, it's always a good idea to go back to basics every now and then. The best way to practise is to rough out bowls from wet or green timber. If you can get your hands on fresh timber, cut some bowl blanks and prepare them for the lathe. Rough out to an even wall thickness and leave sufficient wood to ensure you'll be able to produce a bowl from it once dry. During the drying process, the bowl will take on an oval shape; seal the end-grain and put it somewhere with a nice, even temperature.

Wet wood will generally cut better once dried, so this is a great opportunity to practise all your cutting and scraping techniques. What's more, you'll save a considerable amount of money in comparison to buying timber that's already dry.

A FEW THINGS YOU NEED TO KNOW



1 Here, the grain is running perpendicular to the lathe bed; this is the traditional method for making bowls. Ensure the size of blank matches the weight of your machine – don't push the lathe to its limits

2 The blank is fixed in place using a screw supplied with the chuck; a faceplate will do the same job. I haven't cut the blank round on the bandsaw as it tends to wear out the set on one side more than the other

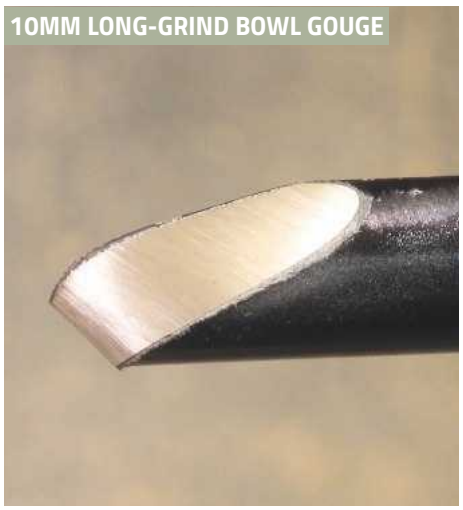
3 Sanding faceplate work is always problematic as sanding marks tend to show up more than on spindle work. I'm using the Simon Hope Pro Sander, which spins as it's held against the timber

4 Power sanding is the other option, along with doing it by hand. A drill-mounted arbor is held in the 8 o'clock position. Aim to get as much of the pad in contact with the bowl's surface as possible

5 Measuring is really important and there's no better way than using a simple set of figure-of-eight callipers. Always buy the biggest set you can, and for safety reasons, only use these with the lathe switched off

6 Sanding the bowl interior by hand, or using the Pro Sander, is best done in this area. I tend to power sand over at 3 o'clock as I find it easier to control the drill in this position

10MM LONG-GRIND BOWL GOUGE



1 Bowl gouges are measured from the inside of one flute to the outside of the tool, so the 10mm tool is made from 13mm bar, which is a tad confusing! Providing the tool is ground properly, the top cutting edge should be straight or slightly convex

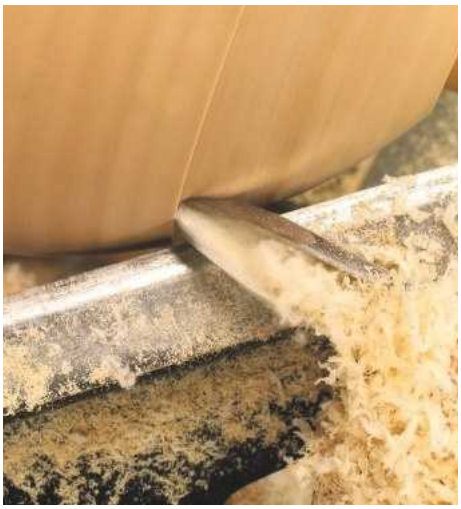
2 If you intend to use the tool only for pull cutting, I recommend having the cutting angle at around the 55° mark. However, this makes it less efficient at push cutting, so as a compromise, try grinding it to around 45°

3 If your lathe has the horsepower, you can take a large cut and make it round in one or two passes, even when the blank is octagonal. Ensure the tool's bevel is pointing in the direction of cut

4 Initial shaping using the gouge is achieved by holding the handle low down with the tool's flute pointing towards 10 o'clock. When positioned correctly, shavings should exit the flute

5 This photo shows the cut perfectly: the wood is being cut and the shaving is rolling around the flute. Curly shavings are a good sign and signify that the wood is being cut well

6 Shear cutting with the gouge is a fairly modern technique. The handle is pointing down and the lower cutting edge presented with the flute almost closed off. Here, the shavings should be very fine



7 I prefer to finish with a push cut. The tool's bevel is resting on the wood and the tool itself is pushed forward into the cut. Try not to force the tool onto the wood as this can result in an unwanted rippled surface

8 When starting the hollowing process, one of the main problems is overcoming centrifugal forces. If you're not assertive enough with the tool, it'll spiral towards the edge, as demonstrated here

9 Many tricks exist that help you to make the first cut. A particularly good one is using your thumb to fix the tool against the toolrest. This way, as the tool is advanced forward, it's unable to move sideways

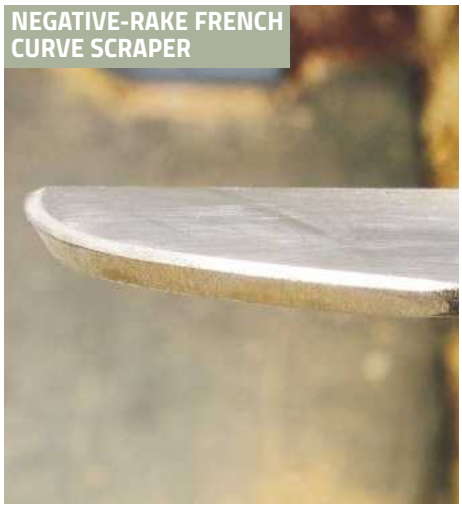
10 A series of steps helps you to gauge the tool's position throughout the process. The bulk of timber in the bowl's centre helps to provide some stability

11 Once you've started the cut, work from the bowl's edge to the centre. Take it down in stages, leaving some timber in the middle; this will be removed as you work downwards

12 When hollowing a bowl, a common mistake is keeping the gouge horizontal. To ensure the bevel's in contact with the inside curve, you need to drop the tool handle throughout the shaping process

13 A problem with the tool's 45° angle is that as you go deeper, it becomes increasingly difficult to keep the bevel in contact with the bottom of the bowl – the rim creates an obstruction. As such, this is a job for the 60° gouge, as you'll see later

NEGATIVE-RAKE FRENCH CURVE SCRAPER



1 To increase the scraper's versatility and ease of use, it's worth grinding the tool with a downwards angle on top; this creates the negative angle, or rake as it's otherwise known

2 Sharpening the tool is best achieved by first completing the top surface. Set up the platform so it allows you to take around 4mm off the top edge. The cutting bevel on the other side is ground in the usual way

3 Rotating the tool at an angle allows it to be used in shear-cutting mode. It's a good idea to soften the tool's lower edge, which allows it to glide effortlessly along the toolrest

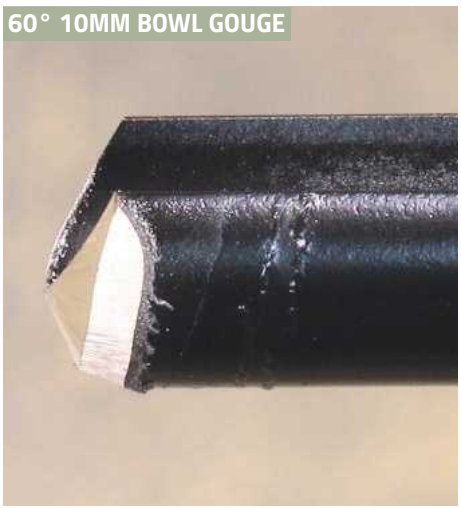
4 The bowl's face can be cleaned up in the more traditional manner, with the tool held flat on the toolrest. The scraper's worst enemy is vibration, so where possible, ensure to keep the toolrest close to the work

5 If you need to scrape the bowl's interior, do it in stages. As wood is removed, the bowl can begin to go out of shape, so scrape each section to a finish before hollowing the next part

6 The scraper's negative-rake allows you to present it horizontally. If there's no downwards angle on the top, you must present the tool trailing, i.e. with the handle held higher than the cutting edge

7 If you're struggling to achieve the desired centre, the scraper is a good tool to use. Here, I've placed the toolrest close to the bowl, which affords the cutting edge as much support as possible

60° 10MM BOWL GOUGE



1 For this tool, I like a superflute-type shape, which means the flute is more parabolic as opposed to U-shaped. Here, I've ground the tool to 60°, so that it's almost upright

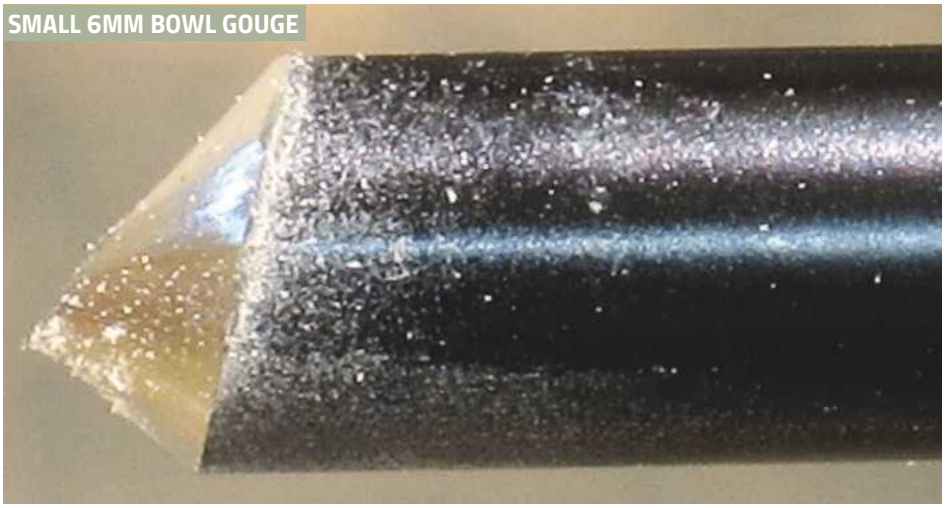
2 The tool's heel is ground off by resting it on the toolrest, so the flute is pointing towards you. This prevents rubbing too much bevel on the workpiece and thus over-compressing the timber

3 Pictured here is my preferred grip when using this particular tool. My left thumb pushes down on the tool while cutting, which allows it to be easily pivoted on the toolrest

4 When you grind such an obtuse angle on a tool, this lessens its cutting ability. This means you can open up the tool's flute in order to achieve a better finish with less risk of experiencing a dig-in

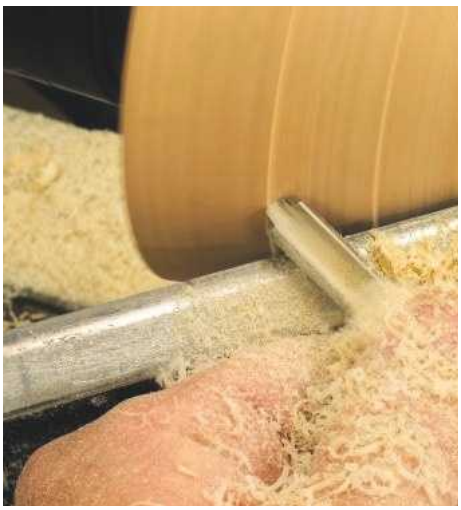
5 When it comes to finishing off the bowl's centre, this tool is my first choice. The wood in the centre isn't revolving very quickly, which means that when you reach the middle, you'll need to slow down the feed speed to almost nothing

SMALL 6MM BOWL GOUGE



1 The 6mm bowl gouge is made from 10mm steel. I prefer this tool for all of my finishing cuts. I grind it to around 45° but never with a long grind, as the flute quickly clogs up if used for pull cuts

2 This is probably one of the simplest tools to sharpen. Set the platform to the correct angle and gently rotate the tool to sharpen it. To ensure you don't put a point on it, rotate the tool slowly as the flute becomes more upright



3 The perfect cut with bevel in contact with wood. You can see that as I've gone around the bowl, I've decreased the cutting depth and will return to the other part shortly

4 A small bowl gouge is the best tool for putting a slight undercut on the bowl's rim as a scraper could tear the grain; this isn't an easy technique but definitely one worth mastering

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SAVE THOSE OFFCUTS!

Ever the fan of saving offcuts, **Glenn Perry** makes a functional foot stool for his mother's 80th birthday using pieces of leftover sapele

Main foot stool components

One of the dilemmas of engaging in woodworking on a regular basis is what to do with offcuts. That is, those pieces of leftover timber that appear too short for most jobs but are too precious to throw away. I usually dispose of small pieces of softwood in the green recycling bin, but tend to hang on to hardwoods. Following my farmhouse chair build – see August 2021 issue – I found myself with a sapele offcut having made the seat. It was 56mm thick and around 630mm wide but only 175mm long, so I decided to saw the section into square blanks, which measured 56mm square × 175mm long. These, along with some 68 × 18mm sapele, would provide the base for a foot stool I was making for my mother's 80th birthday.

Construction

The foot stool's construction is straightforward and relies on traditional mortise & tenon joints. Using my lathe, I turned four legs from the 175mm blanks, with a ring and vabe profile, leaving an approximate 75mm square section. The four 68mm rails connecting the legs at each corner are set back 5mm from each edge. On the rails, I cut 25mm deep barefaced tenons for the 10mm wide mortises, which were chopped out (**photo 2**). I added a bead moulding to the rails using a scratchstock, having made the cutter from an old tenon saw blade using a round file (**photo 3**).

Producing the moulding by hand is much more time-consuming than using a router, but very satisfying. I glued the whole stool base in one using sash cramps on a level surface, checking the diagonals for square. I finished the base with three applications of liquid wax. I made the top from 50 × 25mm timber with 6mm plywood glued on (**photo 4**). I chose to use pine here – a softwood – as it provided an easier surface for fixing the upholstery and would also be hidden. As a precaution, however, I softened the rectangular frame's corners. As I'd made use of offcuts, the only additional items I had to buy were a rectangular cushion inner and some material, which I found online via Tuppence Collective – **www.tuppencecollective.co.uk** – and subsequently printed as a 1 × 1.35m section.

This was then stapled to the top frame's underside, and the frame secured to the base with metal brackets. All in all, this project was a successful exercise in terms of showing how offcuts can be effectively reused to make other items. More importantly, my mother was pleased with the end result and the foot stool now resides in front of her settee, where it serves as a perch for tired legs at the end of a long day.

Shallow tenons connect the legs

Bolection profile in a homemade scratchstock, which makes use of a tenon saw blade

Foot stool with softwood top prior to attaching the plywood

After a long day and as a means of supporting tired legs, the foot stool comes into its own

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The Woodworker & Good Woodworking
November 2022 edition
– on sale 21 October

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THE FINAL FRONTIER
So many tools, so little room: Tony Sutton describes his solution to the age old problem – space and storage

STRENGTHS & USES OF WOOD
Peter Bishop takes an overview of wood's uses over time, as well as offering a peek at the future

PLUS ▪ Framed ledge & braced door ▪ Why Tormek? ▪ Dovetails great & small ▪ Lathe router platform Carved knife handle ▪ An exercise in laser-guided hollowing ▪ Modifying existing pieces

IN THE HIGH COURT OF JUSTICE
BUSINESS AND PROPERTY COURTS OF ENGLAND AND WALES
COMPANIES COURT (ChD)

CR-2022-001261

IN THE MATTER OF AGF INSURANCE LIMITED

- and -

IN THE MATTER OF CATALINA LONDON LIMITED

- and -

IN THE MATTER OF CATALINA WORTHING INSURANCE LIMITED

- and -

IN THE MATTER OF PART VII OF THE FINANCIAL SERVICES AND MARKETS ACT 2000

Notice is hereby given that on 13 July 2022 an Application was made under section 107 of the Financial Services and Markets Act 2000 (the **Act**) in the High Court of Justice, Business and Property Courts of England and Wales, Companies Court (ChD) in London by AGF Insurance Limited (**AGF**) and Catalina London Limited (**CLL**) (together the **Transferors**) and Catalina Worthing Insurance Limited (**CWIL**), for orders:

(1) under section 111 of the Act sanctioning a scheme (the **Scheme**) providing for the transfer to CWIL of the entire general insurance and reinsurance business written and/or assumed by each Transferor; and

(2) making ancillary provisions in connection with the Scheme pursuant to sections 112 and 112A of the Act.

Each of AGF, CLL and CWIL are UK-authorised insurers in run-off. AGF was formerly known as the Employers' Mutual Insurance Association Limited, N.E.M. Insurance Company Limited and NEM Insurance Company Limited and acquired the business of the National Employers Mutual in 1989. CLL was formerly known as American Re-Insurance Company (UK) Limited, Aetna Re-Insurance Company (UK) Limited, The Imperial Fire & Marine Re-Insurance Company Limited and Alea London Limited. CLL also acquired the business of KX Reinsurance Company Limited and OX Reinsurance Company Limited. CWIL was formerly known as Hartford Financial Products International Limited and in 2015 acquired the business of Excess Insurance Company Limited, a portfolio originally written by London & Edinburgh Insurance Company from Aviva Insurance UK Limited and the business written by the London branch of Hartford Fire Insurance Company.

A copy of the report on the terms of the Scheme prepared in accordance with section 109 of the Act by an Independent Expert (the **Scheme Report**), a statement setting out the terms of the Scheme and a summary of the Scheme Report, and the Scheme document may be obtained free of charge by contacting the Transferors and CWIL using the telephone number or addresses set out below. These documents and other related documents, including sample copies of the communications to policyholders, are also available at www.catalinaworthing.co.uk/PartVII.html. This website will be updated for any key changes to the proposed transfer.

Any questions or concerns relating to the proposed Scheme should be referred to the Transferors and CWIL by email to PartVIITransfer@catalinare.com, by telephone at +44 1903 836804, or in writing at Part VII Enquiries, Catalina Services UK Limited, 1st Floor, 1 Alie Street, London E1 8DE, United Kingdom. When calling the helpline number, please leave a short message stating the nature of your query and your contact details and we will endeavour to return your call within 48 hours (excluding Saturdays, Sundays and public holidays).

If you are in any doubt as to whether your insurance policy is included in the proposed transfer please contact the parties at the contact details set out above.

The Application is due to be heard at the **High Court of Justice of England and Wales, 7 Rolls Buildings, Fetter Lane, London, EC4A 1NL, United Kingdom** on **18 November 2022**. Any person who thinks that he or she would be adversely affected by the carrying out of the Scheme, or objects to the Scheme, may attend the hearing and express their views, either in person or by a representative. It is requested that anyone intending to do so informs the Transferors and CWIL (using the contact details set out above) as soon as possible and preferably before **11 November 2022** to set out the nature of their objection. This will enable the Transferors and CWIL to provide notification of any changes to the hearing and, where possible, to address any concerns raised in advance of the hearing.

Any person who objects to, or considers they may be adversely affected by, the Scheme but does not intend to attend the hearing may make representations about the Scheme by giving written notice of such representations to the Transferors and CWIL at the address provided above or by calling the telephone number provided above, in each case as soon as possible and preferably before **11 November 2022**.

The Transferors and CWIL will inform the UK's Financial Conduct Authority and Prudential Regulation Authority of any objections raised in advance of the hearing, regardless of whether the person making the objection intends to attend the hearing.

If the Scheme is sanctioned by the Court, it will result in the transfer of all the contracts, property, assets and liabilities of the Transferors to CWIL save where otherwise specified in the Scheme, notwithstanding that a person would otherwise be entitled to terminate, modify, acquire or claim an interest or right or to treat an interest or right as terminated or modified as a result of the transfer of business effected by the Scheme. Any such right will only be enforceable to the extent the order of the Court makes provision to that effect. Subject to the sanction of the Court, the Scheme is currently anticipated to be effective at **23:59 GMT** on **30 November 2022**.

5 August 2022

Norton Rose Fulbright LLP,
3 More London Riverside, London, SE1 2AQ, United Kingdom

Solicitors acting for AGF Insurance Limited, Catalina London Limited and Catalina Worthing Insurance Limited

Ref: RAXH/1001168254

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07971 617 911 or **01392 424 934** Devon)

1) **Plano 2m clamp** & eight upright clamps – £200; 2) **Five-function small stayer multi unit** – electrics need sorting; tools included; £200
01732 823 769 (Kent)

Axminster Craft AC118CE cyclone dust extractor – two-years-old; in excellent condition; £350 – buyer collects
07931 678 286 (Birmingham)

1) **Axminster dust/chip extractor** with fine filter bag & ducting – £70; 2) **DeWalt router 621** – £125; 3) **Trend CRT Mk3 router table** – £65; all in very good condition
01386 430 043 (N.Cotswolds)

1) **Scheppach slide compound mitre saw**; as new – £110; 2) **Clarke CBS300 305mm bandsaw** – maximum depth of cut is 165mm; supplied with all fences; £150
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1) **Triton TCB 100 saw table** – £85; 2) **Nobex Mitre Saw** Champion 180 – £65; 3) **Scheppach Deco 402** hobby scrollsaw – £50; 4) **Veritas scraping plane** – £40; 5) **Clifton 3110 combination plane** – £70; all in very good condition
01386 430 043 (N.Cotswolds)

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TAKE 5

This month's selection showcases the work of some fantastic craftspeople, all of whom work with the medium of wood in very different, extraordinary ways

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1 'Shell Tree' by Alain Mailland, 2020, pistachio wood, 150 × 229 ×150mm – via **Wood Symphony Gallery** – **@woodsymphony** – visit **www.woodsymphony.com** to view more pieces by the artist

2 Tiny shelf in locally-sourced Eastbourne elm with a charred edge, by **Sand Buchanan** – **@sandbuchanan**

3 Bespoke sideboard with elm and ocean doors, painted to match a client's kitchen, by **Marshbeck Interiors** – **@marshbeck**

4 'No.6' sparrow wing platter by **Williams and Cleal Furniture School** – **@williamsandcleal** – student **Monty Cholmeley** – **@monty_cholmeley** – made partly in response to his previous cat platter and also due to the swirled texture on 'No.5' echoing the way in which feathers fan around a wing – **photo credit:** *michael.pawley.photographer*

5 Wooden hedgehog by **Gunnar Flørning** – **@gunnar_florning**

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