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June 2021

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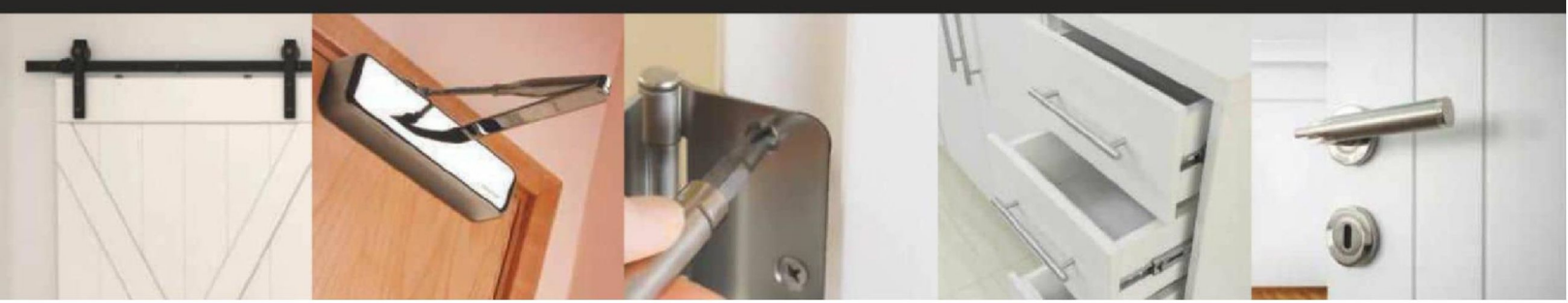





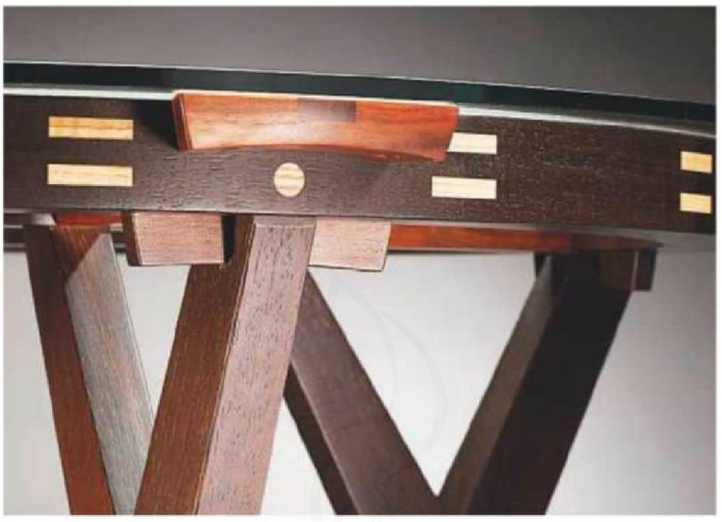
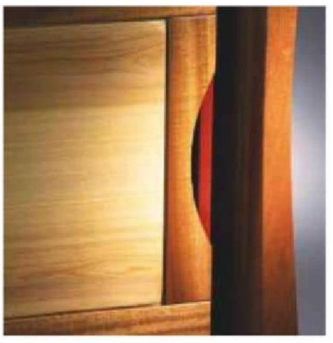

Welcome

June is here and we've already reached the halfway point of the year. How have you found 2021 so far? It's certainly been a strange one, with families separated at Christmas, then having to endure the stresses of being plunged back into lockdown. Sadly, it looks like the effects of COVID-19 may be with us for some time yet, and no doubt the last two years will go down in history. Hopefully there's light at the end of the tunnel, however, and while summer seems to be a long time coming, spring has most definitely sprung. While we've experienced plenty of sunny days down on the south coast, I won't be packing away my scarf and gloves just yet! The weather has been a bit on the chilly side, but seeing signs of new life poking its way through the soil is most reassuring. I made my annual trip to a local woodland and was delighted to see a carpet of bluebells – it really was a sight to behold – not to mention the daffodils, crocuses and my newfound favourite, the snake's-head fritillary.

Appreciation of skill

As I said last month, many of you are enjoying being back in the workshop and are even starting on some summer projects – perhaps for the home or garden. We've got a great lawn chair build in this issue, plus a garden seat, not to mention turning aplenty and a hall table that will test and develop your skills. There's also a fantastic feature on self-taught furniture maker Brian A.Hubel, whose 'Passage in Time' clock graces this month's cover. The photos above show various details of his work, including some complicated joinery techniques. These are often overlooked on hand-crafted pieces, but it's important to take a step back and admire the sheer skill and hard work which has gone into a piece's creation. Brian's furniture hints towards an Asian influence, but his style is very much unique to him. We hope you enjoy the profile and are inspired by his story.

Hints, tips & tricks

With workshop time in mind, don't forget to keep sending in your handy hints and tips for inclusion on our letters page. There's a Veritas apron plane up for grabs each month, so do let us know about your tricks and hacks and those which make your woodworking life easier. We've had a great selection so far – from making your own abrading sticks and scrapwood memo, to an anti-vice racking wedge, as well as creating movable platforms for woodworking kit. Share your individual tips with other readers and who knows, you may well pick up something revolutionary! Email **tegan.foley@mytimemedia.com** and ensure to include photos, too.

We hope our June issue helps to put a spring in your step!

Tegan

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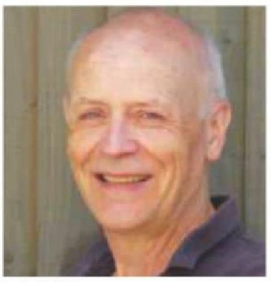

Phil Davy
Technical & Consultant Editor

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

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Les Thorne takes things up a notch, turning a pair of 1.8m high architectural columns on his large capacity lathe

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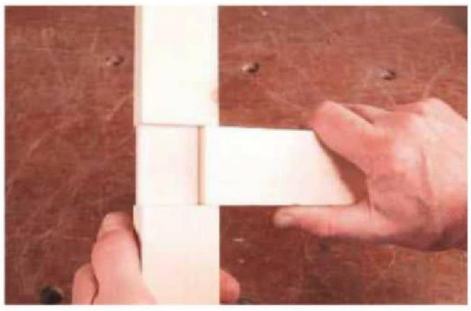

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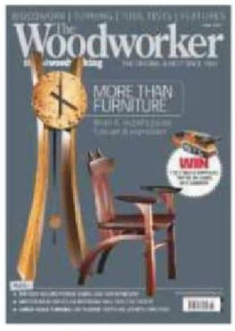

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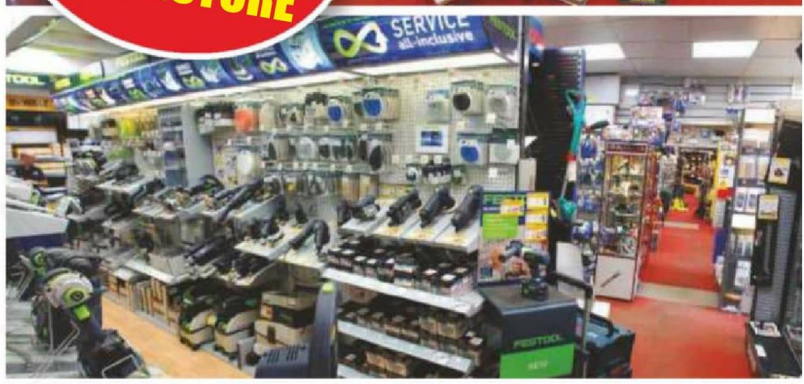

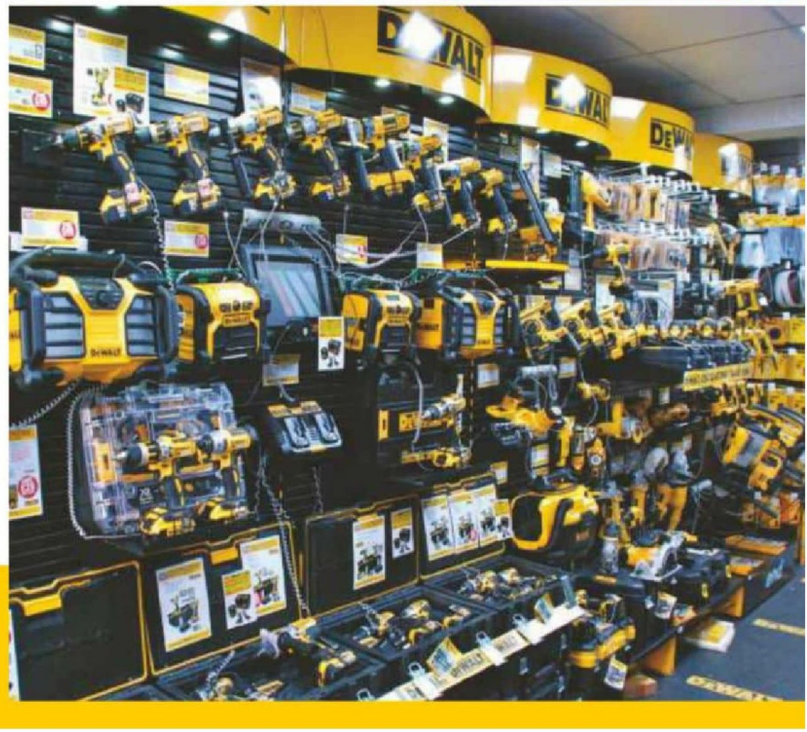

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RECORD POWER SABRE-250 10IN BANDSAW

Offering improved capacities, excellent cutting performance and substantial build quality, **Phil Davy** takes a look at this new bandsaw from **Record Power**

Record Power's mobile stand shown here is not included with the bandsaw. It costs around £90 extra

For many woodworkers (myself included), the bandsaw is a workshop essential. It's the saw most woodturners rely on for cutting blanks, while it's undoubtedly more versatile than any other stationary machine. It's quiet, relatively safe and will cope with fine joint cutting as well as converting large planks, depending on the machine. Fitted with the appropriate blade it will saw tight curves, rip deep timber, cut tenons, veneers, bevels and so on. Of course, it needs to be set up correctly in the first place, but this is usually straightforward.

Record Power has produced an array of bandsaws for donkey's years, to suit most pockets. Their SABRE-250 is a budget model likely to be within the range of most woodworkers considering a compact saw, without requiring the cutting capacities offered by a bigger machine.

There's a storage holder for hex keys and spanners at the back of the machine

Initially, the table must be bolted to the cast alloy trunnion, which is easy enough with four M6 bolts

Construction quality

There's some assembly involved before you can set it up, with four hex keys and a spanner provided. Handily, there's a storage holder for these at the back of the machine.

Four holes in the base enable the bandsaw to be bolted down. It may be small, but don't assume the SABRE-250 is easy to manhandle; you'll probably need help lifting it onto a stand or bench top. Weighing some 35kg, frame construction is mainly of heavy gauge welded steel, and extremely rigid. Aluminium is used for smaller components such as bandwheels, fence and blade guard. Overall height is 860mm, while width is 520mm and depth 370mm. Probably more relevant is table height from the base, which is 368mm.

Initially, the table must be bolted to the cast alloy trunnion, which is easy enough with four M6 bolts. Once fitted, you align the table with the blade for parallel. Although cast-iron, this isn't the thickest of castings. A bolt and wing nut at the front of the blade slot is designed to level up the two sides, though I found this made little difference. A steel straightedge across the table revealed a tiny gap underneath – a common problem with many split tables and something you learn to compensate for when cutting. Either that or add a steel bar underneath…

Equipped with a 550W motor, this is actually a two-speed machine. For timber cutting, the higher speed of 1,000m per minute is preferable. Changing to the slower speed of 460m per minute involves slackening off the motor retaining bolts, then shifting the drive belt on the lower bandwheel. This speed is more appropriate for cutting non-ferrous metals or similar.

A 2.4m detachable mains cable plugs into an IEC socket alongside the motor. Sited

Changing to the slower speed of 460m per minute involves slackening off the motor retaining bolts...

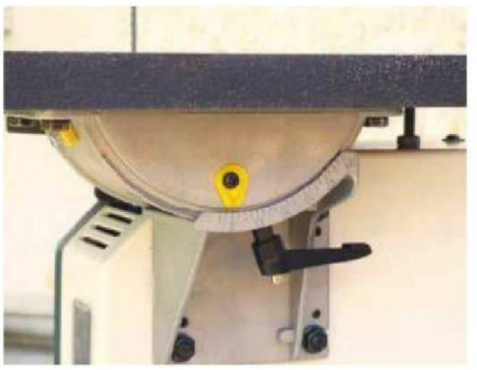
... then shifting the drive belt on the lower bandwheel

Sited on the neck of the machine, the NVR switch is easy to reach, its buttons shrouded against dust

A 65mm port for connecting a dust extractor is located on the base...

... while a small brush next to the lower bandwheel helps remove debris

You can tilt the table up to 45° via a Bristol lever at the back of the machine



An all-important, adjustable stop bolt sets the table back to zero

The box section rip fence hooks over the rail, and is locked in place with a large plastic lever

Depending on material thickness, you can mount the fence horizontally or vertically, with appropriate T-slots accepting the T-bar

When not required, the fence can be neatly stored out of the way, on a holder at the top of the casing

on the neck of the machine, the NVR switch is easy to reach, its buttons shrouded against dust. A 65mm port for connecting a dust extractor is located on the base, while a small brush next to the lower bandwheel helps remove debris.

Table & fence

Table size is 350 × 318mm, with a slot for a sliding mitre guide. Rather oddly, no such guide is provided with the SABRE-250, which does limit its scope. A basic alloy mitre guide costs around £40, but expect to pay much higher than this for something more sophisticated.

You can tilt the table up to 45° via a Bristol lever at the back of the machine. A protractor scale on the trunnion is fairly easy to read, while there's an all-important, adjustable stop bolt for setting the table back to zero.

Before the rip fence can be used you need to fit an aluminium rail across the front of the table. Marked with metric graduations, a couple of wing nuts underneath secure this in place.

The box section rip fence hooks over the rail, and locks in place with a large plastic lever. It can be fitted either side of the blade, and important for ripping timber safely with the table tilted. Small plastic set screws allow you to fine-tune the fence for accuracy: alignment with the blade and squareness to the table.

The fence is mounted on a steel block via a T-bar and thumbwheels, reversed when using it on the right side of the blade. Depending on material thickness, you can mount the fence horizontally or vertically, with appropriate T-slots accepting the T-bar. When not required, the fence can be neatly stored out of the way on a holder located at the top of the casing.

Guides & capacities

Roller guides above and below the table are spring-loaded, each tightened with thumbscrews. A bit fiddly to adjust, clear polycarbonate guards on the upper guide can restrict your view of the blade due to dust build up. I'd be tempted to remove these to make adjustments easier. Correctly set up, the blade travels sweetly around the bandwheels. The upper blade guard is aluminium and operates via a rise and fall mechanism, the knob locked off at the back. Maximum depth of cut is a respectable 127mm, while throat depth is 245mm.

Roller guides above and below the table are spring-loaded, each tightened with thumbscrews

The upper blade guard is aluminium and operates via a rise and fall mechanism

Both upper and lower steel doors are locked with circular knobs, which operate well

To change the blade, you first release the tension via a lever at the back of the bandsaw...

Blade change

Both upper and lower steel doors are locked with circular knobs, which operate well. Micro-switches ensure the machine cannot be activated with either door open.

The SABRE-250 comes with a decent 10mm blade already fitted – length 1,790mm or 70.5in – making initial set-up quicker. To change it, you first release the tension via a lever at the back of the bandsaw. Remove fence, rail and table bolt, then withdraw the blade off the wheels and through the slot. If fitting a new blade of the same size, the blade guides should be OK. If not, you'll need to adjust these.

Once installed, the replacement blade must be re-tensioned with the lever; a knob on top is used to adjust tension as necessary. Next, the blade must track correctly around the bandwheels. A clear plastic window allows you to view its path around the upper wheel as this is rotated by hand. Again, a knob at the back is used to adjust blade tracking.

... then remove fence, rail and table bolt, before withdrawing the blade off the wheels and through the slot

The cast aluminium bandwheels are 258mm in diameter, each covered with a thin rubber tyre. Both rotate smoothly and are nicely finished.

In use

I cut a variety of timbers on the SABRE-250, including 50mm bubinga, 60mm oak, plus plenty of softwood, thin poplar, MDF, and even a few logs. Ripping 85mm sapele, I was able to produce decent thin slices, even with a 10mm blade. Swapping to a 13mm blade gave a more consistent finish, so if you're keen to cut your own sawn veneers, this saw will handle it. Tilting the table is a fairly quick process, though where accuracy is important, it's worth checking the angle selected rather than relying solely on the protractor scale.

Conclusion

For smaller cutting tasks, the SABRE-250 is a neat little bandsaw, with substantial build quality. It's small enough to sit in a corner, even on the bench-top, though you won't want to move it too often. It would suit model makers, small-scale woodturners or cabinetmakers, musical instrument makers and similar.

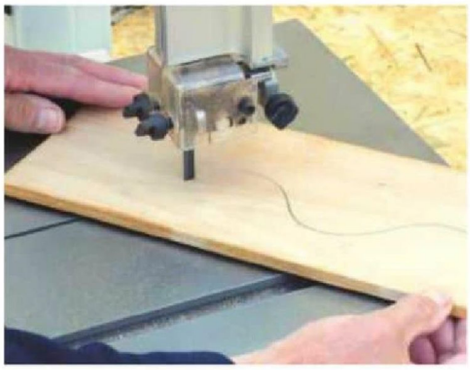
Capacities are limited, so if you'll be cutting heavier timbers, it may be worth considering a bigger machine. Don't forget, you'll need to find a mitre guide for accurate crosscutting. Warranty is an impressive five years.

A clear plastic window allows you to view its path around the upper wheel as it's rotated by hand

A knob at the back of the machine is used to adjust blade tracking

During testing, I cut a variety of timbers, including 50mm bubinga...

... 60mm oak, plus plenty of softwood...



... thin poplar, MDF and even a few logs

Ripping 85mm sapele, it was possible to produce decent thin slices, even with a 10mm blade

Tilting the table is a fairly quick process, but it's advisable to check the angle selected

SPECIFICATION

Maximum depth of cut: 127mm
Throat depth: 245mm
Table size: 350 × 318mm
Table height from floor: 368mm
Motor input P1: 550W
Motor output P2: 370W
Blade length: 70½in
Blade width capacity: ¼-½in
Blade speed: 460m/min & 1,000m/min
Extraction port diameter: internal – 58.8mm; external – 64.5mm
Weight: 35kg
Dimensions: 865mm high × 525mm wide × 470mm dia.

Typical price: £389.99
Web: www.recordpower.co.uk

THE VERDICT

PROS

- Two speeds; compact; quiet; excellent cutting performance

CONS

- No mitre guide

RATING: 4 out of 5

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TRITON TA1200BS 1,200W BELT SANDER

Featuring a number of upgrades, which improve its performance, **Phil Davy** takes a look at this redesigned belt sander from **Triton Tools** – it's one hefty machine that packs a lot of power!

It may not be every woodworker's must-have power tool, but a belt sander can be surprisingly useful for many shaping tasks. It's not restricted to flat surfaces, either. For convex curves, it's handy if you don't have a vertical bobbin sander, while a protruding front roller means it can generally cope with gentle concave curves, too. For shaping heavy timbers or recycling material, it can remove stock rapidly.

Those of you familiar with Triton tools will know that their TA1200BS belt sander isn't exactly hot off the press. It's been around for some years, but has now been updated with a couple of significant improvements. Gone is the cork sanding plate covering the steel platen underneath the tool, now replaced by a graphite version for reduced friction. This reduces heat build-up and is claimed to increase the life of the sanding belt.

There's an upgraded roller and belt assembly too, designed to increase dust extraction efficiency. Ends of rollers and the belt tensioning mechanism are now more enclosed compared with the previous model, so I'm guessing more dust is directed towards the outlet.

Fast & furious

Equipped with a 1,200W in-line motor, the TA1200BS certainly isn't a compact power tool. Weighing 4.5kg, it's no lightweight, either.

For shaping heavy timbers or recycling material, the TA1200BS can remove stock rapidly

A graphite sanding plate reduces heat build-up, friction and increases sanding belt life

A relatively slim design, the big, low rear handle extends back from the body casing. There's plenty of soft-grip rubber around the grips and along the top of the body. You can adjust the front D handle through 90°, simply by opening a small lever and clicking the handle to any of four positions.

A large on/off trigger is built into the rear handle, with lock-on button above. This is essential for inverted sanding as you'll need both hands free to grip the workpiece. With a variable speed range from 200-450m/min, you adjust this via a thumbwheel at the base. Convenient for right-handers, it's probably easier to read if you're left-handed. Fitted with a heavy-duty cable, it's a respectable 3m long.

A zipped, fabric dust bag is provided, which twists onto a port on the left side of the body. I found this slightly awkward when sanding as it's quite bulky, a common problem with many sanders where the bag is mounted at one side.

Unfortunately I didn't have the correct size adaptor to connect the hose to my Trend extractor, though a piece of gaffa tape did the job well enough. Extraction is particularly efficient when hooked up.

All change

The front cambered roller is steel, while the rear drive roller has a dense rubber tyre.

You can adjust the front D handle through 90°, simply by opening a small lever and clicking the handle to any of four positions

A large on/off trigger is built into the rear handle, with lock-on button above

A zipped, fabric dust bag is provided, which twists onto a port on the left side of the body

As the dust bag is mounted on one side, and quite bulky, I found this made sanding slightly awkward

Unfortunately I didn't have the correct size adaptor to connect the hose to my Trend extractor, though a piece of gaffa tape did the job well enough

Access to the toothed drive belt is convenient by removing a screwed plastic cover, and a spare belt is also provided

To change a belt, you open out the hefty sprung tension lever between the two rollers

A knob at the end of the front roller allows you to easily adjust belt tracking when the tool is running

Unlike most belt sanders, the Triton is intended to be inverted, which really extends its scope

Access to the toothed drive belt is convenient by removing a screwed plastic cover, and a spare belt is also provided.

Sanding belt size is a standard 76 × 533mm, so buying replacements shouldn't be a problem. Three belts are supplied – 80, 100 and 180 grit – and changing one follows the standard procedure: open out the hefty sprung tension lever between the two rollers, slip the new one over these and close it up again. A knob at the end of the front roller allows you to adjust belt tracking easily when the tool is running.

Upside down

Unlike most belt sanders, the Triton is intended to be inverted, which really extends its scope. This means you can shape small components, end-grain and so on easily, something normally done on a dedicated disc or combination sander. The top of the body casing is flat, so it will sit securely upside down. A pair of clamps are provided to fix it to a bench top, Workmate or even a scaffold board, up to a maximum thickness of 100mm.

A rigid steel back stop is also included, mounted across the belt with a thumbscrew at one side. Don't rely on this for precision sanding, though, as it can't be adjusted for square. In fact, when shaping a bubinga offcut, I found it better to remove the stop altogether. With a bit of practise, I managed to get reasonable results using a 180 grit belt.

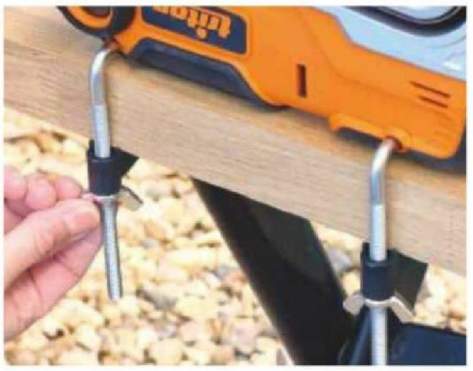
In use

After replacing my stairs last year, I had several lengths of thick parana pine, too good for the woodburner. In order to recycle these pieces, several layers of paint had to be removed, so the Triton was the obvious choice here. With an 80 grit belt fitted, it didn't take long.

Due to the TA1200BS's overall length, your hands are some distance apart when controlling the sander, which can take some getting used to. Vertical sanding is feasible, and certainly gives your muscles a good workout!

Conclusion

This is one hefty machine, so if you're after a compact sander you'll need to look elsewhere. A welcome upgrade to what was already a workhorse power tool, for preparing recycled timber it's a great choice. As a small, inverted belt sander for occasional work, it could be just the ticket.



A pair of clamps are provided to fix the sander to a bench top, Workmate or even a scaffold board – up to a maximum thickness of 100mm

Vertical sanding is feasible, and certainly gives your muscles a good workout!

SPECIFICATION

No load speed: 200-450m/min
Power: 1,200W
Length × width × height: 410 × 120 × 145mm
Weight: 4.5kg
Sanding area: 75 × 150mm
Sanding belt size: 75 × 533mm
Supplied accessories: 3 × sanding belts (80, 100 & 180 grit); set of inversion clamps; dust extraction bag; graphite plate; instruction manual

Typical price: £209.59
Web: www.tritontools.com

THE VERDICT

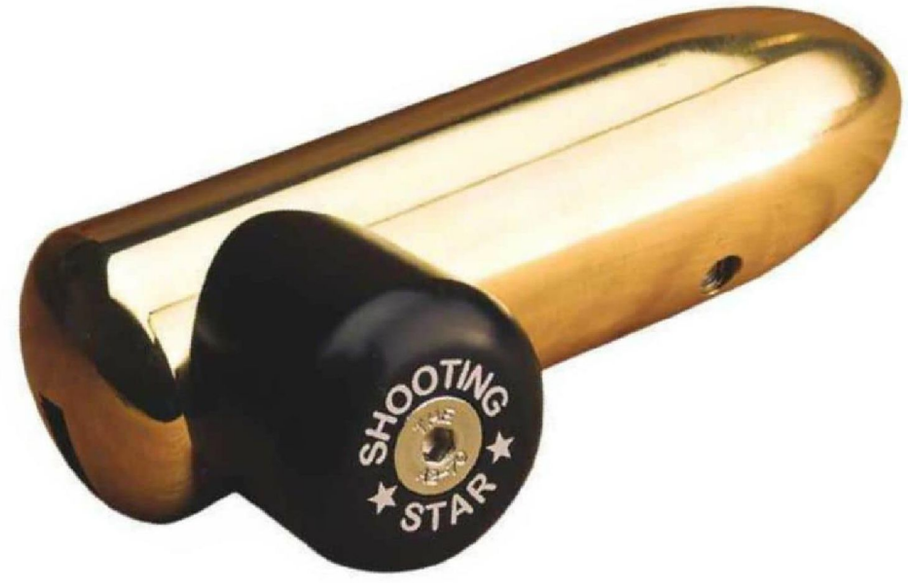
PROS

- Powerful; can also be inverted for stationary sanding

CONS

- Heavy for vertical sanding work

RATING: 4 out of 5



SHOOTING STAR SHOOTING HANDLE

Providing a comfortable grip and half a kilo of welcome additional heft when using a bench plane on a shooting board, the British made Shooting Star is a beautifully engineered piece of kit, as **John Lloyd** discovers

Do you remember the Record T5 technical jack plane? It was a plane designed for those heady days when 'woodwork' was taught in schools and small hands were having trouble controlling big planes on shooting boards. That's not to say large hands don't have trouble controlling big planes on shooting boards – they most certainly do – and to confirm this you only have to look at Lie-Nielsen's eye-wateringly expensive, dedicated shooting board plane.

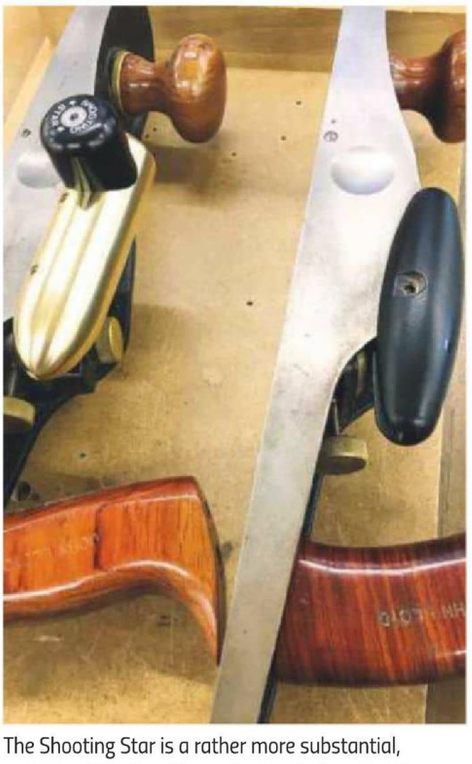
The T5 is actually just a jack plane with extended wings, which make it more stable when used on its side for shooting duties. The really useful feature, though, is a turned wooden handle, which can be quickly screwed into its side to give small (or large) left- or right-handed users something substantial to hang on to when using the plane on a shooting board. The T5 went out of production over 40 years ago and in the intervening years, we've just had to put up with the discomfort of wedging our thumbs into the cramped space behind the frog and trying to control things by hanging onto the blade. Or, just white-knuckled clutching onto the side wing, trying to keep precise control while moving the plane up and down a shooting board, without experiencing any twisting or tilting.

Refining the process

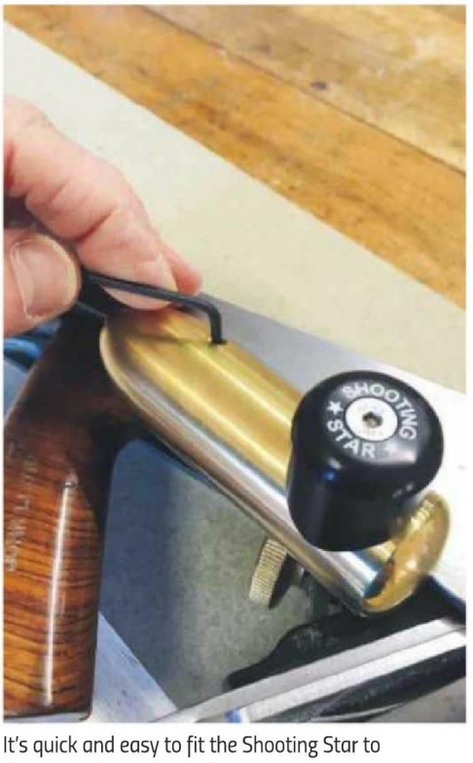
There have been several attempts at making this rather precarious process a little more controllable and comfortable. Lie-Nielsen produced the No.9 mitre plane, fitted with a similar, but smaller, screw-on wooden handle to the T5, and they also introduced the 'Hot Dog' handle – a short sausage-shaped casting that could be attached to the wing of their mitre or low angle jack. The No.9 has now been replaced by the No.51 'Shoot Board Plane', which is their version of the original Stanley No.51, and there's also a Veritas shooting plane. Both are excellent bits of kit, but neither are cheap or ambidextrous, and they can only do one thing, albeit, extremely

The Shooting Star is supplied with two Allen keys and a spare grub screw

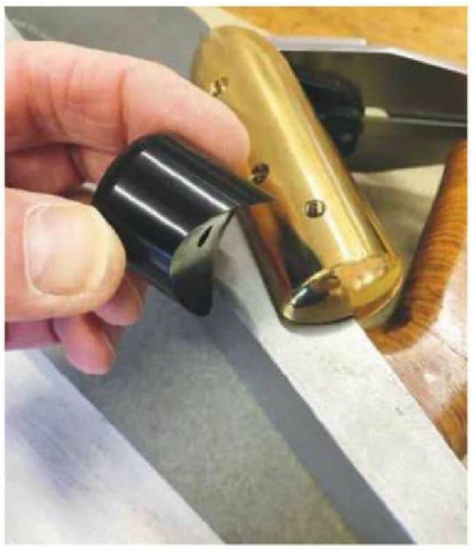
The old Lie-Nielsen mitre plane had a similar knob to the T5, which aided grip while shooting



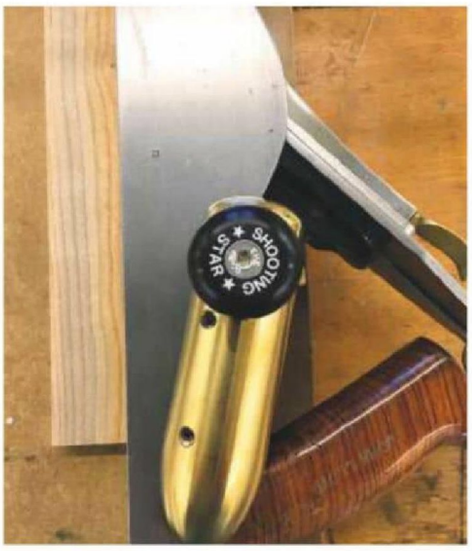
The Shooting Star is a rather more substantial, weighty affair than the svelte Lie-Nielsen Hot Dog



It's quick and easy to fit the Shooting Star to the wing of any plane using two grub screws



The anodised aluminium lug can be quickly switched for left- or right-handed use



The Shooting Star neatly tucks in behind the frog on a bench plane

The Shooting Star's hefty body and chunky lug provide a much improved handhold

well. The Hot Dog, although it certainly helps, isn't the perfect solution to controlling planes on shooting boards. Yes, it gives you something to hang on to, but not a great deal, and it doesn't give you much to push against, either. Plus, the Lie-Nielsen Hot Dog only seems to fit Lie-Nielsen planes – surely this could be improved upon?

Different design

Well, this is the very thought that an engineer – who was a student of mine on a Skills course last year – had while trying to get to grips with a low angle jack plane, a Hot Dog handle and a shooting board. A little later in the year, the same student returned on another course with a prototype of his improved Hot Dog, and by the end of the year, he'd refined it to the even more improved 'Shooting Star'.

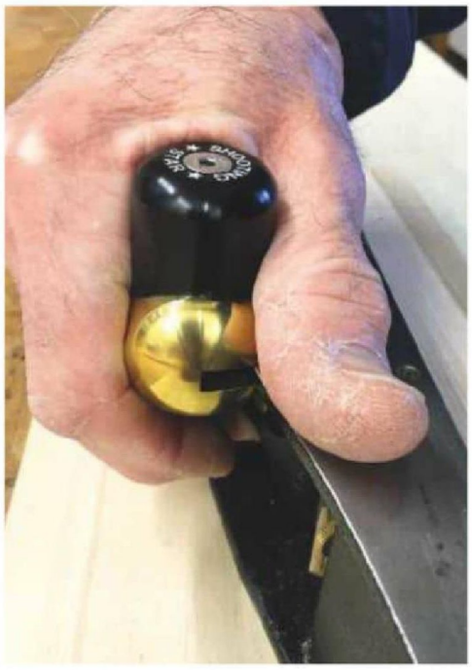
Although the Shooting Star is certainly based on the concept of a Hot Dog handle, it's significantly different. For a start it's made from a big, chunky, heavy lump of brass. When it's attached, your plane will immediately be about 0.5 kg heavier, and we all know the benefit of having a heavy plane: once you've got it moving, the extra weight ensures a smooth, effortless cut. Another feature is that one of the ends is flat; this gives you something positive and comfortable to push against with the heel of your hand. These are all great improvements, but there's more. The real game changer comes in the form of a chunky, cylindrical anodised aluminium lug, which can be screwed to the side of the body. This gives you something to hook your thumb around, which, combined with the hefty brass body, means you have something really secure, comfortable and substantial to hang on to, not to mention, vastly improved grip and control.

Fits most planes

The Shooting Star is completely ambidextrous and easy to attach to either side wing of any suitable bench plane – likely to be a No.5, or bigger, or a low angle jack – using just a couple of stainless steel grub screws; these are then quickly tightened onto the wing of the plane with an Allen key. The chunky brass body can be attached with or without the aluminium lug, and this can be easily swapped from left- to right-hand mode and secured with a single screw. I successfully fitted the Shooting Star to several of my planes – Lie-Nielsen, Clifton, Veritas, Stanley and Dictum – so it seems to fit most, if not all, planes with wings.

Conclusion

I was amazed at the improvement compared to a standard Hot Dog handle. Fitting a Shooting Star to your bench plane will transform its performance when used on a shooting board, turning what is usually a rather awkward, slightly painful process, into something controlled, accurate and pleasurable. It obviously won't ever quite match a dedicated shooting board plane, but it won't be too far off and the price won't make your eyes water.



The lug provides a really secure grip and good balance for shooting

The flat end of the brass body gives the user another comfortable option to push against

SPECIFICATION

- Compatible with Quangsheng, Lie-Nielsen, Veritas, Stanley, Record, etc. Check the side wings of your plane to ensure it will fit. The slot is 5.6mm wide × 15mm deep in the centre

Typical price: £74.50
Web: www.workshopheaven.com

THE VERDICT

PROS

- Beautifully engineered; made in the UK; quick and easy to attach and remove; left- and right-handed; increased mass improves planing performance; generous, comfortable, secure grip makes for effective and precise shooting

CONS

- The grub screws tend to leave small marks on the wings of the plane

RATING: 4.5 out of **5**

TRITON launches new compound mitre saw

Triton Tools, leading brand of woodworking hand and power tools, has launched the TCMS254 1,800W sliding compound mitre saw 254mm in Europe and the UK. The new mitre saw features a 254mm 60T TCT blade and powerful 1,800W motor to help woodworkers and makers machine their timber with precise, clean cuts at any angle.

A dual-bar smooth-sliding cutting head and extended blade channel gives the saw extra reach to crosscut timber with a maximum capacity of 64 × 318mm, and the saw can make compound, 0-45° right bevel, 0-47° left bevel, or 0-50° left or right mitre cuts, all at preset or micro-adjustable angles.

Mark Pearson, Triton Global Brand Manager, said: "Our customers have been waiting for this saw to arrive, and we're excited to finally bring the TCMS254 to makers' and woodworkers' workshops."

With safety in mind, the TCMS254 has large, durable, sliding infeed and outfeed tables with side stops and extenders to provide support for longer boards, while the clamp and sliding fence assists in securing workpieces. Other features include an adjustable calibration laser for precision cutting, depth stop for trench cutting, dust bag, and fixing holes for mounting to a bench or compatible mitre saw stand. Visit **www.tritontools.com** to find your nearest stockist.

SCREWFIX launches Price Checked

Screwfix has launched 'Price Checked', which gives busy tradespeople the best deals on essential products. 'Priced Checked' products offer market leading prices on everyday essentials – just look for the tick and take your pick from cable ties and heavy-duty shelving to blue roll and safety boots.

Trusted by the trade since 1979, Screwfix has highlighted its 'Price Checked' products both online and in store, using a special badge. This is just another example of the omnichannel retailer going further for its customers on price, in addition to 'Screwfix Deals', 'Bulk Save' and 'Low Price'.

Customers can order via Click & Collect service to pick up from more than 700 stores across the UK. Simon Jackson, Screwfix Customer & Digital Director, comments: "Time is money for our customers, so we've launched 'Priced Checked' to reassure them that, on our everyday essential products, we're market leading on price. We do the hard work, so they don't have to."

For more information and to see the latest deals for yourself, visit **www.screwfix.com**, or call **03330 112 112**.

DICKIES brings together Workwear & Lifestyle product ranges – now available at www.dickiesworkwear.com

Global workwear and lifestyle brand, Dickies, recently announced the consolidation of its previously segmented 'Work' and 'Life' brands in Europe. Dickies will move forward as one cohesive apparel brand with both workwear and lifestyle product ranges now available under 'Dickies Europe'.

Founded in 1922 in Texas, Dickies has stood alongside generations of proud workers, equipping them with tough, durable workwear. What began as a humble workwear company has grown into a worldwide force and, as a result, saw Dickies Life evolve as the lifestyle arm of the brand, focused on quality, fit for purpose streetwear. Bringing together both work and life product ranges is a natural next step and representative of a global community of people who have taken inspiration from the traditional world of work and made it their own.

Back in March, the brand launched the second instalment of 'United By Dickies' – a digital-first campaign championing the dignity of work through traditional artisans and culture-drivers. Exploring the human aspect of what it means to be a maker today, the campaign cast a light on the diverse global maker community at the core of the Dickies brand. From metal workers to painters, ceramicists and beyond, the personal yet universal stories of each were expertly captured, exploring the human being behind the creative output.

Dickies' new e-comm site will maintain a segmented workwear and work-inspired offering, presenting workwear apparel designed for physical and demanding work alongside work-inspired apparel, hard working and durable but worn for leisure and style. This new approach expands the possibilities for wear and reinforces the fact that Dickies has become so much more than just clothes to work in – see **www.dickiesworkwear.com**.

The Woodworker Timber Suppliers Directory – June 2021

Adhectic Ltd (Berkshire)
Tel: 01235 5
Web: www.adhectic.co.uk

A Harrison (Northants)
Tel: 01536 725 192
Web: www.aharrisonwoodturning.co.uk

Bennetts Timber (Lincolnshire)
Tel: 01472 350 151
Web: www.bennettstimber.co.uk

Black Isle Woodturning (Scotland)
Tel: 07842 189 743
Web: www.blackislewoodturning.com

Brodies Timber (Perthshire)
Tel: 01350 727 723
Web: www.brodiestimber.co.uk

Brooks Brothers Timber (Essex)
Tel: 01621 877 400
Web: www.brookstimber.co.uk

C&G Barrett Ltd, Cilfiegan Sawmill (South Wales)
Tel: 01291 672 805
Web: www.cilfiegansawmill.com

Clive Walker Timber Ltd (West Yorkshire)
Tel: 01132 704 928
Web: www.clivewalkertimber.co.uk

D Emmerson Timber (Lincolnshire)
Tel: 01507 524 728
Web: www.emmersontimber.co.uk

Earlswood Interiors (West Midlands)
Tel: 01564 703 706
Web: www.earlswoodinteriors.co.uk

English Woodlands Timber (West Sussex)
Tel: 01730 816 941
Web: www.englishwoodlandstimber.co.uk

Exotic Hardwoods (Kent)
Tel: 01732 355 626
Web: www.exotichardwoods.co.uk

EO Burton, Thorndon Sawmills (Essex)
Tel: 01277 260 810
Web: www.eoburton.com

Eynsham Park Sawmill (Oxfordshire)
Tel: 01993 881 391
Web: www.eynshamparksawmill.co.uk

FH Ives (Essex)
Tel: 01268 732 373
Web: www.fhives.com

Fulham Timber (London)
Tel: 0208 685 5340
Web: www.fulhamtimber.co.uk

G&S Specialist Timber (Cumbria)
Tel: 01768 891 445
Web: www.toolsandtimber.co.uk

Good Timber (Northamptonshire)
Tel: 01327 344 550
Web: www.goodtimber.com

The Hardwood off cut shop (Essex)
The Wood Yard, Canterbury Tye Farm, Doddinghurst road, Brentwood, Essex, CM15 OSD
Tel: 01277 205990
Web: www.hardwoodoffcuts.co.uk
sales@hardwoodoffcuts.co.uk

Horndon Timber Products
Unit 8-9 Orsett Industrial Park
Stanford Road, Orsett, Grays
Essex. RM16 3BX
Tel: 01375 679 999
Web: sales@horndontimber.co.uk

Interesting Timbers (Somerset)
Tel: 01761 241 333
Web: www.interestingtimbers.co.uk

ISCA Woodcrafts (South Wales)
Tel: 01633 810 148/07854 349 045
Web: www.iscawoodcrafts.co.uk

Joyce Timber (London)
Tel: 0208 883 1610
Web: www.joycetimber.co.uk

Lincolnshire Woodcraft (Lincolnshire)
Tel: 01780 757 825
Web: www.lincolnshirewoodcraft.co.uk

Nottage Timber (South Wales)
Tel: 01656 745 959
Web: www.nottagetimber.co.uk

Ockenden Timber (Powys)
Tel: 01588 620 884
Web: www.ockenden-timber.co.uk

Olivers Woodturning (Kent)
Tel: 01622 370 280
Web: www.oliverswoodturning.co.uk

Oxford Wood Recycling (Oxfordshire)
Tel: 01235 861 228
Web: www.owr.org.uk

Stiles & Bates (Kent)
Tel: 01304 366 360
Web: www.stilesandbates.co.uk

Scadding Timber (Avon)
Tel: 01179 556 032
Web: www.scadding-son-ltd.co.uk

Scawton Sawmill (North Yorkshire)
Tel: 01845 597 733
Web: www.scawtonsawmill.co.uk

S.L. Hardwoods (Croydon)
Tel: 020 3051 4794
Web: www.slhardwoods.co.uk

St. Andrews Timber (Scotland)
Tel: 01316 611 333
Web: www.standrewstimbersupplies.co.uk

Surrey Timbers Ltd (Guildford)
Tel: 01483 457 826
Web: www.surreytimbers.co.uk

Sykes Timber (Warwickshire)
Tel: 01827 718 951
Web: www.sykestimber.co.uk

The Timber Mill (Cornwall)
Tel: 07966 396 419
Web: www.thetimbermill.com

The Wood Recycling Store (East Sussex)
Tel: 01273 570 500
Web: www.woodrecycling.org.uk

Thorogood Timber Ltd (Essex)
Tel: 01206 233 100
Web: www.thorogood.co.uk

Timberman (Carmarthenshire)
Tel: 01267 232 621
Web: www.timberman.co.uk

Tree Station (Lancashire)
Tel: 01612 313 333
Web: www.treestation.co.uk

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

Waterloo Timber Ltd (Lancashire)
Tel: 01200 423 263
Web: No website

Wenban Smith (West Sussex)
Tel: 01903 230 311
Web: www.wenbans.com

Wentwood Timber Centre (South Wales)
Tel: 01633 400 720
Web: www.wentwoodtimbercentre.co.uk

W L West & Sons Ltd (Surrey)
Tel: 01798 861 611
Web: www.wlwest.co.uk

Yandle & Sons Ltd (Somerset)
Tel: 01935 822 207
Web: www.yandles.co.uk

BOSCH PROFESSIONAL ramps up **#builtwithBosch** to the EXTREME

Owing to the success of its hugely popular **#builtwithBosch** campaign, Bosch Professional UK will take it to the absolute EXTREME in 2021. The new **#builtwithBosch EXTREME** programme sees the company offering a massive 500 tools throughout the year, which will be put through their paces by tradie testers, who'll then share short videos giving an insight into real-life usage on site. The best part is that testers can then keep the tools free of charge.

All 500 tools are from the BITURBO Brushless range, which brings together Bosch's best battery – the ProCORE18V – with its leading 1,800W brushless motor. The range includes superior, lightweight, easy to handle, cordless tools, which perform with the power of their corded equivalents and the convenience of cordless use.

Three BITURBO tools

There will be three rounds of **#builtwithBosch EXTREME** taking place throughout 2021, the first of which launched via the new Bosch Professional Instagram channel back in April. Testers have the choice of three tools, all from Bosch's BITURBO range:

- **GKS 18V-68 GC cordless circular saw:** cordless flexibility with corded power and even faster cutting speeds
- **GBH 18V-36 C cordless rotary hammer:** maximum power with a class-leading compact design (weighing in at just 6.1kg) and intelligent interface
- **GCM 18V-216 cordless mitre saw:** equal power to a corded 1,600W mitre saw, lightweight and ergonomic with a cutting depth of 70mm. Over the course of 10 weeks, chosen testers will film two or three videos per week, which Bosch Professional will then share via its newly launched Instagram channel.

Kate Pritchard, User Marketing Manager for Bosch Professional UK, commented: "We're really excited to launch **#builtwithBosch EXTREME** and significantly widen out the number of tradespeople that can get their hands on, and test, our latest cordless BITURBO Brushless tools. We've already built a great community of testers from the initial **#builtwithBosch** programme – the user feedback benefits our R&D and it's great to see the testers supporting each other with ideas and building their own 'band of Bosch' community."

To apply to become a tester, visit the Bosch Professional Instagram page – **@boschprouk** – and for more information on Bosch Professional, see **www.bosch-professional.com/gb/en**.

Oils for beautiful woodwork – **Liberon UK** take the mystery out of what to use & when

Oil and woodwork: it's a marriage made in heaven. Wood loves oil to protect and nourish it, and the application of oils is one of the oldest forms of wood finishing. The process results in a natural, hard-wearing effect with an unmistakable, beautiful sheen and silky smoothness you'll appreciate. There is a wide range of oils available, and even those who consider themselves pretty savvy when it comes to caring for their woodwork can get confused about what to use and when.

Richard Bradley, Marketing Manager at woodcare experts, Liberon, says: "It's true – we do get asked about the various oils on the market, and I can understand the confusion. Hopefully we can help provide some clarity here. Essentially, homeowners really only need to have three types of oil on hand: a Danish oil, a tung oil, and a finishing oil. If you've got all three of these in your DIY toolkit, you'll have pretty much all interior woodwork needs covered."

Going through what to use and when, here are some pointers.

Liberon's Finishing Oil

This product is perfectly suited to a kitchen table with some signs of wear and tear, recently bought new wood furniture and woodwork in a bathroom.

Liberon's Finishing Oil can be used to either finish or refinish surfaces and build up a lasting, water-resistant finish. The product blends hard-wearing oils with resins, and its resin content is such that it enables protection not only against water, but also heat and alcohol.

Liberon's Superior Danish Oil

This Danish oil is ideal for doors, skirting boards, other kitchen surfaces as well as wooden garden furniture.

Achieving a superior satin gloss sheen, the Danish oil also feeds, protects and adds long life to both hard- and softwoods. Added UV filters help protect against sunlight, which also makes it ideal for protecting exposed exterior surfaces. Plus, due to its resin content, it's also resistant to water, alcohol, heat and food acid.

Liberon's Pure Tung Oil

This tung oil is the perfect partner for surfaces most often in contact with food, such as chopping boards, salad bowls and wooden kitchen work surfaces.

The above applications require a premium, natural tung oil with no additives in order to seal and preserve the wood. This product from Liberon is hard-wearing, providing a long-lasting matt finish, and can also be used for external applications to help prevent black spots.

For further information on Liberon and its extensive range of woodcare products, visit **www.liberon.co.uk**.

WIZARDRY IN WOOD 2021
Focus on exhibitors

Wizardry in Wood – **https://turnersco.com/turning/wiw/** – will be returning to Carpenters' Hall, in the City of London, from 13–16 October this year. In addition to a variety of exhibitions on the subject of woodturning, there will also be a wide range of demonstrations and exhibitions from some of the UK's leading woodturners, two of whom are Tobias Kaye and Louise Hibbert.

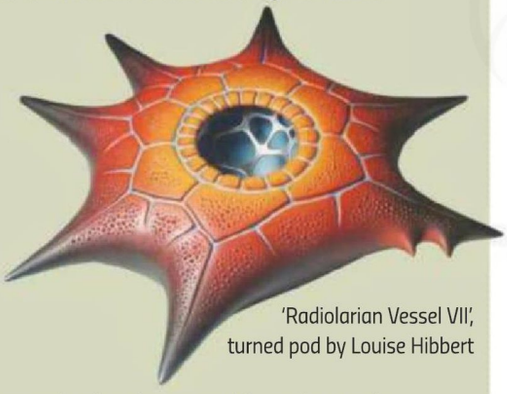
Tobias Kaye

One of Tobias Kaye's Sounding Bowls

Tobias' Sounding Bowls are used in recording studios, health projects and private lives from birth to death, and the whole adventure in between. On the COVID frontline, Jacob Marshal has been part of a team creating 'recharge rooms' for stressed hospital workers,more information on which can be found here: **www.wired.com/story/covid-recharge-rooms-health-care-front-line**. Jacob has an international following as a 'sound designer' and uses an ash wood lyre bowl. The smaller Sounding Bowls have also achieved a following and he's been offering meditations such as this one to contribute whathe can to healing the stresses of this difficult time.

The largest bowls Tobias makes have been selling off-the-lathe before he's even completed them. A video with more information on this can be viewed on his website: **www.soundingbowls.com**.

Louise Hibbert



'Radiolarian Vessel VII', turned pod by Louise Hibbert

After years of living with and loving her wood art collection as a whole, Louise decided to start the process of deaccessioning part of it. She contacted curators at the Renwick Gallery of the Smithsonian American Art Museum regarding her desire to add wood art to the Renwick's permanent collection. After several years of discussion with multiple curators, current Renwick curators, Mary Savig and Nora Atkinson, were given the green light by the Smithsonian to begin the process of selecting objects from the collection. Mary and Nora had maximum flexibility in terms of what they could choose, visiting Louise's home multiple times for in-depth study. Pieces of interest were researched and eventually put through an extensive review process as dictated by the Smithsonian.

This resulted in the selection of over 40 pieces from 29 artists. Louise is very happy with their selection of pieces and also very pleased that, for 23 artists, this will be their first object(s) accepted into the Renwick's permanent collection. The following pieces – 'Radiolarian Vessel VII' and 'Cinachyra Box' – will be donated to the Renwick Gallery, forming part of a building-wide exhibition taking place in honour of the Renwick's 50th Anniversary. The details and planning for the exhibition are still being determined, but all of the pieces donated will be on display during the exhibition. To see more examples of Louise's work, visit **www.louisehibbert.com**.

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MANUFACTURER: DeWalt
D&M GUIDE PRICES: See our website

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Not only does this feature deliver an additional kick when required on tougher jobs, it also increases the versatility and runtime of the equipment. This means that an 18V XR product is capable of handling a host of different applications, thus significantly enhancing the flexibility and productivity of the professional's toolkit.

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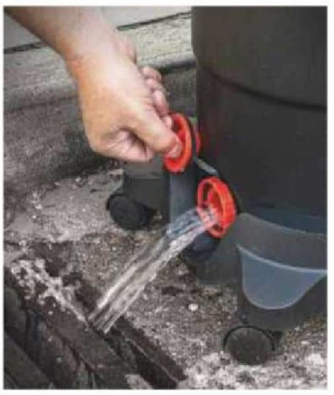
MANUFACTURER: Trend
D&M GUIDE PRICES: £239.95 (inc VAT)

The T33A is the latest wet & dry site vac from Trend. Featuring an M Class HSE Construction Site rating, it captures microscopic dust and mist particles with 99.95% efficiency, and the Auto-Start Function operates the extractor automatically when a power tool is connected and started up.

A pleated HEPA filter captures dust as fine as 0.3 microns and above for a safer working environment, and multifunction wet & dry collection allows it to be used for an increased range of applications around the jobsite.

Compact and lightweight for easy transportation, the T33A includes a 5m hose, chromed steel tubes and cleaning kit for standard vacuuming applications. The shakedown filter function maintains efficient extraction performance, while the high impact rugged plastic tank is designed to take the knocks encountered during site use.

A top-mounted cable management cleat keeps the cable stored when not in use and the four castor wheel base allows easy movement around the workplace. With power take off for high performance and hazardous dust capture, the T33A is available in 240V and 115V options for both site and domestic applications.



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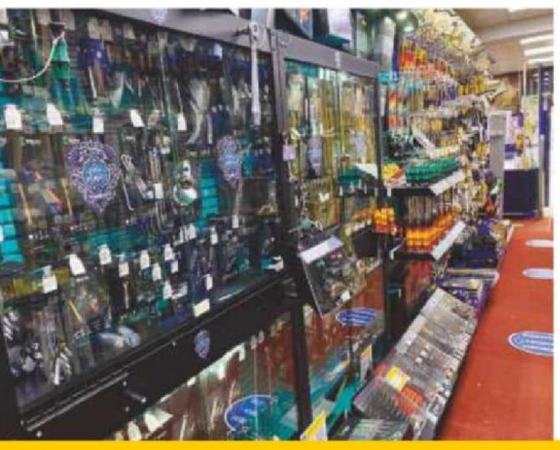

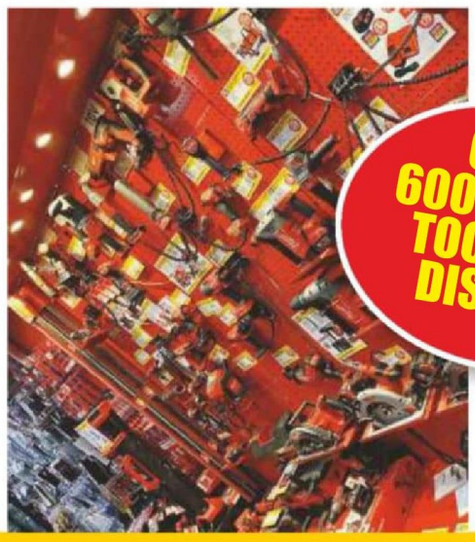

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1 OF 2 TRITON NEW & IMPROVED TA1200BS BELT SANDERS

The relaunched **TA1200BS 1,200W Belt Sander 75mm** from **Triton Tools** features a redesigned roller assembly and anti-friction graphite sanding plate, transforming the tool into a class leader. There's two up for grabs in this month's competition, so be sure to enter

Triton Tools, leading brand of woodworking hand and power tools, has redesigned the TA1200BS 1,200W Belt Sander 75mm.

The new TA1200BS uses the same efficient 1,200W motor, but now includes a redesigned roller assembly and an anti-friction graphite sanding plate, transforming the tool into a class leading sander.

All new roller assembly

Featuring an all new roller assembly, the TA1200BS now extracts and collects up to 30% more dust. A smaller gap between the roller housing and the belt's abrasive surface means this is now safer for the operator, and also allows for a more refined dust gathering space for the sawdust to be extracted.

Finer finish

Another addition is the new anti-friction graphite plate in the sanding base, which significantly reduces heat production during operation, resulting in less tool wear, less paper wear, more sanding time, and a finer finish.

Mark Pearson, Triton Global Brand Manager, said: "The TA1200BS has always been a great belt sander, but this makeover has turned it into a class leader. We've tested it against other top brands and we were very pleased with the results."

Ideal for site work or the home workshop, the sander is supplied with a bench-mounting inversion clamps kit, dust collection bag and three sanding belts. Visit **www.tritontools.com** to find your nearest stockist.

TECHNICAL SPECIFICATION

- **No load speed:** 200-450m/min
- **Power:** 1,200W
- **Length × width × height:** 410 × 120 × 145mm
- **Weight:** 5.15kg
- **Sanding area:** 75 × 150mm
- **Sanding belt size:** 75 × 533mm
- **What's in the box:** 1 × TA1200BS Belt Sander 75mm; 3 × sanding belts (80, 100 & 180 grit); set of inversion clamps; dust extraction bag; graphite plate; instruction manual

HOW TO ENTER

To be in with a chance of winning 1 of 2 Triton TA1200BS 1,200W Belt Sanders, just visit **www.getwoodworking.com/competitions** and answer this simple question:

QUESTION: What is the sanding area of the redesigned TA1200BS?

The winners will be randomly drawn from all correct entries. The closing date for the competition is **18 June 2021**. Only one entry per person; multiple entries will be discarded. Employees of MyTimeMedia Ltd and Triton Tools are not eligible to enter this competition

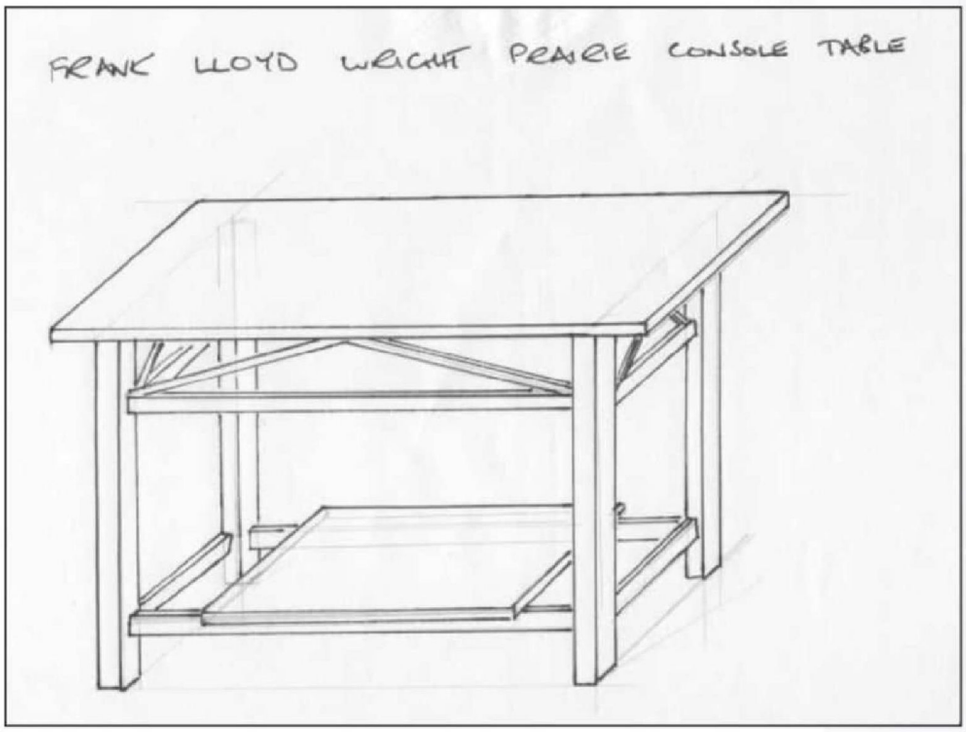


Fig.1 Frank Lloyd Wright Prairie console table

DOWN ON THE PRAIRIE

Martin Aplin makes a hall table inspired by the American Prairie Houses of Frank Lloyd Wright

I received a commission to make a small table in the style of Frank Lloyd Wright, but I have to admit this was met by a rather quizzical expression on my part.

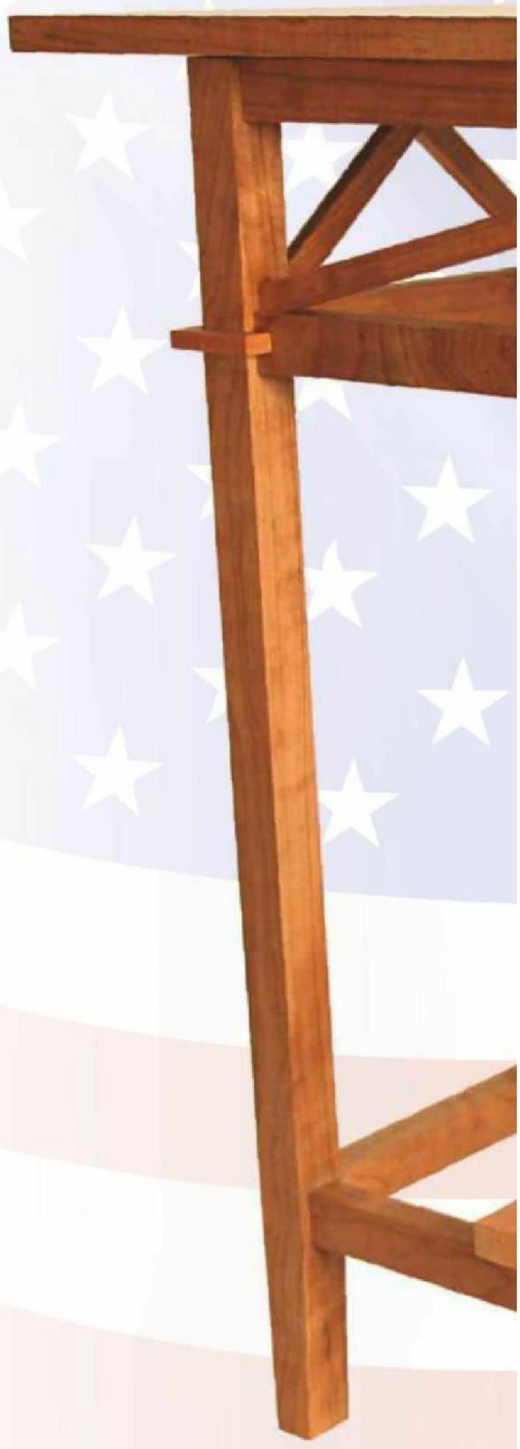
For those in the dark, Frank Lloyd Wright was an early 20th century American architect, probably best known for designing the Guggenheim Museum in New York, which was completed after his death, in 1959. That modernist style of design wasn't what the client had in mind, however; instead, they were referring to Lloyd Wright's much earlier work, namely domestic residences, which came to be known as Prairie Houses. We don't have any such houses here in the UK or Europe, but in the New World – America, Australia, and New Zealand particularly – the Lloyd Wright Prairie House style captured imaginations and would be copied and modified over and over.

There's a hint of the Victorian villa in the Prairie Houses, but they are typified more by being long, low buildings with shallow, sloping roofs, covered terraces and porches. They further differ from villas by being ostensibly open plan– arguably the first open-plan buildings.

1 Draw the table out full size on a sheet of faced hardboard to produce a rod which will aid in the setting out of joints

They can be differentiated from Modernist houses by virtue of their comfortable, almost stately interiors, and the style was often referred to as 'organic'.

While learning all of this was helpful, it still wasn't the 'steer' the client was looking for. Fortunately it turns out that Lloyd Wright was one of those architects who also designed the interiors of his buildings, right down to the




WW
PROJECT

furniture. And so, thankfully, there are many examples of Lloyd Wright-designed furniture to draw inspiration from. Like his houses, his furniture also seems to be a matter of long and low with shallow angles, clean in line, almost like Modernist furniture, only made using comfortable, warm timbers, such as cherry.

So, I needed to make an occasional table, probably in something that approximated cherry, echoing the styles seen in comfortable middle-class American houses in and around the 1920s. I just hoped I could deliver on the brief.

Architectural furniture

The nice thing about a small console or hall table like this is that it fits in well with the modern home, matching up well with contemporary furniture. You can see aspects of Lloyd Wright's style in the strong rectilinear lines of this table; the comparatively large overhang of the table-top and the shallow roof pitch-line is echoed in the angled rails fitted between the rails of the frame.

One feature I have seen on some items of Lloyd Wright furniture is what I refer to as the 'collars', around the legs at mid rail level. They are often fitted around the legs at lower rail level, but I thought this broke the line too much so decided not to fit them. I've also added more construction detail to the article as an encouragement for readers to attempt making the table themselves. It's quite straightforward but requires attention to detail, especially when fitting the leg decorative rails and collars.

2 Edge-joint the boards for the top with a rubbed joint. Apply glue to one edge, which then needs rubbing against the mating part

3 Cramp the boards together, alternating each side to equalise the cramping force

Timber choice

I chose American cherry as this was suggested earlier due to its warm look, the colour being a salmon pink when first cut but soon darkening to a nutty brown – a fascinating transformation. It also has an interesting and attractive grain and is quite easy to work, though it does have a habit of splitting.

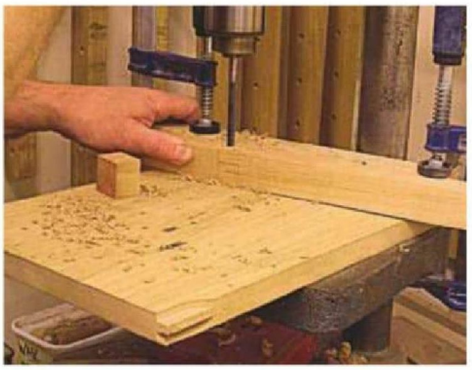
Cherry is quite expensive compared to, say, oak or ash, which I feel are too coarse-grained for such a light table as this. It is twice the price of oak or ash but as only about 1.5 cubic feet is needed for the table, the price was reasonable.

The problem with using cherry is that much of the sawn stock is only good on one face, with a fair amount of sapwood on the reverse. It's worth spending some time going through the stock and looking at each face in order to select the best boards and minimise waste.

Having transported the timber home, the first task I like to handle is passing the boards

4 Having planed the legs to size, clamp them together and mark positions for the joints

5 The positions for the mortises are clearly scribed out with a mortise gauge



6 Although the mortises are quite small, the bulk of the timber is removed with a drill

7 Cut the mortises to finished size using chisels. These will break into each other as they are cut into adjacent faces on the legs

8 Having cut the joints, glue the front and rear frames together, being careful to ensure squareness

through the planer/thicknesser, just enough to clean them up. This allows me to see the grain and any small defects, and I can plan where to cut the boards accordingly.

The first step is to draw the table full size on a piece of board to produce the rod; this enables you to check overall dimensions of the piece and is a valuable aid for setting out the joint positions.

The table-top & shelf...

... were made first, mainly so that after gluing-up it could be set aside while I worked on the table frame, allowing it to settle before finishing. Plane the boards, leaving them slightly oversize to allow for planing after gluing up, ensuring the edges of the board are truly square to the faces. Lay the boards flat and arrange for best grain pattern, remembering to keep the growth rings alternating to minimise the risk of cupping.

I jointed the boards with a simple rubbed joint, which means simply applying glue to one edge of a board, then rubbing the edge of the adjacent board against it to spread the glue. You soon feel more resistance to the movement as the glue is absorbed into the wood, causing suction which then pulls the boards together.

Cramp the boards together, making sure the faces are aligned. Alternate the cramps above and below the boards to equalise cramping force.

When the glue is dry, set aside and finish in stages. I prefer to plane and scrape to finished size over a period of days, allowing the stresses in the board to stabilise, giving myself the best chance of keeping the table-top perfectly flat.

Legs & rails

Next, it's time to tackle the legs, which are just lengths of cherry finished to 32mm square × 740mm long. Mark out the vertical positions of the mortises from the rod then scribe the mortises centrally on adjacent faces, the width of these being 8mm. Although the joints are quite small, I find it easier to remove the bulk of the waste using a pillar drill, cleaning up the joints with chisels. As the mortises are meant to be cut from adjacent faces, allow them to break into each other.

Having cut the joints, I finished the legs by tapering the inside faces of the lower legs, which adds a little visual interest. It's not a feature I've seen on other Lloyd Wright furniture, but my interpretation is flexible.

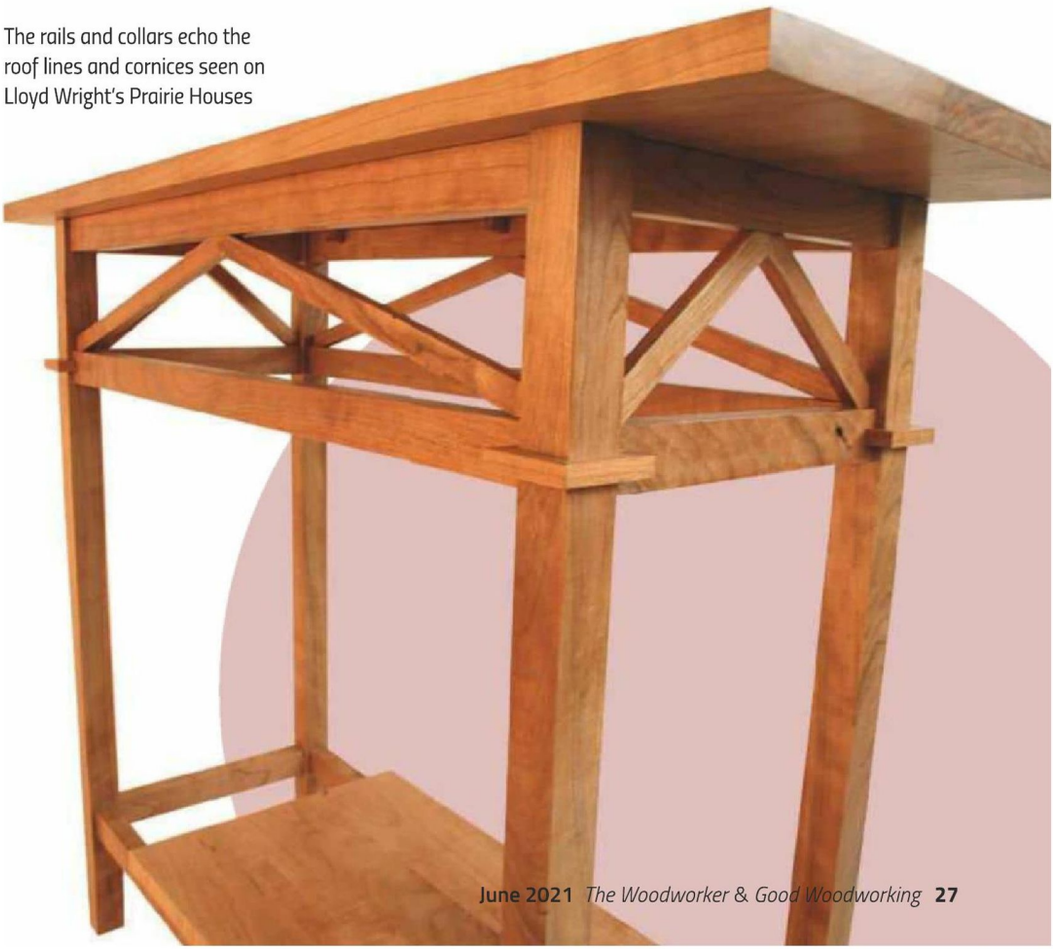
The main front and rear rails are all the same length and section, with the side rails also of the same section but obviously much shorter.

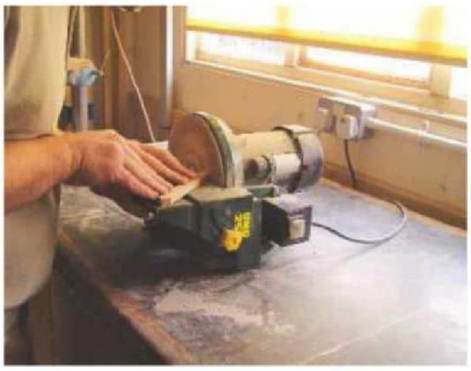
Next, mark out for the tenons, the distance between the shoulders on the front and back rails being 634mm and those on the side rails 216mm. Mark out the 20mm-long tenons centrally on the rails and carefully cut to size with a fine-cut saw, finishing to size with paring chisels.

Having cut the tenons, the ends need to be mitred or the rails will foul each other on assembly. With all the parts cut, assemble the frame dry, easing joints where necessary

9 Join the front and back rails together with end rails. Use a cramp across the diagonal to keep the frame square

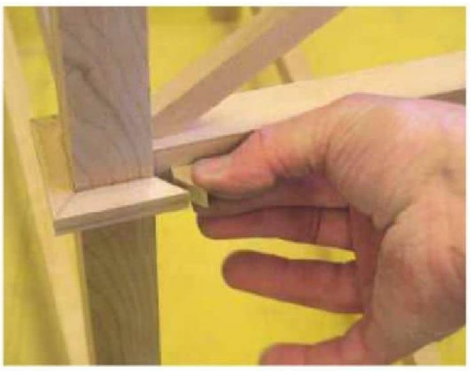
The rails and collars echo the roof lines and cornices seen on Lloyd Wright's Prairie Houses





10 Carefully sand the infill rails to length and to the correct angles. Make sure the table is set square to the sanding disc

11 The infill rails are inserted in pairs, and hold each other in place while the glue dries



12 Prepare the segments around the legs on the disc sander using a mitre fence to ensure the segments fit neatly together

13 The buttons to hold the table top are prepared from square sections of timber. A small pull saw makes a neat job of removing the waste

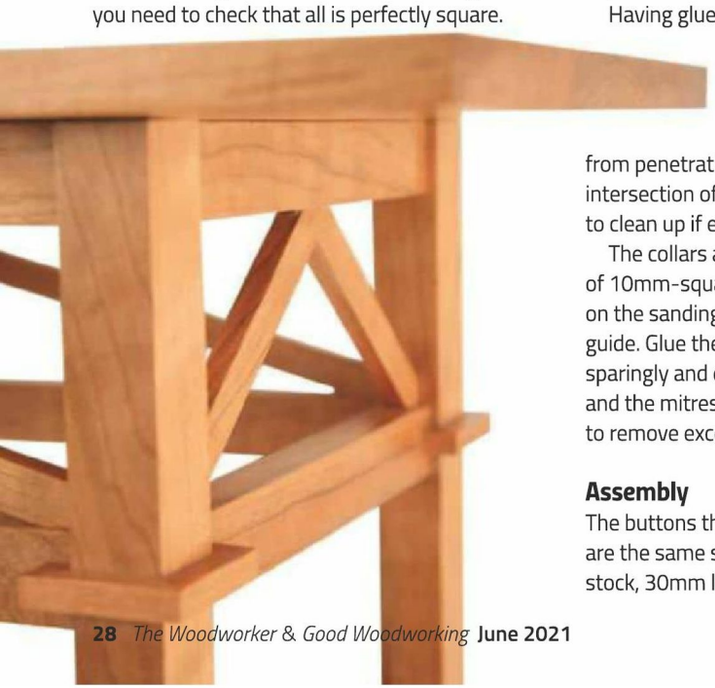
14 Having cut the step, part the button from the stock, then drill a countersunk screw hole through

15 The buttons fit into mortises cut into the inside faces of the rails. Eight are used to hold the table top

and cramping up to make sure all the joints pull up tight. Mark all the joints to ensure that when dismantled, they can be reassembled in the correct order.

Also mark the inside faces of all the top rails and the front and back lower rails as these have small mortises cut in their inside faces for the buttons; these will attach the top panel and shelf. The top front and back rails have three mortises each, the end top rails have one each, and the lower rails have two.

With all the rails cut and sanded smooth, the front and back frames can be glued, assembled and cramped, ensuring all is square and true. Once they are quite dry, these can be assembled together with the side rails. Again, you need to check that all is perfectly square.



Simple decoration

The decorative infill rails are strips of cherry, planed to 18 × 10mm. Having lightly marked the mid position of the upper rails, I found the easiest and most accurate way to form the double angles on the ends was to offer the over-length rails against the frame, judging by eye where they intersected with it and each other and marking them with a pencil.

I trimmed the rails roughly to shape and then carefully free-hand sanded the final shape using a disc sander, repeatedly checking the fit of the rails against all the mating surfaces, until they were just long enough to spring into place. This way they would hold each other in place as the glue dried.

Having glued the parts, be careful to remove any residue. I use PVA glue and if the excess isn't removed, it seals the surface, preventing the Danish oil I use for finishing from penetrating the timber. Also, with the intersection of all the pieces, it's very awkward to clean up if excess glue is allowed to dry.

The collars around the legs are small sections of 10mm-square cherry, with the mitres formed on the sanding disc, but this time using a mitre guide. Glue these in place, applying the glue sparingly and ensuring they are perfectly level and the mitres closely butted. Again, be careful to remove excess glue before it dries.

Assembly

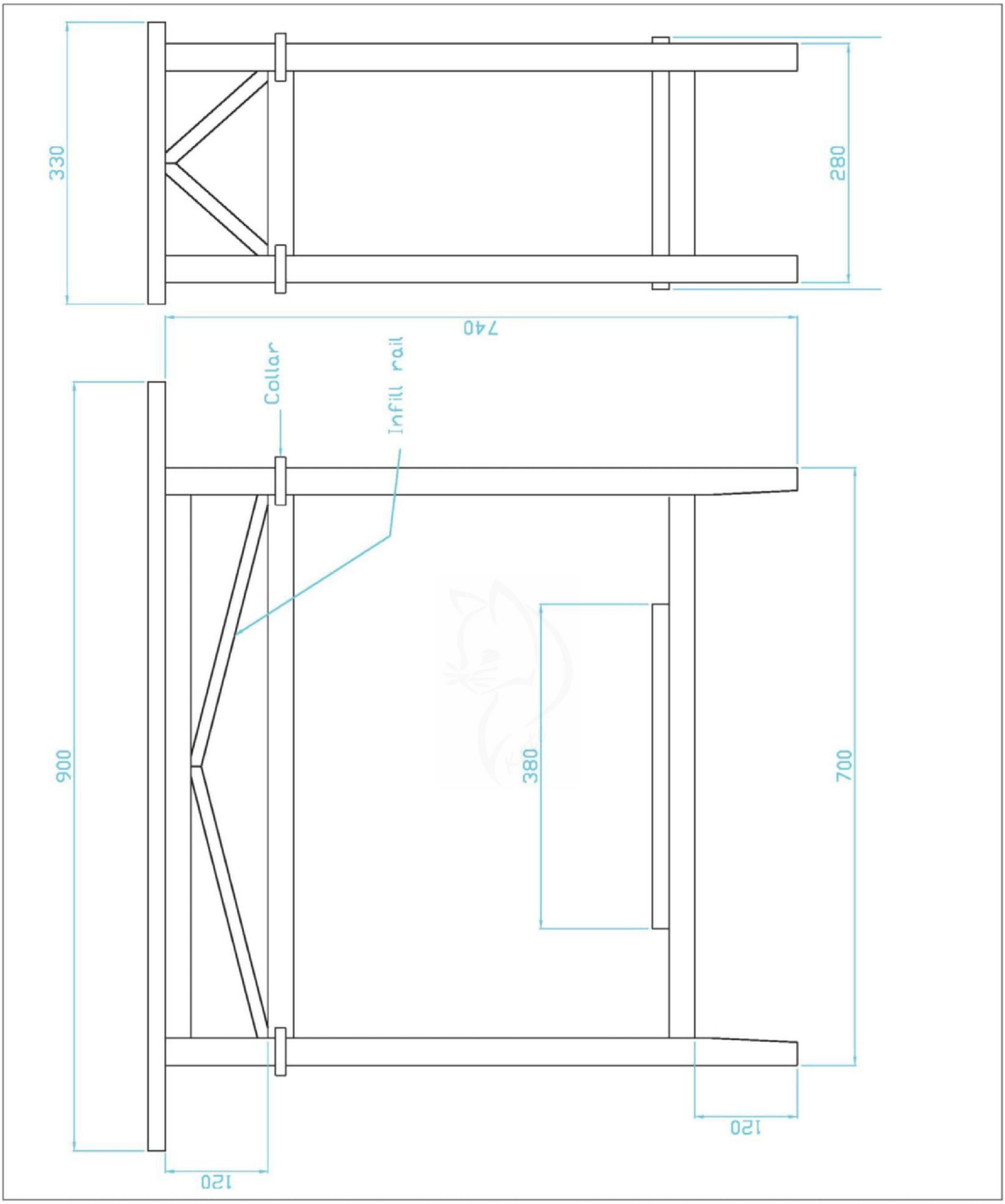
The buttons that attach the table-top and shelf are the same size, being cut from 12mm-square stock, 30mm long. Saw to shape and drill a countersunk hole through. To attach the table top, lay it face down on the bench, protecting it with a piece of thick cloth. Place the upturned frame on it and centralise before inserting the buttons in the mortises and fixing with screws.

Fixing the top using this method allows it to move against the frame, reducing the risk of damage as the timber moves. The top could be fixed with slotted metal brackets if preferred, however. The shelf will need to be clamped in place while the buttons are fitted.

With all the assembly complete, remove the table-top and shelf and apply the finish. I used three coats of Danish oil, de-nibbing between each and finishing with a good quality wax polish such as Briwax.

See overleaf for table plan, complete with dimensions and cutting list. The drawing gives the main dimensions for a well-proportioned table, but these could easily be adjusted if you wanted to make a wider version.

16 Attach the lower shelf using four buttons



CUTTING LIST

American cherry used for all table components. All dimensions in millimetres. Lengths of rails allows for joints. Collar rail cut as required

Table top	900 × 330 × 20	1 off	**Infill rails – front & back**	18 × 10 × 350	4 off
Shelf	380 × 295 × 20	1 off	**Infill rails – side**	18 × 10 × 180	4 off
Legs	32 × 32 × 740	4 off	**Collar**	10 × 10 × 60	1 off
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Pedal to the metal

Commissioned to make a steering wheel for a pedal car restoration project, **Peter Vivian** had to get creative in order to recreate the perfect circle

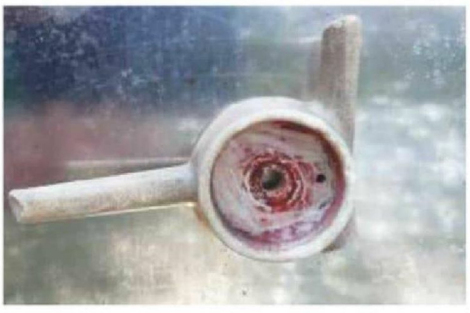
1 The full-size Moto-Lita steering wheel

My friend, who's a big motor sport fan, recently asked if I could make a steering wheel for a restoration project. I assumed he meant a full-sized one, but it turned out to be for a Tri-ang pedal car from the late '50s or early '60s, which he'd bought for his young grandson. This proud grandfather wanted to get him behind the wheel of his first car as soon as he could crawl! The project was in need of total restoration, but luckily I found a good online source selling spares for these miniature motors. The steering wheel was in desperate need of replacement, and sadly unavailable. Rather than try and replicate the original, I thought it might be fun to come up with a replica of one of the classic wood-rimmed steering wheels from Moto-Lita, which, despite the name, are made in the UK (**photo 1**).

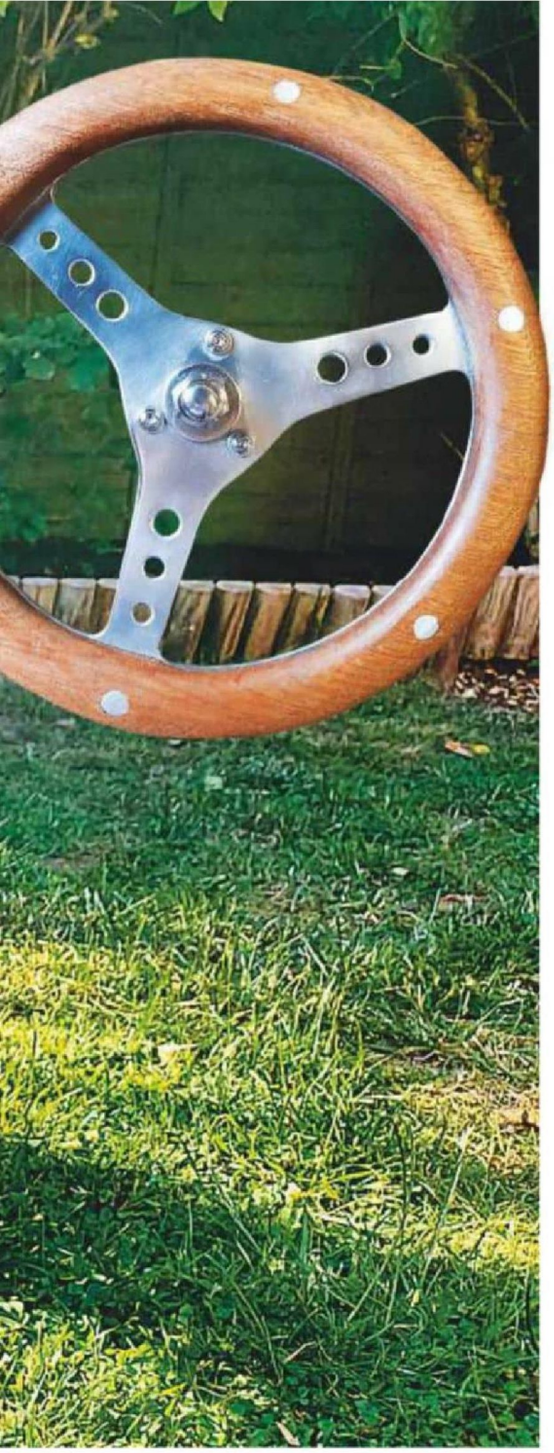
Unfortunately, there wasn't enough left of the original wheel to establish the diameter (**photo 2**), but we had a stroke of luck finding someone with a similar pedal car that was in slightly better shape (**photo 3**). The diameter was 170mm, so this gave me a starting point for the design (**photo 4**). The drawing was fixed to the 3mm aluminium with Spraymount and cut out with my jigsaw, using a fine metal cutting blade. I set the pendulum motion on position 1 of 3, and progress was a little slow – any higher and things would get 'interesting'! (**photo 5**).

Spinning the discs

As careful as I was, it was inevitable that I wouldn't be able to cut a perfect circle, so I clamped a scrap piece of MDF to the base



2 There wasn't enough left of the original wheel to establish the diameter



of my disc sander, drilled a hole in the centre of the aluminium and rotated it around a screw, which passed through the disc and into the MDF. This meant that the lowest part of the 'circle' was therefore in contact with the abrasive. Slowly rotating the aluminium against the revolving disc sander meant that I was able to cut the desired perfect circle (**photo 6**).

Turning full circle

The inner circle wasn't going to be as easy to resolve, however, so I started on the two wooden rings. I had a piece of mahogany to hand, which was wide enough to allow me to make two out of a single piece. I cut two slices allowing plenty of excess thickness and, using my ancient homemade circle cutter (**photo 7**), I cut two circles around 180mm in diameter and, after mounting on a faceplate, turned them to the correct diameter on my lathe. Marking the inner diameter and centreline, I turned the rings to a semi-circular or 'D' profile. Next, I temporarily attached them to the aluminium with masking tape and scribed the inner line, then followed

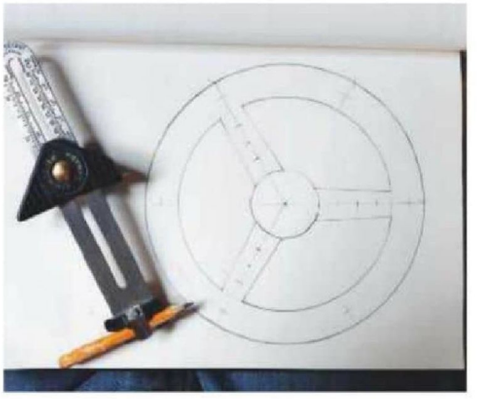
3 The pedal car was in pretty bad condition too

the slightly tedious hand filing to match the wooden rings. As I'd cut as close to the line as possible, I didn't have too much to do.

Sticky situations

I decided not to assemble it with epoxy as I could potentially end up in a sticky mess with the inevitable cleanup, so I drilled six equally spaced holes around the rim and countersunk them on the pillar drill, ensuring the depth stop was set to make sure they were all identical. The depth was set so that, when the screw was inserted, the bottom of the slot was level with the wood. I used some aluminium screws left over from another project; these were easier to file down in order to remove the slotted heads and would resemble the rivets used on the full-sized ones (**photo 8**). Aluminium wood screws are incredibly difficult to find and I only tracked down one online supplier who could help, so if you're planning to make something similar, you might choose to go down the sticky route!

I had previously sanded the aluminium down to 1,200 grit via 400 and 600 used wet, finishing off by buffing on the lathe along with a good metal polish. I carried out final



4 The wheel diameter was 170mm, which gave me a starting point for the design

sanding of the wood down to 400 grit used dry, followed by two coats of Shellac sanding sealer, which I sanded with some worn 400 grit used dry to remove the 'nibs'. Several coats of Danish oil followed, which I applied with a soft cloth, wiping off the excess after 10 minutes with a clean cloth to prevent another sticky mess. This left a nice soft satin finish, which can be 'topped' up unlike the real ones supplied with a high gloss lacquer finish. In 30 years of owning one, I've had to return it to the manufacturer twice to be refinished!

Chequered flag in sight

With the finish line in sight, I proceeded to tap a 6mm thread on the original steering column and secured it with a 6mm stainless steel dome nut (**photo 9**). To prevent it rotating on the column, I added three 3mm stainless button head set screws held in place with Nyloc nuts. I was pleased with the end result as was my friend, who kindly said it had set the standard for the remainder of the restoration.

5 Ready to start jigsawing using a fine metal cutting blade

6 The perfect circle was achieved by slowly rotating the aluminium against the revolving disc sander

7 Using the ancient circle cutter to cut one of two 180mm circles

8 Getting ready to put the aluminium screws in place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WW PROFILE

FUNCTIONAL ART IN WOOD

'Roundabout' table, showing the Tamo ash leaves installed

The completed 'Roundabout' table top

Entirely self-taught and deeply inspired by form and function, **Brian A. Hubel** believes a piece of furniture should stand on its own merit. We find out more about this maker and his creative processes

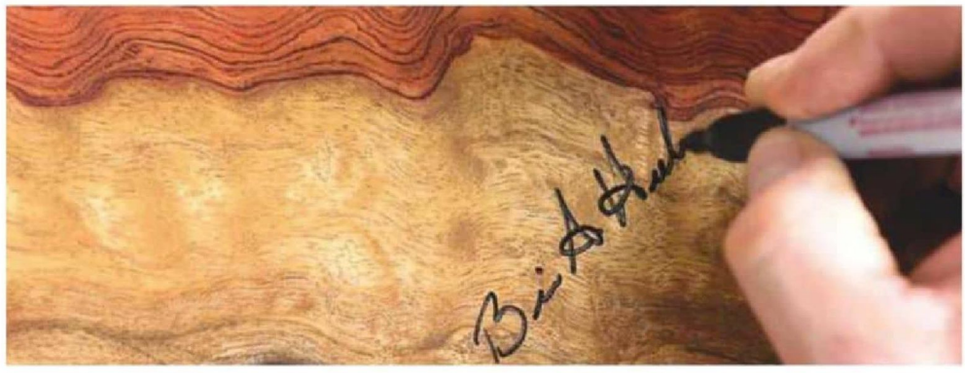
Brian A. Hubel isn't your average furniture maker. Like many, he initially discovered woodworking at an early age, recalling being shown around his grandfather's woodshed and a fascination taking hold early on. Having a deep-rooted appreciation for the beauty of nature, as well as an interest in taking things apart and figuring out how they worked, all helped to instil a passion for woodworking and the medium in general. This wasn't fully realised, however, until his 17th birthday, when his mother gifted him a table saw. This was the catalyst for opening up a whole new creative outlet, and 30 years on, Brian is still exploring.

Growing up in Colorado, despite his grandfather's influence early on, Brian didn't initially set out to become a professional woodworker, his interests instead lying in forensics. Focused on a career in criminalistics, he went on to study for degrees in chemistry, biology and criminal justice, also taking on the odd woodworking job to help towards his tuition fees. Doing so gave Brian the opportunity to develop his creative ability, and as well as picking up tips and techniques along the way, he learnt by trial and error, ultimately teaching himself as he went along. So, when it came to graduation, and soon realising that his future lay in the workshop rather than lab, Brian made the decision to start making furniture professionally – and the rest, as they say, is history.

Japanese joinery

Looking at the incredible skill and craftsmanship that goes into each piece Brian creates, it's hard to believe that this furniture maker is 100% self-taught – he explains it from his perspective: "I avoid a lot of external influences, so I'm not familiar with much of the furniture work both past and present." In a sense, then, he relies on natural instinct, drawing on themes he encounters in every day life. The one maker he does admire, however, is leading studio furniture designer Jere Osgood, who studied under world-renowned Danish furniture designer and maker, Tage Frid. The fact that Brian cites Osgood's work as a source of inspiration translates in terms of subtle similarities in style, while the distinctive and unique design elements Brian incorporates help to tie his whole body of work together.

Looking through his portfolio of work reveals

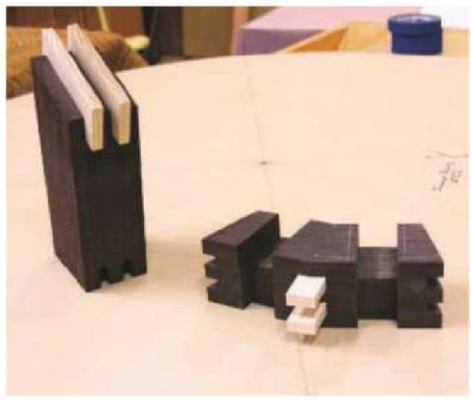


Brian adding his signature maker's mark

Close-up of spline joinery used for the 'Roundabout' table's segmented inner and outer rings

a subtle nod towards Asian influence in terms of line and shape, and Brian confirms that this style particularly appeals to him. Although he tries to not overthink the design and making process, the forms seem to reveal themselves organically, as he so eloquently describes: "There's always an aesthetic and structural evolution, which allows each piece a beautiful and elegant freedom." Driven by form and function, this is an ethos that underpins every piece he makes.

Also a great admirer of Japanese architecture and joinery techniques, Brian confesses to having a deep respect for the craftsmanship behind its making and execution: "I've not studied Japanese construction and I'm by no means educated on the subject, but I know what I like. I've always been



'Roundabout' table's segmented outer ring assembly

fond of Japanese joinery and I suppose you could say that sparked my interest in unusual methods. While not traditionally Japanese, mine is reminiscent of that style." As a result, Brian enjoys experimenting with alternative methods of joinery. Elevating these and giving them prominence allows the viewer to gain an insight into the technical mastery that goes into the creation of such details.

He reiterates at this point – and you'd be forgiven for forgetting this – that he's never taken a woodworking class – except in junior high school – or an apprenticeship of any form. Commenting that he doesn't necessarily condone this as being the best way to learn, it's a route that's certainly worked well for Brian, as he explains: "[Teaching myself the skills required] provided shelter from the influences of others, and doing so, I think, has allowed me to view things a little differently."

The most precious thing on earth

Unsurprisingly, Brian has a deep appreciation for wood in terms of its natural beauty, strengths and imperfections, which differ according to individual species. This self-confessed "lumber addict" chooses to collect and hoard this natural material as if it were the most precious thing on earth. In fact, Brian's 400sq.ft. storage unit is absolutely full of lumber, some of the pieces having been in his collection for 20 years, finding them "simply too precious

'Passage in Time' – quartersawn zebrawood legs with maple burl face and ebony accents – 1,778mm high × 533mm wide × 279mm dia.

to use." Each and every one is hand-selected owing to a specific characteristic that makes it unique in some way, shape or form: "While it's difficult for me to choose a favourite species, I've always had a certain fondness for Claro walnut, large lengths of which are ideal for my 'Tandem' benches," he tells us.

Workshop sanctuary

For someone whose workshop is their 'sanctuary', it's no surprise that Brian likes to keep this space very organised, clean and full of the tools he loves to use, his favourite being a 1971 Tannewitz bandsaw. Brian describes this faithful workhorse as "a wonderful machine; an absolute joy to use," stating that he couldn't wear it out, even if he tried. One piece of kit that is missing, however, is a jointer, and as a result, Brian joints every board by hand for glue-ups, relying heavily on his Lie-Nielsen No.8 plane. Small but well equipped, there's scope to add a second storey to this space, expanding the business further and giving Brian the option to, literally, take his furniture making to the next level.

An evolving process

In terms of the custom commission process behind his pieces, Brian explains that this begins with an initial consultation and design idea. Once discussed and agreed with the client, he then moves on to completing a series of rough sketches, which allow him to get a feel for proportions: "Once I start building, everything is subject to change

'Show Tyme' – a cherry case with sliding doors, mahogany and Claro walnut panels and Claro walnut base – 762mm high × 1,625mm wide × 444mm dia.

'Slim' table – salvaged Russian olive case with Claro walnut drawers, ebonised ash legs and ebony pulls – 914mm high × 1,320mm high × 304mm dia.

'Solide' table – waterfall bubinga top slab with cherry base and ebony accents – 736mm high × 1,117mm wide × 2,438mm long

and often does; it's an evolving process, from beginning to end," he admits.

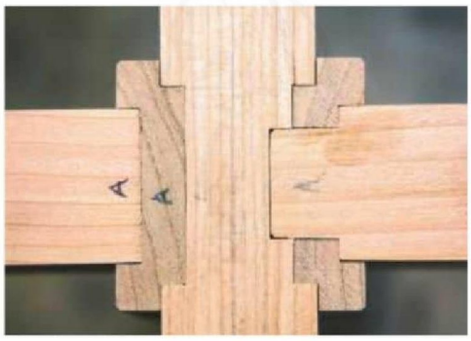
When it comes to traditional joinery, Brian relies on solid, tight construction, which is evident in the design details he chooses to expose. When all's said and done, however, this maker's commitment and dedication to fine craftsmanship is translated via the one-of-a-kind pieces he creates, which are both timeless and functional.

Taking all this into account, it's no surprise to hear that Brian's talents are in demand, and having recently completed a two-year commission, which happened to include his "most challenging project to date" – a dining table and eight chairs, plus two benches and two clocks – he admits to being very pleased, and understandably proud, of the end result.

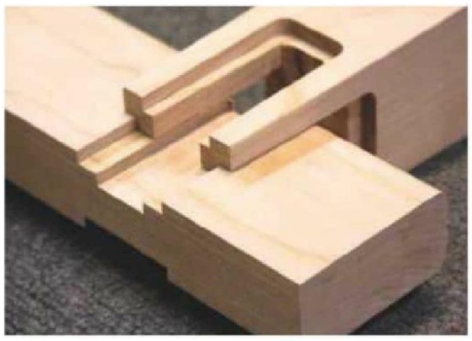
To give a further insight into another stage of the process, when it comes to delivering a project to the client, this will, typically, involve the culmination of six weeks' work, from planning to final execution. The sheer quality of craftsmanship speaks for itself, but the fact he consistently wins numerous awards, plus a fair few 'Best in Show' commendations, all helps to affirm this. In addition to these, in 2012, Brian was awarded first place in the 'From the Earth' competition in Tri-Lakes, Colorado, and in 2015, received both second and third place in the San Diego 'Design in Wood Exhibition'. There's no doubt that this list of achievements will continue to grow as Brian further pushes the envelope, refining technical processes and adding to his considerable arsenal of woodworking knowledge.

Hands-on approach

Being able to produce such pleasing designs, the fruits of many years' hard labour, Brian is often reminded of the path his furniture making career took – one which, luckily, has really paid off. Despite numerous successes, he admits there's still much to learn,



Top view of the leg/apron intersection on the 'Solide' dining table. A rather complicated connection



Unassembled 'Solide' joinery

'Styx' – a tall, cherry storage cabinet with ample storage – door panels in quartersawn sycamore with Amboyna burl door pulls. This piece can function equally well as a china cabinet, wine cabinet, or even in the bedroom for clothing

'Tripod' – a fun, flexible side table capable of finding a use in nearly every room of the house. These tables are highly customisable in terms of size and materials. Shown here with either a bubinga or Claro walnut top, supported by cherry legs and ebony wedges

'Two's Company' desk – English walnut case with black walnut legs and ebony pulls – 762mm high × 2,133mm wide × 508mm dia.

'Freelance' sculptural chairs, with and without arm rests, originally designed to complement the 'Roundabout' dining table

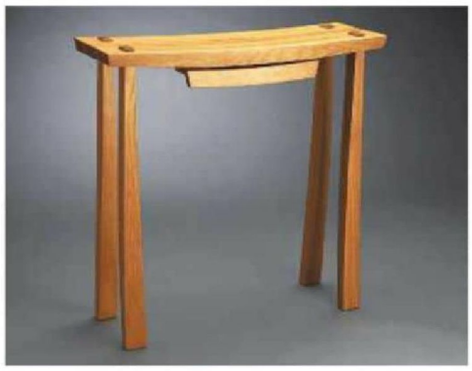
so he continues to challenge himself, discovering new techniques and methods, at times failing, and having to pick himself back up. This is all part of the hands-on approach he relies on, however, and in Brian's eyes, it really is the best way to learn.

Owing, perhaps, to the fact he didn't choose the typical route, Brian finds he has a desire to pass on and share his skills with other budding furniture makers, which he does by teaching a series of fine furniture making classes at the Colorado Springs Woodcraft store. From fundamentals to advanced, he's developed several series of classes that delve deep into the disciplined art of fine furniture making, as he explains: "My goal is to help students safely, creatively and accurately build high-quality custom furniture." Class sizes are small – a maximum of six students – with ages ranging from 14 upwards. He's also taught disabled veterans, husband-wife teams and father-son duos.

Believing that learning is a lifelong process and one that never stops, Brian finds teaching first time students especially rewarding, finding their approach to furniture "absolutely amazing." Having little to no woodworking background means they'll often look at things a little differently than your average experienced woodworker, which, according to Brian, can be very eye opening. "But at the end of the day," he says, "I want students to think and design for themselves," and this is very much encouraged. Taking all this into account, Brian's love of teaching cannot be denied and the passion he has for woodworking is passed on to each and every one of his students.

As we round up the interview, I suggest we stand back and evaluate the furniture making industry as a whole. In response, Brian says he's confident that the market for handmade items is on the rise, especially with more people working from home in response to the recent pandemic. Indeed, there certainly seems to be a growing desire and appreciation for custom designed, hand-crafted furniture, and for makers like Brian, this provides the impetus he needs to keep creating and supplying superior quality pieces. And luckily for his clients, both present, past and future, that hunger shows no sign of waning any time soon.

'Bogen' – a sleek, space-saving coffee table, which can also serve as seating for an entryway or end of a bed. Shown here with a white oak top and sculptural purpleheart base



'Sway' – custom designed to serve as a pedestal for a beautiful art sculpture. The top sways slightly downward to match the lines and shapes of the artwork to be displayed. Made in solid, rift-sawn white oak with a single suspended drawer

FURTHER INFORMATION

To see more examples of Brian's work and a range of videos detailing his design processes, visit his website: **www.brianhubel.com**

'Sterling' cabinet – 457mm wide × 1,219mm high × 305mm deep – solid orchard salvaged Claro walnut with ebonised ash pulls and legs. Features interior single adjustable shelf; all drawers are dovetailed and feature concealed hinges – finished with a hand-rubbed oil varnish blend

'Tsunami' – the newest addition to Brian's bench collection, shown here in Claro walnut

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WOODWORKER'S ENCYCLOPAEDIA PART 27

Peter Bishop has got a really mixed bag for us this month – everything from stink wood to parquetry and many things in between. He clears the Os and makes a good start into the Ps

Odour

I've mentioned the fact we can use the 'gross features' of wood to help with identification, and odour is one of them. With regular use, recognition of some timbers can be made simply by their smell or the reaction we might have to them. Some are really pungent, like cedar with its peppery smell, or teak with a musky odour. There are other tropical timbers simply called 'stink wood' as they have an unpleasant aroma when freshly cut. I suspect we can all recognise someone working with softwood such as pine; there's a distinctive, resinous smell. Odour is also part of the fungi identification process but probably only sniff to see if that mouldy smell is present.

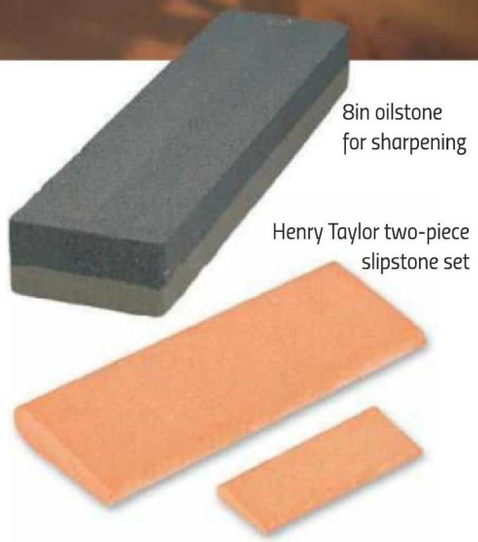
Off the saw

A simple, sawyer's phrase to describe the size of freshly sawn lumber as it comes off the conversion saw rig.

Ogee

A very common edge moulding that's applied to skirtings and architraves. If you're trying to match new into old, take care as there are lots of different sizes and variations with this pattern on the market, many of which can be found in DIY sheds and timber merchants.

Softwood timber ogee architrave – 25 × 75mm



8in oilstone for sharpening

Henry Taylor two-piece slipstone set

Oilstones &/or slipstones

These are used to sharpen our chisels, planer blades and other tools with edges. All will be made and shaped from solid, naturally abrasive stones or be a manufactured compound comprising of various materials. We tend to think of 'oilstones' as larger, rectangular blocks with two grades of cutting material, one each side. 'Slipstones' are smaller and shaped to reach into the tighter curves and rounds, etc. All these types of sharpening stones will need oil or water to help lubricate and remove the waste produced. In addition to these natural and compound stones, we can also find some with diamond chip faces. The small particles of diamond are attached to a backing and will be available in a variety of grades. Diamond sharpeners can usually be used without a lubricant.

Old Woman's Tooth router plane

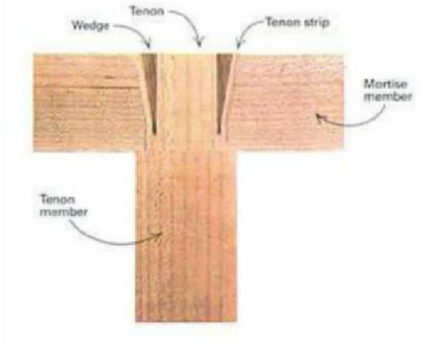
Thos Ibbotson & Co Old Woman's Tooth router plane

Old Woman's Tooth

This is a rather derogatory name for the original tool that was the predecessor to our modern day router. It's a single-toothed tool, with a flat face, used for cutting trenches and grooves. The really old ones will have wooden bodies and those of a little later date might be in cast metal. One assumes that as the powered router was developed, the similarity to a single point cutting tool decided what it would be called.

Open grain

A description of woods, which have wide growth rings rather than narrow, tight ones.



A wedged mortise & tenon joint

Open mortise

A simple open or through mortise into which the tenon is fitted and then wedged to hold it in place. The wedges will be driven into the end-grain to expand the tenon. To make it even more secure, the outer ends of the mortise can be tapered so that the tenon can be spread into this wider width as the wedges are hammered tight. Another example of this type of joint will be when the tenon protrudes well beyond the outer face and this is holed to take a wedge.

Overall

A term we might use to describe the distance between two points that we need to cover or span. For example, we might say a piece with tenons each end is 300mm overall. This will be including the tenons and not between 'the shoulders'.

Overlay

A thin covering of some form. We might use a strip flooring to overlay the existing, or perhaps a thin strip to cover a defect.

Ovolo

The other common moulding that is so often found on edges of skirtings and architraves. Once more, take care if you're trying to match new to old.

Ovolo moulding in sapele

Packing

Anything we might use to pack out or fill a gap, make solid or level off.

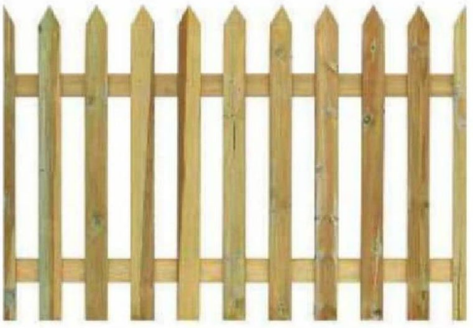
IRWIN 165mm 8tpi pad saw

Pad saw or keyhole saw

We talked about the pad saw when describing a keyhole saw. They're basically the same thing; a narrow-bladed saw with a small handle.

Palings

Narrow, regular sized pieces of wood attached to arris rails to form fencing. They may be simple or fancy shaped at their top end. A single is called a 'pale' and, once they are fitted as a whole, a 'picket fence'.



Pointed top palisade fencing

Palisade

This is a fence made up of palings or round stakes with pointed ends. A name often employed to describe the outer wall of a wooden fort.

1,200 × 1,200mm wooden pallet

Pallet

Any flat, open-boarded structure that can be used to stack things on and be portable. The mass-produced ones are made from lower grade timbers and fixed together using a nail gun and ring shanked nails, which are very difficult to remove! Usually designed to be moved with a fork lift vehicle or something similar.

Panel & panelling

We'd generally refer to any thin, solid piece held within a frame as being a panel and, if more than one, panelling. Fencing panels are the complete thing, frames and all, and 'panel boards' is an alternative name for sheet materials.

15mm steel panel pins

Panel pins

Another member of the nail family, these will be made from steel, brass or copper, and derivatives thereof. The shortest of these I use is around ⅜in long, say 10mm, ranging up to around 1in, say 25mm. Special longer or thinner ones are available if you have a use for them. Panel pins are usually knocked flush or below the face of the piece they are driven into.

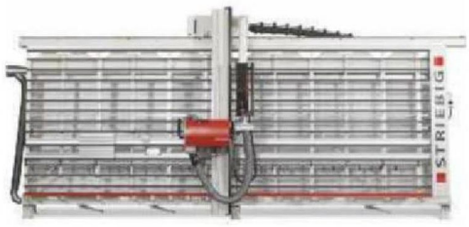
Logosol PH365 panel planer

Panel planer

Panel planers, as the name implies, should be able to plane fairly wide surfaces as they pass through the machine. The opposite of a surface planer, a workpiece passes underneath the cutting block and is pulled/pushed through with a feed mechanism. You can't easily straighten stuff out on one of these machines; you can on

a surfacer. The combination 'over and under' machines are probably best suited to the smaller workshop.

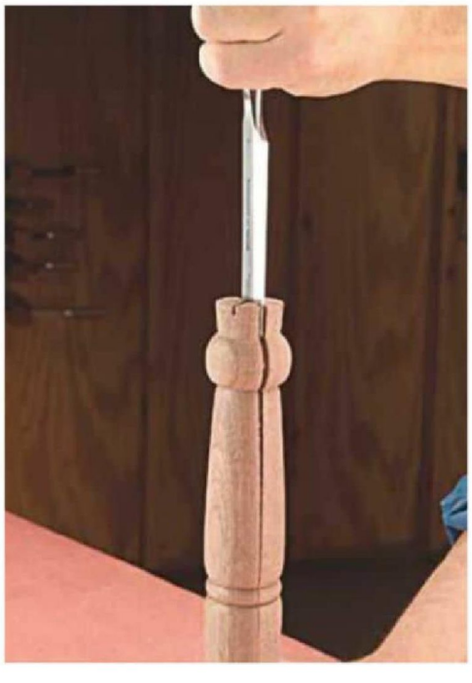
Martin T60C panel saw



Striebig Standard S wall-mounted panel saw

Panel saw

We'll come across two types of panel saws: the first is a vertical, wall-mounted machine and the second a stand-alone circular saw bench with an enlarged working table. If you are tight for space, then the first is great but if you have loads of room, the second is probably best. These machines are mainly used to cut sheet materials down into smaller sizes. The vertical ones will have a saw cutting head fitted to adjustable rails, which allow multi-directional cuts to be made. The larger, stand-alone saws have a floating bed that supports the panel as it is being pushed through the saw. You can also get jig systems that will transform your hand-held circular saw into a panel saw. Most of the larger machines are used in high production environments and are too big for us simple woodworkers.



A selection of UK paring chisels

Paper joints

The paper joint is mainly used in woodturning. We use it to make a temporary joint that can easily be broken apart later on. Using a water-based glue ensures it can be easily cleaned off.

PAR

This is the abbreviation for 'planed all round', which simply describes wood that has had all four surfaces planed. This doesn't necessarily mean that the wood has been planed square, but one would hope so! If we're describing stuff that is, for sure, planed square all round, it should be PSE – look out for this later on in the series.

Using the tip of a sharp chisel to separate a paper joint before gently tapping the chisel with a mallet. The paper will begin to split, leaving a little on each half of the joint. Use the chisel as a wedge rather than a lever. As the joint opens, you can complete the separation by pulling on the parts by hand
Photographs courtesy of **www.rockler.com**

Narex paring chisel set from Workshop Heaven

Paring chisels

Paring chisels are for use by hand and should not be clouted with a mallet or, worse still, a hammer! These chisels come in either bevel- or straight-edged versions and are usually fairly long to allow the user to get a bit of leverage behind them.

Parquet block flooring

Parquet flooring

This is a type of block flooring using thin, regular sized pieces of wood laid in geometric patterns. It is extremely hard wearing and therefore ideal for domestic or commercial flooring applications.

Making a strong geometric pattern more dramatic by outlining parquetry panels with coloured epoxy resin
Photograph courtesy of **www.finewoodworking.com**

Parquetry

Parquetry refers to the use of wood to make geometric patterns; this is where the flooring gets its name from. Most parquetry applications are used for producing very decorative tops, which are made up using a variety of different woods.

NEXT MONTH

In the next instalment, Peter gets stuck into the Ps, and looks at terms including patina, pie crust top and peen

The chocolate cupboard

Prompted by an article in *The Woodworker* of October 1934, **Robin Gates** is moved to measure the years in sideboards

One of the delights of delving into *The Woodworker* archives is turning up the many informative histories of items of furniture, which have been published down the years. And what an impressive piece this Elizabethan court cupboard is, gracing the first page of 'The story of the sideboard' from October 1934. With its boldly carved door panels, frieze and bulbous turnings it has such commanding presence, as though some stern-faced Lord had entered the room, and we'd better sit up straight and take our elbows off the table or face reprimand.

Yet beneath the ornamentation this is a highly practical piece of furniture, with cavernous four-square space below while the cupboard above, tapering to the sides, strikes a useful balance between storage and the working surface of the top. Just such a luxuriantly carved court cupboard, dated 1640, is one of the chief attractions of The Old House in High Town, Hereford, where, before the COVID pandemic, it had been a favourite diversion from the business of the day to lose myself among the black oak timbers and white panels of wattle-and-daub. I look forward to renewing my acquaintance at the earliest opportunity.

Now I'm thinking that my own history could be told as meaningfully in sideboards as in years, beginning where this article ends with its critical appraisal of 'the Victorian efforts... the heavy, tomb-like structures, beautifully made, but too respectably dismal to please present day taste.' That sounds like the sideboard which stood in my paternal grandparents' living room in Portsmouth and in which, aged two or three, I was urged to search for the chocolate which had been hidden in anticipation of my arrival. Heavy and dismal it may have been, but that sideboard sparked my interest in antique furniture. For 60 years, I've been opening old cupboard doors searching hopefully for the chocolate!

WOODWORKER

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THE STORY OF THE SIDEBOARD

ITS ORIGIN AND DEVELOPMENT

WHEN one comes to think of it, the sideboard is a fairly obvious piece of furniture. Its accommodation of drawers and cupboards is a necessity in a dining room just as its large top is desirable to hold the various pieces of table furniture and other items. This necessity has always existed since men have been in the habit of meeting together in one room for meals, and so since early times we find a species of sideboard, though it has been called by various other names in its long history.

As might be expected, it has undergone many changes, its form at any one period being the result of various circumstances; the wood available, the skill of the craftsmen, the general conditions of life, and later the sway of fashion. The last point applies in particular to the 18th century when there was a wide choice of wood, the craft of cabinet work as distinct from joinery had become established, and life was altogether on a less troublous footing. We thus find that it was in the earlier periods that the sideboard mostly reflected the conditions of life, for men made things out of their necessity.

Its Origins.—We have no need to go back much farther than the early 16th century to see what the early sideboard was like. That they did exist there is no doubt, but they were probably of the crudest form, being just so many boards pegged together in box-like formation with possibly a traceried opening pierced in the front to give ventilation. A late 15th or early 16th century cupboard exists at the present time in South Kensington Museum. It is typical of the kind in use, there being no attempt at framing, the whole thing consisting of channelled boards pegged together. Even the door is a solid piece of oak. It has the pierced openings, these being in the form of Gothic tracery, probably copied from a church window. In the same museum is a slightly later cupboard in which the craftsman had learnt the advantages of framing, for it is made up of four posts joined up with grooved rails in which panels are fitted.

FIG. 1.—THE COURT CUPBOARD OF ELIZABETHAN DAYS.

The Chest.—Such was the earliest form of "sideboard." At this point, however, we come across another structure which also had its effect on the history with which we are dealing. We refer to the chest. This was probably the oldest piece of furniture, and after passing through the stages of solid pegged boards, had by the beginning of the 16th century become the framed-up structure with which we are all familiar. It probably occurred to someone that, by lengthening the posts to form legs, a very useful piece of furniture would result; it would retain all the useful accommodation of the chest, and would bring its top up to an altogether more serviceable height.

The Buffet.—So came the buffet or side table, an example of which is given at A, Fig. 2. This dates from the early years of the 16th century, and it is interesting to consider the kind of room in which it would have stood. In the first place it should be realised that, apart from towns, houses were few and far between. The swineherd had his hovel, and the labourers their primitive dwellings, but the only buildings in which furniture could possibly be used were the halls and

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Sideboard tells a story

The contents of the grandparents' sideboards often find their way into those of the next generation, and on it goes. Oddments of 'best' china and glass, a silver-plated teapot, war medals, the wedding photos, honeymoon souvenirs and engraved tankards. In a small home a sideboard takes on the role of an attic, a museum of treasured family artefacts, or in the case of the sideboard which stood in the bedroom I shared with my brother in the 1960s, a hybrid of workshop and laboratory. It was a 'Utility' piece in light oak, built to stringent World War II regulations, and strongly redolent of our hobbies – microscopy, photography and model-making. Opening a door or drawer would release an overpowering waft of botanical fixative, developer or polystyrene cement. The top, a riot of colourful stains arising from chemical spillages, scored by scalpels and littered with plant and balsa wood offcuts, was our workbench. By contrast, I recall sitting awkwardly at tea in the posh residence of a school friend where the wax-polished sideboard – Sheraton, I'm sure – retained its original purpose: the baize-lined cutlery drawer displayed regiments of polished cutlery, while cut glass decanters glittered on the top.

Today we simply don't have the floor space for a sideboard, although a broken-down example bought for a tenner at a charity shop did serve briefly as my tool store in the shed. I'd bought it chiefly for the wood. The top, doors, drawers and panels gave up an assortment of reusable boards in well-seasoned oak and mahogany, not to mention a cache of good quality hardware including dozens of desirable Robertson socket screws. If you're looking at old furniture as an inexpensive source of materials, a word of warning – do check it isn't a valuable antique before getting stuck in with the hammer and chisel! In the meantime, which items of furniture would best represent your own life history?

Robert Sorby

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A WOODEN REVOLUTION

The first bicycles constructed from wood, in around 1817, bear little resemblance to the sleek, modern versions we see today. **Paul Greer** takes us on an educational ride

Though long popular with makers of children's balance bicycles, wood is rarely associated with all-age pedal cycles. Yet it constituted the main material of their predecessors – often termed velocipedes, dandy horses, or hobby horses – which appeared early in the 19th century. Recent improvements in fabrication – and adhesives specifically – have allowed wood to be elevated to not only a feasible option, but, increasingly, a very desirable and trendy one.

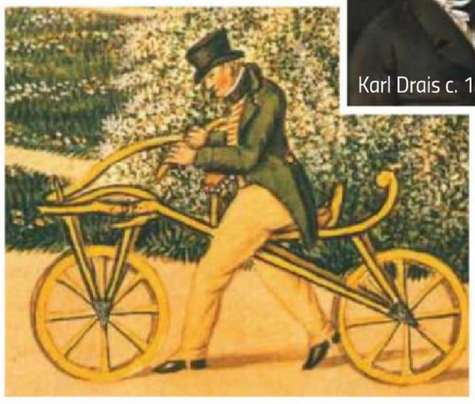
From draisienne' to 'boneshaker'

The first two-wheeled, rider-propelled machine was designed by a German – Baron Karl von Drais – who, in 1817, rode it for nine miles, and the following year exhibited it in Paris. His creation – known as a 'draisienne' – was made of wood, but lacked pedals, and progress relied on the rider 'paddling' it with alternate feet. It was another 50 years, however, before a pedal-powered version was built in Paris, in the late 1860s, when 'velocipede' also gave way to the term 'bicycle'. With wood-spoked wheels and iron rims, it was deservedly known as a 'boneshaker', and a variety of examples still exist to this day.

Surprisingly, bamboo bicycles were introduced to the public as early as the 1890s, and with a patent soon granted, their future seemed assured. The rapid development of steel and aluminium in the early 20th century, however, meant that few – if any – went on to enjoy mass-production.

In terms of the cycle industry today, due to burgeoning environmental awareness in recent decades and the increasing influence of the green movement, bike companies, old and new, have been forced to give wood a second look, especially as the appetite for such bikes appears strong at both ends of the market.

Karl Drais c. 1820



Karl von Drais on his original Laufmaschine, the earliest two-wheeler, or hobbyhorse, in 1819

'Boneshaker' bicycle, on display at Fermanagh County Museum, located within historic Enniskillen Castle, Northern Ireland

Easy Rider Lite balance bike

First 'Draisienne' bicycle made by Karl-Friedrich von Sauerbrunn (1817)

Each Materia bike frame is hand-drawn and unique due to the wood grain and pattern. The frame takes between 60-70 hours to produce, followed by a 20-hour-long polishing process, done by hand. Five coats of yacht varnish ensure the bike frame can withstand a variety of weather conditions

School children riding bamboo bikes supplied by the Ghana Bamboo Bike Initiative

Bespoke wooden bike making at Pev Labs using a CNC to mill the bike frame contours and pockets

The Renovo R4 Pursuit – proof that a wooden bike can be more than just a novelty

Bamboo: the 'miracle plant'

The Ghana Bamboo Bike Initiative (GBBI) is a social enterprise aimed at raising the educational prospects of children in the country, and the number of women in employment. Previously, no bamboo cycle producers existed in Ghana, but so far the GBBI has built over 3,000 road, children's and mountain bikes. Over half of those trained to do so have been women, and the organisation hopes to reach its target of 250 employees over the next few years.

The Initiative, founded by Bernice Dapaah – a World Economic Forum Young Global Leader – was inspired partly through childhood memories of very long walks to school from her rural community, until she was bought a bike by her grandfather.

For each one they sell, the GBBI donates another for use exclusively by children who would otherwise face comparable walks almost certainly prejudicial to their education. It also plans to further improve women's prospects by partnering non-governmental organisations (NGOs) to introduce childcare facilities so that female employees who become mothers can continue to work.

Bernice calls bamboo 'a miracle plant', because it grows very quickly and absorbs carbon, and for each one it harvests, the GBBI plants 10. Botanically, bamboo belongs to the grass family, but its tensile strength is greater than steel, and making a bamboo bike takes less electricity than a metal one. Moreover, a bamboo frame is completely recyclable.

A similar project, founded in 2007, is the Bamboo Bike Project at New York's Columbia University. It recognised that, besides personal transport, bikes in sub-Saharan Africa are invaluable for carrying goods to market, and delivering medical supplies. A feasibility study undertaken by KPMG confirmed that bamboo bikes could be produced economically, and sold much more cheaply than those imported from China and India.

A smooth ride & peace of mind

At the high end of the wooden bicycle market, makers are fastidious in their choice of materials. One Indonesian-based company uses only teak seasoned for at least 50 years to clad a steel frame; another firm offers its e-bike, made-to-measure, in ash, a handsome, white wood, for around £3,500; a Danish company produces a composite wood and

White ash free, from which COCO-MAT can make 50 of their wooden bicycles

This bike tour in Kos gives tourists the opportunity to see the sights while riding a COCO-MAT bike

A bamboo tandem bicycle in Mumbai

Bamboo cargo bike

Recumbent bike with plywood frame by AtomicZombie DIY

Recumbent low racer wooden bike from Ligneus Bikes

carbon frame, with prices starting at £2,000; and yet another presents a range of wooden handlebars, which can be bought separately. Such upmarket variety can be seen at events like the Berlin Cycle Show.

'Materia', a European-based company, produces wooden bikes in four categories – city, race, urban and limited edition – with prices ranging from £3,000-8,000. Designed in partnership with champion riders, these are available in three options: ash, redwood and walnut. The frames themselves are hollow, lightweight – usually between 6-7lbs – coated with yacht varnish to render them especially water-resistant, and are reputably laboratory-tested. The company makes comfort a priority, and its website highlights the fact that wood absorbs vibrations four times more effectively than carbon.

Their clean, simple lines disguise the 16-40 pieces of wood, which constitute each 'Materia' frame. The timber itself is very carefully selected, and pieces are cut to precise dimensions prior to the laminating process, which fuses multiple layers into a single plank, from which frame parts are then milled. Next, the parts are glued with epoxy in a climate-controlled room, and the completed frames then oven-cured to guarantee the strongest bond possible.

Another company that recognises the benefits of a wooden frame is COCO-MAT.bike, founded in Greece in 2016. From its Athens-based factory, cycles are made 'from certified renewable forests that preserve the biodiversity and sustain the landscape and eco-systems of the world'. The organisation's website also emphasises the fact that the use of wood will 'robustly extend the bike's life-cycle'. A fully-grown ash tree offers sufficient wood for the firm to make 50 bikes, and for every sale, it plants a tree bearing the buyer's name. Quaintly but fittingly, each COCO-MAT model bears the name of a character from Greek literature, with Odysseus and Penelope (from Homer's *Odyssey*) among them. Its range includes two e-bikes, and, besides Athens, COCO-MAT offers rental facilities and tours in several European cities, including Antwerp (in Belgium), and Barcelona and Valencia (in Spain). All its bikes have earned safety certification by passing a range of computer simulation

Sandwichbike, which can be assembled in less than an hour, features a wooden frame harvested from a sustainably-managed German forest

Sojourn Cyclery host a series of wooden bike making workshops, supplying participants with all the necessary materials and guidance to complete their own unique project

The Beach Cruiser Amber from Vilebrequin and Materia Bikes – made from hand-finished, sustainable ash, which is 25% lighter than the average bike frame and also weather-resistant

The Beach Cruiser Amber's frame features a beautifully hand-drawn turtle pattern

and physical laboratory tests, all undertaken by an independent organisation in Hamburg.

Wooden bike workshops & wood for comfort

While admiring the technology and industrial approach adopted by the companies mentioned so far, it's comforting to know that quality wooden bikes can still be made on a 'craft' basis. For those of a practical bent, and keen to have the closest link possible with their machine, 'Sojourn Cyclery' is an American (Ohio-based) firm, which offers workshops showing you how to build your own.

Recumbent cycles – also known as 'recliners' – allow the rider to sit at a low height with their back supported, and the pedals level with their chest or head. They benefit cyclists for whom the posture required on a conventional cycle is difficult or impossible. Many find wood ideal for the seat, as it yields to their weight.

Concern for the health of their pullers has led to a number of countries – especially in Asia – to outlaw conventional rickshaws, instead favouring cycle versions. Most are three-wheelers, and therefore called 'trishaws'. During the 1990s, there were an estimated four million of these, worldwide, and because – like their predecessor – they still require a lightweight structure, the passenger section is usually wooden. Bamboo may constitute the cycle part, too. The 'driver' usually sits ahead of the passenger(s), but occasionally behind. The wooden passenger accommodation is usually colourful, and sometimes highly decorated.

Carbon-friendly & afforable for all – the future of wooden bikes

With wooden bikes being a fairly recent phenomenon, it's interesting to speculate on their future. Car ownership remains an aspiration for many in populous countries such as China and India, but economics and climate concerns may combine to inhibit this, thus opening a potentially huge market for carbon-friendly cycles, which are also cheap to make.

Margins of victory in professional cycling are so fine that potential routes to advantage excite great interest. Could important characteristics like their frame lightness and stiffness be retained or developed in such a way that, one day, the 'Tour de France' could be won on a wooden bike? Only time will tell.

FURTHER INFORMATION

COCO-MAT.Bike – **www.coco-mat.bike**

Materia Bikes – **www.materiabikes.com**

my Boo – **www.my-boo.com**

Sandwichbikes –**www.sandwichbikes.com**

Selva – **www.selva.bike**

Sojourn Cyclery – **www.sojourn-cyclery.com**

The Ghana Bamboo Bike Initiative – **www.ghanabamboobikes.org**

A bamboo trailer from Bound Bikes. Each trailer is made using varieties of bamboo, with joints made from plant-based epoxy (ecopoxy) with a choice of carbon, basalt, hemp, or salvaged jute burlap fibres

Selva Ti XXII road bike – the company takes pride in its unique glued-up wood shaping and use of different wood species to create striking veneer laminates

my Boo Densu Cross bamboo bike

To make the frame, bamboo tubes are joined together and aluminium components fixed in place using a hard-drying resin. The bonds are further strengthened by wrapping them in resin-soaked fibres, taken from the sisal plant

WW TECHNIQUE

THE BRIDLE JOINT

The useful bridle joint – often referred to as an open or slot mortise & tenon – is also easy to cut and fit accurately, as **Andy Standing** demonstrates

The bridle joint can be used on corners, either square or in mitres, where it is significantly stronger than a halving joint by virtue of its larger gluing area. It is most useful, however, for connecting middle legs to continuous top rails on tables, where breaking the rail to form a pair of tenons would weaken the structure unnecessarily. This form of the joint is known as a T-bridle. It's a relatively simple joint to make, with the slot being cut first and then the tenon made to fit it. The proportions used are the same as for a standard mortise & tenon, so that when joining two timbers of equal thickness, the slot should be centrally set and take up no more than one-third thickness of the wood.

1 Start by marking out the joint with a try square on the tenon member

TOOLS YOU'LL NEED

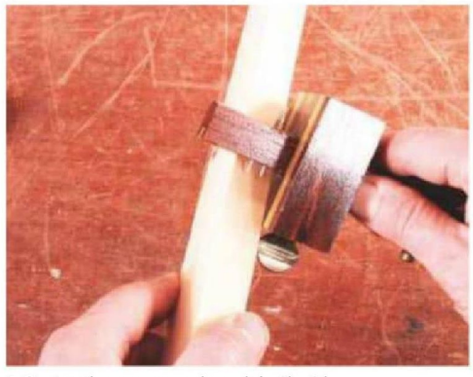
- Try square & pencil
- Mortise marking gauge
- Tenon or pull saw
- Narrow & wide chisels
- Coping saw
- Router & straight cutter

2 Use the mortise member along with the try square to mark the exact width

3 Extend the joint lines around the tenon member with a pencil and try square

4 Mark the depth of slot on the mortise member. If you wish, you can make it a little deeper and then plane off the end once the joint is complete, to produce a neat finish

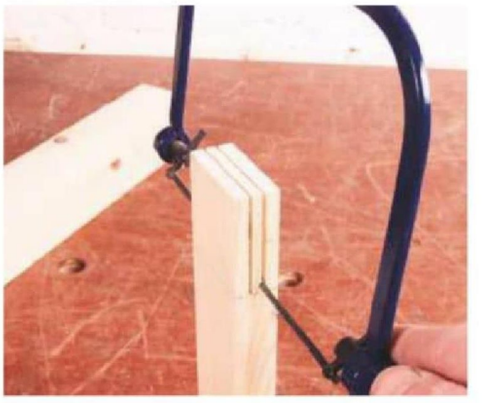
5 Set a mortise marking gauge to the width of your chisel. In this case the timber is 19mm thick, so I used a 6mm wide chisel



6 Centre the gauge and mark both sides of both components. Always work from the same face to minimise any inaccuracies

7 To make the marked lines more easily visible, run a sharp pencil down them

8 Fix the mortise member vertically in a bench vice. Cut down on the waste side of the marked lines with a fine-toothed saw



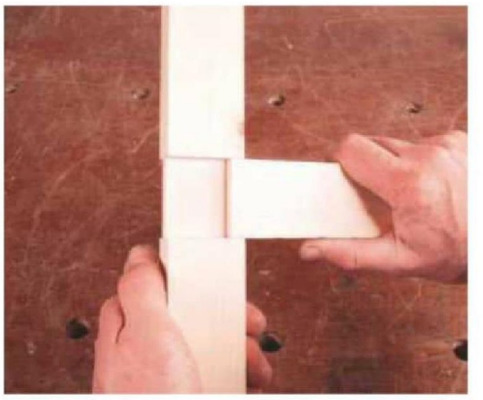
9 Use a coping saw to remove most of the waste. Don't cut beyond the base line

12 A router will remove most of the waste. Fit a wide straight cutter and plunge down to the gauged lines in stages. Be careful not to tip the router over the edge, and run as close to the sawn edges as possible

10 Square off the base of the slot using the chisel used to set the marking gauge

11 To cut the matching tenon, start by cutting the sides of the joint. Make sure the cuts are vertical and don't breach the depth line

13 Clean up the base of the joint with a wide-bladed chisel. If you don't have a router, use this to pare away all the waste



14 Test the fit of the two components and make any necessary adjustments. Next, apply a little glue and assemble the joint. Trim the end of the mortise flush if you cut it over-long

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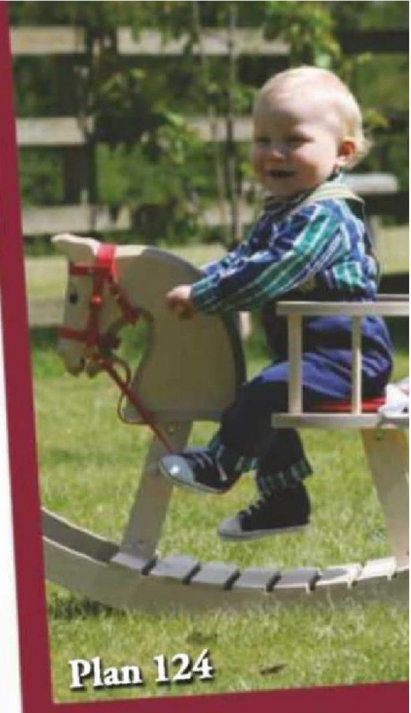
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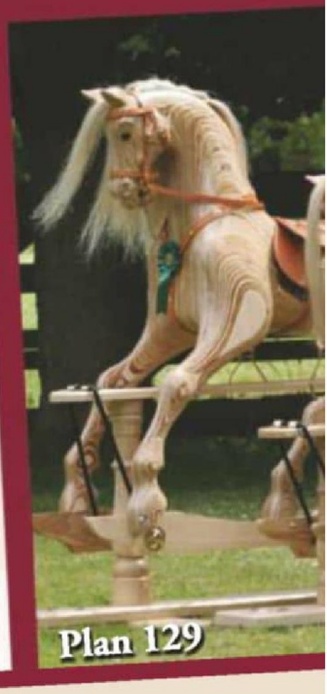
Plan 109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"There's a piece of furniture that wants to be something else!"

REWORKING A CARCASS

Ever the lateral thinker, **Dave Roberts** transforms an old table into a quirky CD and DVD cabinet

Fans of *The Great British Sewing Bee* will be familiar with the part where contestants are given something like an old T-shirt and asked to transform it into something stylish, thus demonstrating skill. Well, that's what I tasked myself with when an old table with upstand and faux bamboo legs came my way. It either had to be given a not too decent burial or a major revamp. I dismissed the easy option and got to thinking about reinvention instead... Now I'm not talking about repurposing when it's the necessary, sensible or most cost-effective course, and definitely not when it's part of a Disneyfied pastiche. Rather, I'm thinking of those instances when it's done with a view to incorporating old and new because the old has become too tired or outmoded to be of service, but is still too good to throw away.

These are the times when sensibility outweighs sense, and the old is kept not because it's important, valuable or unique, but because its value lies in the depth or the interest that it brings; in the respectable patina of useful service that something wholly new would otherwise take years to acquire.

Actually, I have a theory that some people treat furniture this way because it's how they'd like to be thought of themselves – layered up with the polish of experience rather than laid off owing to signs of age –

2 ... and appears to have replaced an earlier version

and I'll wager a tenner that anyone who's made a mid-life career change will agree with me on this. Then again, it's just a theory, and I may lose my money. Indeed, I may be the only person who'd look at my poor old pine side table and think: "There's a piece of furniture that wants to be something else."

Neither use nor ornament?

The table came my way after the fashion of a stray dog: I didn't set out to acquire it, and can't really afford the space it takes up, but I gave it a home to save it from neglect. I mean, leaving aside all the TLC that's required, it's not an altogether unattractive thing, is it? Oh, the top is split in places and quite plain, but at least it's not so thick that it's both plain and slabby, while the overall proportions of the table are equally neat and simple. On the other hand, I think that the upstand, which seems to have been crudely added to the table to replace an earlier version, should be a darned sight less upstanding!

1 Compared to the neat and simple lines of the side table itself, the upstand has all the charm of a boy racer's badly fitted spoiler...

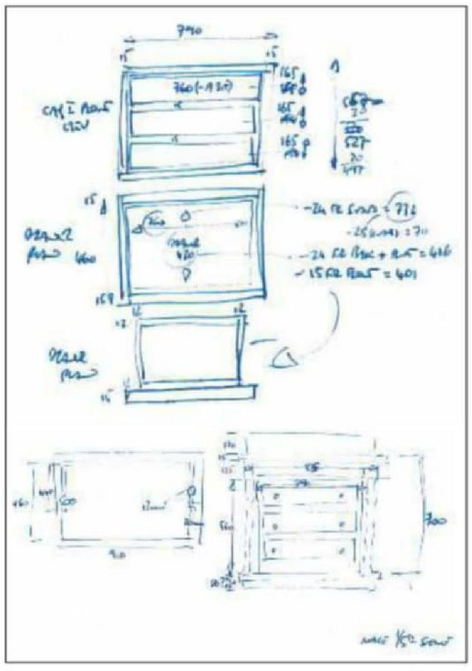


Fig.1 Initial sketches showing combined cabinet and table

However, it's the legs that are the sticking point: if this table were indeed a dog, goodness knows what a breed society would make of it. I know that there was a vogue for faux bamboo, but I certainly don't think that this table is one of Sheraton's 18th-century gems – or if it is, then it was made by Horace Sheraton, a carpenter from Cleckheaton, and not designed by Thomas Sheraton! From a practical point of view, the length of the legs coupled with the lack of stretchers – a characteristic of some side tables, of course – and years of wear on some of the joints, not only makes the table less than stable but means that they're vulnerable to more damage if it's moved or bumped into.

As it stands, then – which it does in a rather uncertain fashion – the table isn't earning the space that it occupies. But then, this was where my old-and-new inspiration came in: could I give the table a fresh lease of life by giving it a new use?

Like many people, I suffer from the luxury of a storage problem: I'm always shortof somewhere to put belongings, either to display or hide them, or sometimes both. Take CDs, for example. When I'm looking for a disc, I want them on view and in order. For the rest of the time, however, I want them filed away out of sight. Technophiles will suggest a portable music player, like an iPod, for instance, but I was thinking more in terms of an unobtrusive piece of furniture – something like a map cabinet, say, with three drawers that slide open to their full depth to give easy access to contents.

From two to three dimensions

Picking up on this thread, I pushed the idea from doodles to sketches that combined cabinet and table, before attempting to model the idea to see how it might look (see 'Maquette makes it easy' sidebar opposite). You can see that, as well as reducing the height of the upstand

3 Years of wear on some of the joints means that the legs...

4 ... are now less stable than ever!

to match the depth of the cross rail and simplifying its shape, I've given the table a plinth, which – using the rule of thirds – is two-thirds the combined depth of the table's top and front rail. The idea is that this will not only brace the legs – which will be located in its top face – but also balance up the overall look of the table by giving it some weight at the bottom. What's more, I'm hoping that the whole ensemble will neatly frame the space where the new cabinet will sit.

The cabinet itself – which will be attached to both the plinth and underside of the body, so adding rigidity – isn't just a box with drawers. Instead, it's shaped to fit between and around the legs so that their slight, faux bamboo forms

6 ... are no longer required to support the table; instead they can offer a little turned, decorative relief to the otherwise solid, square-rigged form

can retire from the job of supporting the table and take up a more decorative role by offering a little turned relief to the otherwise solid, square-rigged lines of the ensemble.

My maquette isn't an exact scale replica, of course. But even though my balsa-work doesn't replicate, say, the joints that'll be used in the full-size piece, it has still helped me to work through these sorts of details by providing a focus for my thinking. So, I look at the corners of the carcass and think: "Lapped dovetails." Or I see the reduced upstand set within the table's top and make a note that I'll need to cut a housing for it. Then it occurs to me that I could extend the line of the upstand and add a little detail to the otherwise plain top by using some dentil inlay. Nothing too fancy, you understand, but enough to give the top a little lift.

But there'll be no point doing that, I tell myself, if the wear and tear around the edges of the top aren't tidied up by dressing them back and adding some lipping to restore the dimensions.

5 The cabinet is shaped to fit between and around the legs so that their slight, faux bamboo forms...

This lipping could be something decorative – but would that look too contrived? – or I could use some of the timber from the new cabinet. On the other hand, I could use some

MAQUETTE MAKES IT EASY

Ideas are made of balsa: a maquette may be low-tech design, but it's still a useful planning aid

I know that many woodworkers use software to create virtual models to help them visualise projects, but I thought I'd experiment with a more analogue approach, and make a rough model or maquette. Old-fashioned I know, but it would be a shame to let these old methods die out...

I used balsa for the model, as it's both easy to work and available in conveniently sized sections. It's also a fairly bland material, which I found makes it easy to view the overall shape of the piece without the eye being distracted by grain.

The model's 1:5 scale was mainly determined by the 15mm-thick table top, which reduced neatly to match a 3mm thick balsa panel. From there, it was just a matter of scaling the other dimensions of the table and cabinet to produce a 'cutting list' of components. Building the maquette, meanwhile, called for nothing more than a scalpel, steel rule and some abrasive. Humbrol's balsa cement is quick-drying and strong, making it easy to build up the shape of the piece using simple butt joints, which – if you exercise care and patience when cutting and sanding components so that they're square and uniformly sized – build up to produce a neat finish. To define the outlines of the drawers, I used 1mm-thick balsa rather than drawing them, which would have been the obvious thing to do, I suppose.

And the faux bamboo legs? Well, I'm no turner, so I simply ran them up from lengths of balsa dowel held in the jaws of an electric drill before shaping with a ¼in chisel and a piece of abrasive. I know, I know! Abrasive isn't a shaping tool, but there it is. It's only a model!

WEIGHTS & MEASURES

To make sure that the storage solution actually solves the problem, I've done some back-of-envelope sums, which go like this.

Overall, the cabinet is 790mm wide, 557mm tall and 460mm deep. Allowing for the thickness of its sides – 15mm, to match the thickness of the tops of the table and plinth – and for thickness of the 12mm stock from which the drawers will be made, I'm left with drawers with internal dimensions of about 736 × 401mm. I say 'about' because I'll obviously build in a margin for movement so that they don't start as or become an interference fit!

In anticipation of the weight they'll carry, I'm aiming to use drawer slides – a Blum 430E drawer slide, for the sake of argument – which will take about 25mm of width out of each drawer, so we're down to a storage area that's 711mm wide × 401mm deep.

Given a CD is 10mm thick and, standing so you can read the spine, 135mm wide – this is generous but allows for, say, the Traveling Wilburys linen-bound boxed edition, oh yes! – then I reckon each drawer could hold about 190 CDs in five rows and still leave enough finger room to get them in and out. That's a payload of about 23kg, which together with the weight of the drawer itself, should still fall within the scope of the 430E's 30kg rating.

As for the height of the drawers, if a CD stands 145mm tall, then allowing sufficient depth for the 6mm ply drawer bases – which will be braced by the four 6mm dividers between the rows of CDs – and for clearance above the CD boxes, the overall height of the drawer fronts will be about 165mm. Given the carcass' 527mm internal height – 557mm less the 30mm of the top and bottom – I can fit two 15mm cross rails to the front of the carcasses above and below the centre drawer, and use the clearance that I've left above and below the drawer box to adjust the fit of the fronts – something that's bound to be required, as all this millimetre-perfect talk will never translate to timber!

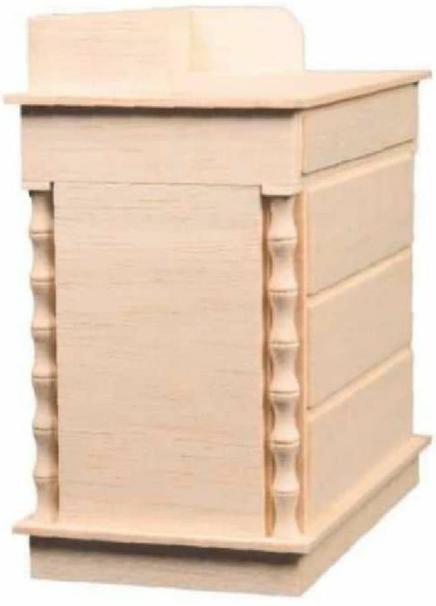
The last jotting on my envelope is a nod to a multimedia world, and says that one drawer could hold 90 DVDs, in five rows of 18. Alternatively, I could put all my CDs on an iPod and use the cabinet for something else!

of the material pared off the upstand. There might be enough, though it'd involve scarfing several lengths together, of course, and the joint would be visible.

Providing it's done neatly, however, that needn't be anything to be ashamed of: letting the bones show in this way is part of the pragmatic approach. As for the plinth, if I'm going to house the ends of the legs in sockets, I wonder if some means of levelling the table needs to be built into the sockets? And so the list-making goes on…

Timber decisions

When it came to the larger decisions – such as choosing a timber for the cabinet – I did think of using a contrasting material to underscore the difference between old and new sections.



On second thoughts, I decided this might draw too much attention to something that's meant to be a relatively plain piece of furniture. Southern yellow pine, then, may not be the stuff of High Church furniture making, but would be in keeping with what's already there, and has all sorts of honest qualities to recommend it: a straight grain and fine texture, stability and workability, and the ability to take a good finish. Another possibility, of course, would be to use reclaimed timber, though this raises the problems of finding a sufficient quantity of suitable material, and then working around any damage and/or dangers to edge tools that may be lurking in the wood.

Finishing thoughts

Finishes? Well, I'd guess that the table has been stripped at some point and then waxed, but in order to create a reasonably uniform finish for the combined cabinet and table, I'll probably remove this wax – alcohol should do the job, or, if it's more deeply ingrained, Colron's wax remover – and start again with a coat of sanding sealer to help the newly applied wax build up a deep finish.

To the workshop!

Amazingly the plan worked out, and many happy hours later I had my restyled CD and DVD storage unit. Now where did I put my boxed set of *The Bridge*?

TOP TIP

If you're looking for drawer and shelving inserts to store CDs and DVDs, try Isaac Lord Ltd – **www.isaaclord.co.uk** – which has a variety of frames, trays and racks that provide ready-made storage solutions

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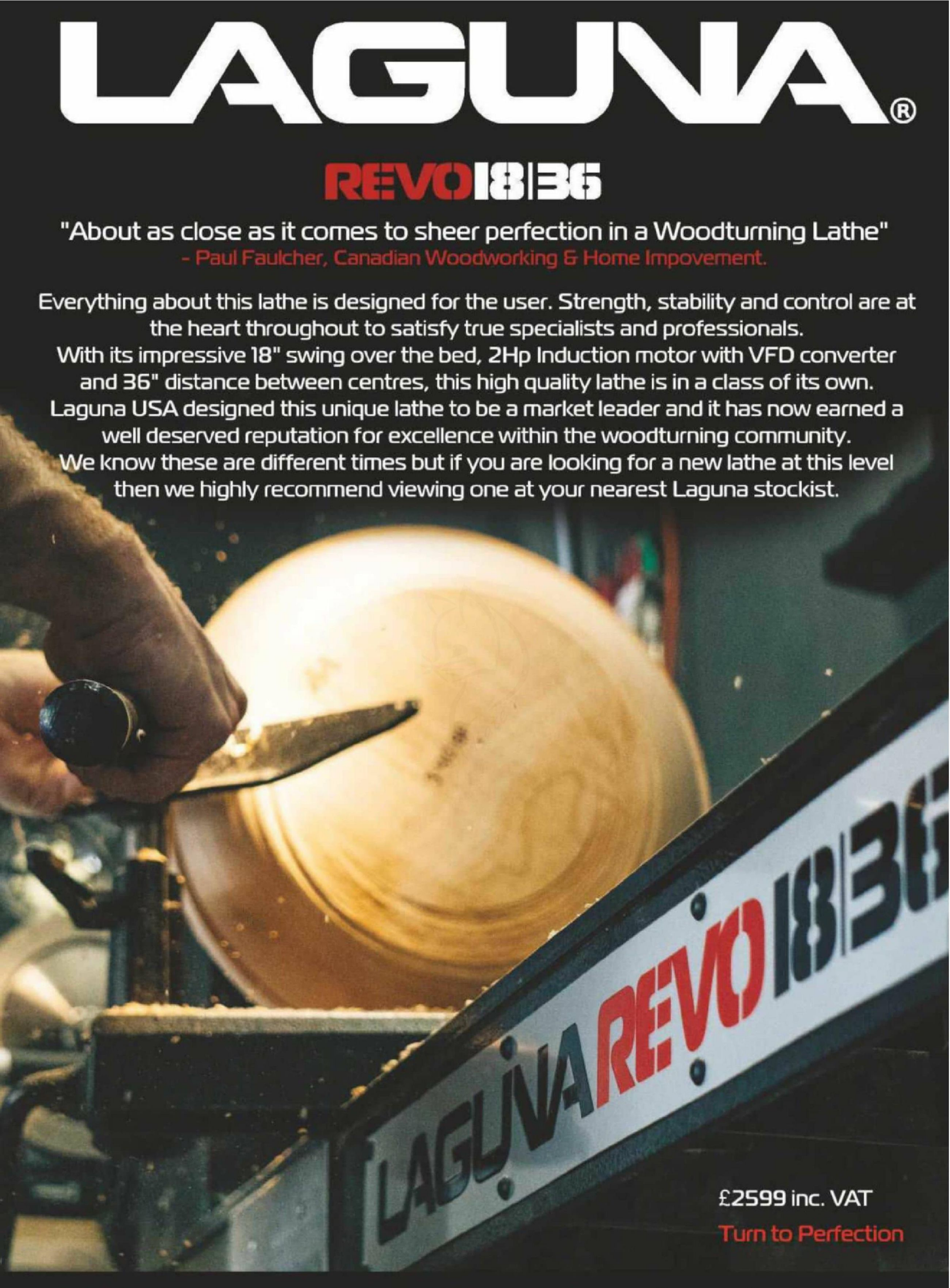

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LETTERS

LETTER OF THE MONTH

ALAN LEES' LOCKDOWN LAST SUPPER MIRACLE

Alan Lees' completed relief carving, which wonderfully depicts 'The Last Supper'

Dear Tegan,
Early on in the COVID-19 lockdown, we decided to seize the opportunity to clear out sheds and, more importantly, Alan's woodworking workshop at the bottom of the garden. Because Alan suffers with severe debilitating forms of arthritis, he'd spent some years painting, and had hardly used the workshop at all, except as a place to store tools, and occasionally to cut up pieces of wood for framing. The result was that it had become extremely cluttered. We took our time, and his wife – that's me! – did most of the heavy lifting and all of the trundling up and down the garden. We hadn't realised just how miserably neglected the place had become.

Buried under a large pile of miscellaneous stuff, we found a huge and beautiful block of lime wood. Many years ago, Alan had been asked by an American customer to carve a depiction of 'The Last Supper', and he'd drawn out the design and started to carve it, before the customer decided they didn't want it after all. So, Alan had shelved it and got on with other things. Back then, he was making sculptural rocking horses and doing all kinds of huge outdoor carvings, so wasn't short of work.

Cut forward all these years – it was early summer – and we gazed at the solid piece of wood, measuring some 15 × 4in deep. "Why don't you finish it?" I asked Alan. So he did.

It's taken him many months, but Alan recently completed the carving. It was very difficult because the arthritis also affects his hands, meaning he could only work for a limited time each day. The other problem is that he can't stand for more than a few moments at a time, so we had to find a method of allowing him to carve sitting down. Fortunately, our clear-out had also uncovered a useful folding workbench, with a tilting facility, which was exactly the right size for the carving, and which could be set at the correct angle. Alan could therefore sit in his comfortable, lightweight folding wheelchair and work away, getting a little fresh air as he did so.

The year and the carving moved on, and it took a lot longer than we anticipated. After all, this is a highly detailed relief carving.

Autumn came and went, with the usual west of Scotland wet, chilly weather. I suggested that he move indoors, so Alan commandeered the conservatory, where he could work in warmth and light. And in early November, he'd sealed and finished it with some layers of shellac.

It is a thing of beauty. The disciples look as though they are having quite a good time! People keep asking us what we're going to do with it next. Of course, we're hoping to sell it, but the price will have to be right. No craftsman is ever fully reimbursed for the hours spent on a piece of work, but I'd rather keep it than let if go without Alan being suitably rewarded, especially given his health challenges.

Meanwhile, we're enjoying it, but all suggestions for its future home, as well as for a woodcarving aficionado with reasonably deep pockets, would be gratefully received!
Kind regards, **Catherine Czerkawska**

Hi Catherine, thank you so much for sharing Alan's work with us. The carving is exquisite and I can only guess at the amount of skill, not to mention hard work, that went in its creation. From what you outlined in your email, the carving was the result of countless months of hard work. It must have been wonderful to see the relief carving emerge and I bet it looks even more stunning up close. Since you originally got in touch, I very much hope you've been able to sell the piece and, most importantly, that it fetched a suitably impressive price. Do let us know where it's now resting as we'd love to see it in situ.
Best wishes, **Tegan**

PROTECT YOUR CHUCK

A sandwich bag and rubber band are all you need to ensure your chuck stays in tip-top shape

Dear Tegan,
I always look forward to Les Thorne's woodturning projects; however, in the recent plywood bowl article (March 2021 issue), he left himself with an unnecessary task. The ebonising process Les used covered his chuck in lacquer, which he then had to clean off. The photo here shows how I deal with this situation. All that's needed is a small sandwich bag and rubber band. Slide the band over the chuck so it sits on the register, then fit the bag tightly over the chuck jaws. Attach the turned object, tighten, then pull the bag over the chuck and slide the rubber band over it as shown. When the job's complete, just remove the bag. Liking to economise, I then put it aside so that it can be used again.
Best wishes, **Kenneth Jones**

Hi Ken, thanks for the hint regarding protecting my chuck from lacquer. If you look in the dictionary under "more haste, less speed" there should be a picture of me! I'll take your advice on board and I'm sure it'll save me time in the future. I'm glad you enjoy the articles and thanks so much for the feedback.
Best wishes, **Les Thorne**

BRACE YOURSELVES

Dear Tegan,
I've recently taken out a subscription to your magazine, which I've enjoyed for most of my life until retirement some 20 odd years ago. It's very different to what I remember. My woodworking started in an old shed at the end of the blackout and progressed – apprentice joiner, tradesman-teacher (school and tech) joinery business, etc. It has also always been a hobby, and one which I still enjoy.

Your magazine is excellent, very interesting, and very well produced, with superb photography, as expected. The woodworkers of today seem to need a few thousand pounds' worth of machinery and power tools, and a workshop that looks like a modern lounge.

I was surprised by the photo of the ledged braced and batten door, which showed the braces the wrong way round. This is a common mistake often seen on TV sets. A few comments on these doors: some joinery manufacturers used to supply braces loose so that they could be fixed on site, while others braced them with one each way, so at least one was correct. Another method was to nail through the battens and ledges and bend the nails over on the back. This was called clenching; a very uncomplimentary term to other joiners. A better way was to let the ends into the ledges to form a loping joint.
Best regards, **Ron Parker**

On this newly-installed framed, ledged and braced side gate, you can see that the braces are sloping upwards, and away from the hinges. This will reduce the gate's tendency to drop

Hi Tegan,
First of all, I would like to say thank you for continuing to produce a great magazine in what must be very trying times at present.
I have a query, however: in Peter Bishop's 'woodworker's encyclopaedia' (Feb 2021 issue), you show a photo of a ledged & braced door. My poor late father would be upset to see this; he was a 'time served' joiner and always adamant that the braces on a door should go the opposite way, taking the weight of the door onto the hinged stile. He always winced if he saw a 'wrongly braced' door on TV or film, but was he right? Do your other readers have any thoughts on this?
I also remember him saying that my woodwork teacher – those were the days when schools taught woodwork – was wrong for not letting us 'drill out' mortises before chiselling, and he always said it was better to chop mortises on narrow stock in a vice as this reduced the risk of splitting – again, not allowed in woodwork classes! I do realise there are many different ways of doing things, but I must admit I've always done things 'dad's way' rather than the 'school way'.
Best wishes, **Roy Barwell**

Hi Roy and Ron, *thanks for pointing out the embarrassing error! You can tell I'm not a trained woodworker, which is why the wrong photo unfortunately slipped into the February issue. I could have said we were testing our readers to see how many would respond, but that would be telling porkies! Phil Davy spotted the error when his magazine landed on the doormat. Interestingly, the last sentence in Peter Bishop's definition on the same page is correct: 'With braces fitted, from the hinge side upwards, they become much more stable and less likely to sag.'*

Roy, you and your father are correct: the braces should have been facing the other way, away from the hinges. This puts the door in compression, countering the tendency for it to sag on the opening side. We don't even have the excuse of publishing the photo back to front, I'm afraid – it would still be incorrect if flipped.

You're also both correct about the occasional TV or film blunder. A wrongly-braced door is usually easy to spot on the big screen. And again, well spotted, Ron, for the similar error on page 72 – Phil missed that one! Slapped wrists all round, then...

Phil pointed out that the same thing happened with The Woodworker *some years ago, under a different editor. At least it didn't appear on the cover this time! Best wishes,* **Tegan**

READERS' HINTS & TIPS

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

A SIMPLE METHOD FOR TAKING A DOOR OFF ITS HINGES & REHANGING

A recent article in the magazine mentioned the steps required to rehang a door. The tip I was given many years ago – and have used very successfully ever since – is to take two 40mm long screws, 4mm in diameter, and saw off their heads. You need to remove one screw per hinge and, inserting by hand, place one of the headless screws into the now vacant screw hole. Turn these by hand as far as they will go, then remove the remaining screws in each hinge. The door can then be removed, thus leaving the headless screws in place. When it comes to rehanging, the hinges are slid onto the headless screws and there it will rest in place while the other screws are re-inserted and tightened. The headless screws can then be taken out and you can stand back and admire your newly hung door, which hopefully, you've been able to do quickly and without too much of a headache.
Ian Eliasson

1 Take two 40mm screws and saw off their heads

2 Remove one screw from each hinge and replace with a headless screw, ensuring it's finger tight

3 Remove remaining screws but leave the headless ones in place. Next, take the door off the screw. When rehanging the door, the headless screws act as the perfect guide and will take the weight of the door while you re-screw the hinges

WRITE & WIN!

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


DELTA

LAMINATED JEWELLERY BOX

In the second part of this series, **Dennis Keeling** takes you through the steps for making a stack-laminated jewellery box using a CNC router

One of the most popular turned items I made was my laminated bowl from Perspex and plywood (**photo 1**). The CNC enables the maker to do things that would be almost impossible to create with traditional techniques. Cutting out a deep box with a CNC router is difficult to achieve with standard length routers, so a laminated technique is required which allows the router's limited depth of cut to be used in the machining of the box.

The box design shown here is very easy to make in batch quantities and you can still engrave individual names on the lids. The cost of materials is negligible, especially if you use offcuts. The biggest expense is the flexible CA glue, costing around £27, but there's enough supplied to make two boxes.

Selecting the shape & base

I've always loved the ellipse shape. You can buy very expensive attachments, which are added to the lathe to create an oval shape, but it's a simple task for the CNC router, and also much cheaper.

My CAD system allows me to create ellipses easily, so I settled on one measuring 150 × 100mm. My CAD system also allows me to nest ellipses, so I also created an inner ellipse of 130 × 80mm, giving a 10mm edge thickness using the same origin. This would also be used later to mill the flange for lid and base (**photo 2**).

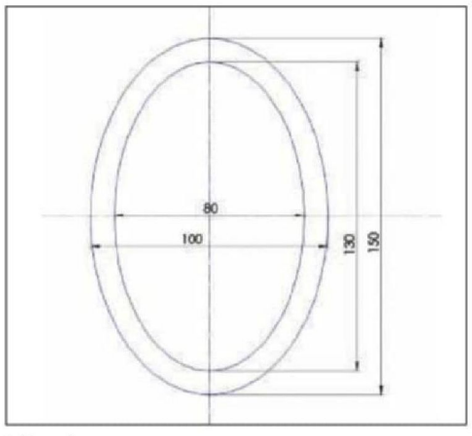
Cutting 12mm plywood cleanly with a router isn't easy, especially if the top is unsupported. Traditionally, one would use a straight flute cutter for plywood but this can still lift the top veneer. Alternatively, I could use a downward spiral router cutter, which will push the laminate down and give a cleaner cut. The underside of the plywood would cut cleanly, thanks to a vacuum bed, and a 12mm MDF sacrificial base allows me to overcut and thus obtain a clean edge.

For the laminations, I selected some transparent 3mm Perspex multi-coloured offcuts. I decided to sandwich the top surface of the plywood between the Perspex laminates, which would cut cleanly and therefore solve the problem.

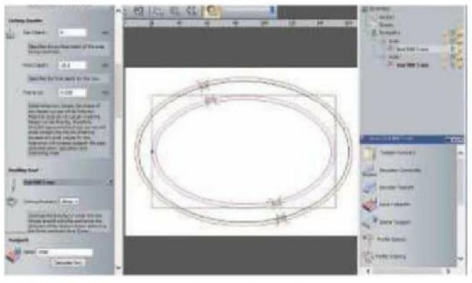
I originally wanted to use plywood for the base and lid, but wasn't impressed with the result. To add contrast, I decided to use white 10mm Perspex, re-cutting the base and lid.

I created the base design in my CAD system and then exported the .DXF file to my CAM system. I created the design for one level and reused it for various other levels. I chose a 5mm spiral carbide cutter, which is better suited than a straight flute when it comes to cutting Perspex. I set the router speed at 15,000rpm with a feed-rate of 600mm/min, and a step down of 4mm – four passes for the 15.2mm composite thickness. I included two bridges on both the inner and outer profiles – 5mm long and 3mm deep – to stop the pieces moving during machining (**photo 3**).

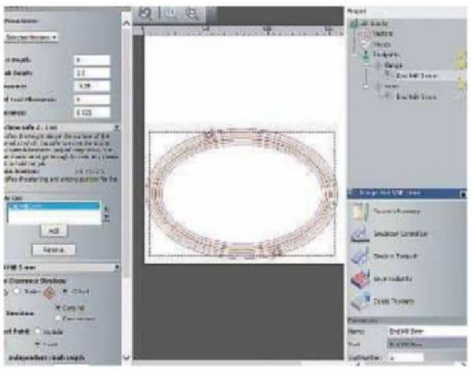
1 Turned and laminated offset bowl in Perspex and plywood



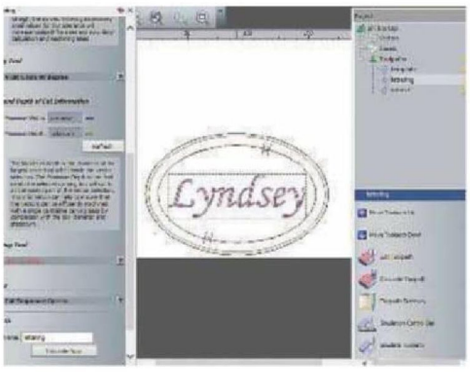
2 Box plan



3 The box interior, as shown in CAM

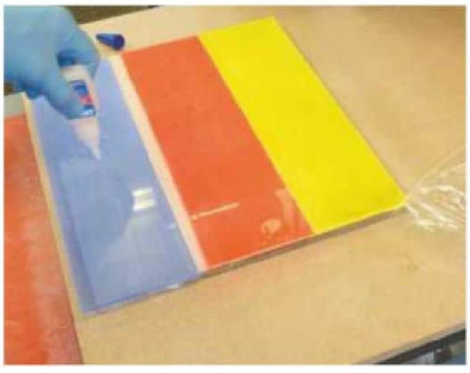


4 The outer flange, as shown in CAM



5 Using CAM to create the lettering

6 Sanding the Perspex



7 Gluing the Perspex using Loctite CA adhesive and my CNC vacuum table

Engraving the top of the lid

For the revised lid and base, I wanted to cut a flange in the lid so it could slot onto the sides. My CNC is very accurate and I had to add a 0.15mm allowance to cut the flange slightly larger, to ensure it would easily slot into the accurately cut sides. This involves some trial and error. The flange is cut by using the area clearance toolpath configuration. I used the 5mm spiral flute carbide router and set a finished depth of 2.5mm from the top surface. Since it was an elliptical cut, I chose the offset clearance strategy, which will cut around the edge. Again, I set a feed rate of 600mm/min, a 2mm step over and a 15,000rpm spindle speed. As before, two 5mm bridges were added to the outer profile to avoid any movement (**photo 4**).

I wanted to engrave the top of the lid and using the engraving facility allows so many possibilities – creating beautiful pictures, patterns or text – but for this project, I chose to engrave my wife's name on the lid using a specially designed script font for engraving. I also chose to cut an ellipse band around the lettering, but had to create a means of fixing and accurately locating the lid for engraving as it had already been cut out. A trick I learnt at Ercol, when spending a day in their CNC shop, was to cut out a template to hold the lid using the same 'X/Y' co-ordinates. I created a toolpath for cutting out the lid template from a piece of 12mm scrap MDF, 0.15mm oversize, using a 5mm router. I then created the engraving toolpath for the V-cut router using the same 'X/Y' zero setup, but with a new 'Z' height.

While I use a 90° V-cutting engraving tool, you must ensure that its cutting faces come to a sharp point rather than a flat edge, as many V-cut routers do; this ensures that very fine detail can be engraved, which is especially important with lettering.

My CAM system has an engraving facility, which automatically adjusts to the correct depth of cut as the router follows the script profile; this enables the broad sections and fine serifs to be beautifully executed.

I set the router speed to 15,000rpm, feed rate to 500mm/min, with a 0.1mm step over and a 1mm step down (**photo 5**). I used the same configuration to cut the groove around the lid, setting the V-cut router's depth of cut to 0.5mm.

8 Routing the various Perspex levels

Making the jewellery box

Gluing Perspex to plywood isn't easy, but I became quite adept at it with my bowl turning. There are two important stages: the first is creating a key on the Perspex, as plasterers do when rendering. You sand the shine (and oils) off the Perspex beforehand using 180 grit abrasive (**photo 6**). The second, and most important, is to use a flexible glue. CA (Superglue) will work on both Perspex and plywood, but is brittle and prone to delaminating. There's a version mixed with a rubberising fluid, called flexible CA glue, which works well. Unfortunately, my main supplier seems to have closed down but Loctite make a flexible CA version: 'Loctite 4860 Super Glue'. It's expensive but works well, and I use the high viscosity version. It's thick enough to not soak into the plywood too quickly, but takes about an hour to cure, sandwiched in the plastic. It's important to keep the surfaces under pressure until it has cured – I used my CNC vacuum table (**photo 7**).

Once cured, it's positioned on the CNC vacuum table and the vacuum turned on. The 5mm spiral router bit is fitted to the CNC and positioned to the top surface of the bottom left-hand corner of the material – the 'X', 'Y' and 'Z' axes are then zeroed. Each level is cut separately and the router repositioned each time. Obviously, if making a batch of these you'd cut a group of them in the same colour at the same time. The support bridges are cut away with an oscillating saw and cleaned up with a file (**photo 8**).

The plain white 10mm Perspex is then loaded onto the CNC. I use hot-melt glue to pin the sides, which prevents movement, then zero the axes as before. The flange and outer profile for the top and bottom are then machined, again using the 5mm spiral router (**photo 9**).

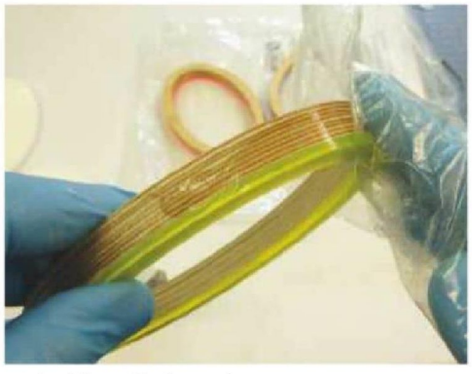
In order to engrave the top of the lid, the template needs to be cut. I use a piece of 12mm scrap MDF as the template material, which is pinned to the sacrificial base with hot-melt glue as before. You can then zero the corner

9 Routing the top/bottom of the box

10 Creating the template

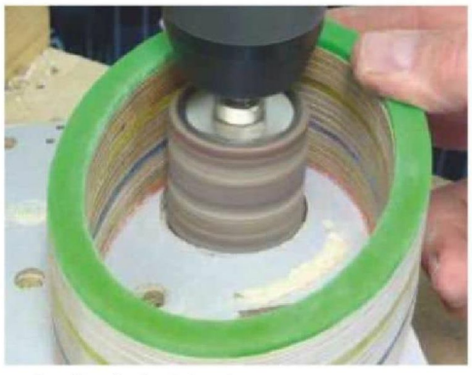
11 Engraving the top of the box

12 All the levels can then be cleaned up using a file to remove the bridges



13 Applying a CA glue seal

14 Gluing the sides of the box



15 Sanding the box's interior...

and cut out the template using the same 5mm spiral router (**photo 10**).

It's important to ensure that the CNC and vacuum bed aren't switched off after machining the template, as you need to retain the 'X/Y' zero position. Next, vacuum out the template's oval hole, to ensure it's clean, then insert the white Perspex top. Next, I spotted the sides of the lid with hot-melt glue to avoid any movement.

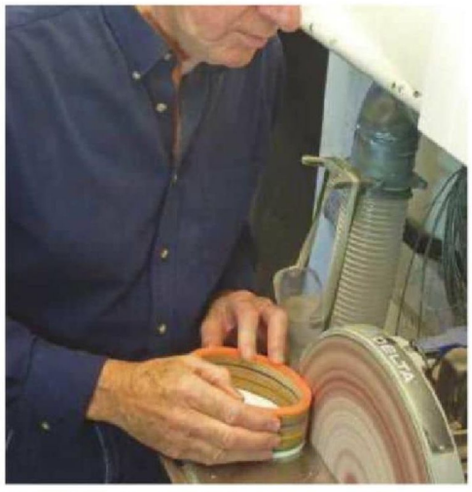
You now need to install the V-cut router bit into the router, then zero the CNC's 'Z' axis to the top of the lid surface, while the X' and 'Y' axes remain unchanged. Care should be taken to achieve the correct 'Z' height as too high or too low will affect the lettering significantly. The top can now be engraved (**photo 11**). All the levels can then be cleaned up with a file, thus removing the bridges (**photo 12**). At this stage, I dry assembled the box but didn't think it looked balanced in terms of the coloured laminations, so I decided to make another coloured Perspex section. This was cut out as a single piece of green Perspex – not already fitted to a plywood section.

Finishing plywood to a high gloss isn't easy. I've found that applying thick CA glue to the plywood works as a great sealer, and once cured, the plywood can be sanded and polished. I applied the CA glue with my nitrile gloved hand in a polythene bag: CA glue doesn't stick to polythene but does to nitrile gloves – sadly, polythene ones weren't available! Beware of the dangerous gases generated when using CA glue in this way, which can affect your eyes and breathing. Always wear goggles, stand well away and ensure the room is well ventilated (**photo 13**).

The box sides are assembled and glued with the flexible CA glue. The composite box then needs to be weighted down and left to cure for a couple of hours (**photo 14**).

Once the laminated levels have dried, the surfaces can be cleaned up; the three levels and extra coloured Perspex section are then glued together.

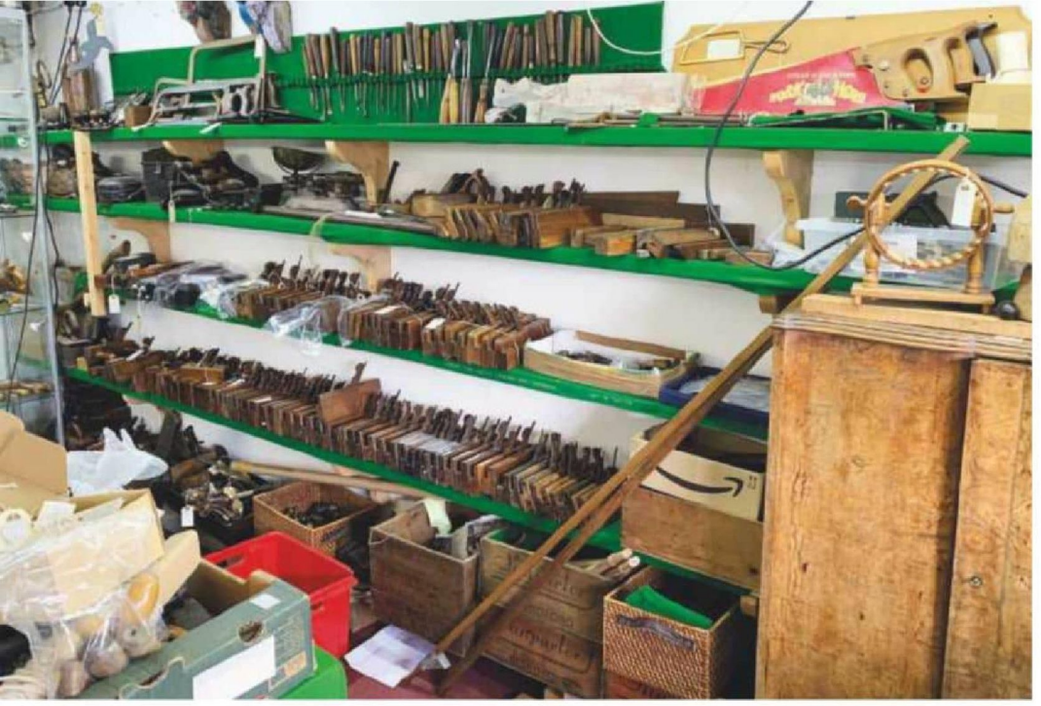
The inside will be very difficult to finish once fitted to the base, so attach this at a later stage. I fitted a rotary sanding drum to my pillar drill and used this to sand the box interior (**photo 15**). I stupidly started to sand the outside without the base until I realised it was required to ensure the levels are all sanded together (**photo 16**). Once the box has been sanded, it can be sprayed with gloss clear acrylic paint. I de-nibbed the piece after each coat, firstly using a reworked old Stanley knife blade as a scraper, then with 240 grit abrasive (**photo 17**). Putting a 90° edge on a Stanley knife blade using a grinding wheel allows a burr to be formed on the bottom edge, thus making a great scraper. Applying around four coats of clear gloss lacquer results in an acceptable, shiny finish (**photo 18**).



16 ... followed by the exterior

17 De-nibbing the box by scraping the exterior

18 The completed jewellery box



Inside the Aladdin's cave that is my workshop – just a small selection of antique and collector's tools

TOOLS of the trade

Old and collectible tool enthusiast **Daniel Letts** shares some of his recent finds, including a moulding plane that holds a very elusive maker's mark

I moved to Dorset when I was eight and opened my first antiques/second-hand shop aged 18. I always carried out my own restorations, making a lot of furniture and a few fitted kitchens, hence the interest in tools. I've always preferred using hand tools, especially planes, as they give a much better finish, but my favourites have to be old wooden moulding planes, and I have over 100 in the workshop. I find it much quicker using a plane than having to set up the electric router or spindle moulder.

I really got hooked on the dealing side of tools when I picked up a triptych full of 72 Holtzapffel ornamental turning tools at a farm sale. I sold them out of the back of my car at Tony Murland's auction car park, picking up more than three times as much as I paid for them within five minutes of arriving.

I've been retired for about five years, and a little over a year ago, I decided to clear out my workshop. To cut a long story short, instead of getting rid of my tool collection, I started buying and selling again. I have an online shop, which I'm learning to use, and now mostly buy at auction. The auctioneers take an average of 30%, so please, if you have any good craftsman's or collector's tools, I'm your man and I'll happily collect anywhere in mainland UK – we can even split the auctioneer's share!

A very rare antique gunmetal adjustable dovetail marker. This one is a bit of a mystery, having recently been purchased on a dark 7am morning from the back of a van. I didn't have a clue what it was until I got home and played with it. This very classy, and probably unique, dovetail marker was very quickly snapped up by a collector friend with a good eye

An exceptionally fine set of 25 Herring carving chisels with boxwood handles

Mathieson bridle plough and sash fillister – with a chest full of tools like these, it's a treat to get to work in the morning

In a drawer under my workbench I have a sharpening stone. I don't recall how I came to have it, but I can't remember not having it! Over the years, I've owned all sorts of grinding wheels and stones, but whenever I've had a job which requires that little extra, out it comes. I think it may be a Belgian Coticule variety, but I've never really got to grips with the differences in natural stones

Everybody has a bit of luck sometimes, and mine came as I was cleaning and sorting out a box of old moulding planes hoping there might be a pair or even a small set of something. I came across a dirty mark on one of the sides, so gave it a rub like Aladdin and there it was – the elusive Granford Maker Mark 1687–1713. I guess that's what they call a sleeper. It only happened to me once before when I bought a plane by 'Samwell Holbeck', which was in superb condition with a lovely mark. I bought it out of the back of a van in David Stanley's car park, in front of 20 other treasure hunters, but that was a very long time ago

OLD TOOLS WANTED FOR CASH

If you're wanting to sell any old tools, cash buyer Daniel Letts can promise you the best prices in the UK for vintage and used tools in good condition. He's interested in single items, whole collections, and also does workshop clearances
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E: **danletts51@gmail.com**

LOW & LAID BACK

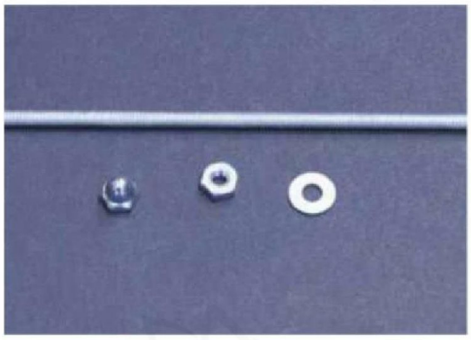
Carl Jacobson's simply designed folding stick chair, perfect for lazy summer days, is easily stored away when not in use

Also called a Kentucky stick chair, this simple design folds up in the winter for storage and is really comfortable to sit on during the summer months. I chose to use cedar as it's a great outdoor timber that holds up well.

This is an easy project to make and involves cutting all the components to length using a table saw. Once cut, it's just a case of drilling holes through each piece at a given point, then threading wire through the holes to tie all the lengths together.

The chair design is low and laid back and can easily be folded up and stored, or carried. The total cost of materials for the chair, including hardware, is around £34.

1 The first step is to pick out three pieces of cedar – or you choice of timber – measuring 2.4m × 88mm × 25mm and one piece measuring 2.4m × 140mm × 32mm. The 2.4m × 88mm piece needs to be ripped down to 32mm on the table saw, and the 2.4m × 140mm × 32mm piece down to 25mm. Once at the correct width, components need to be cut to length using a chop saw

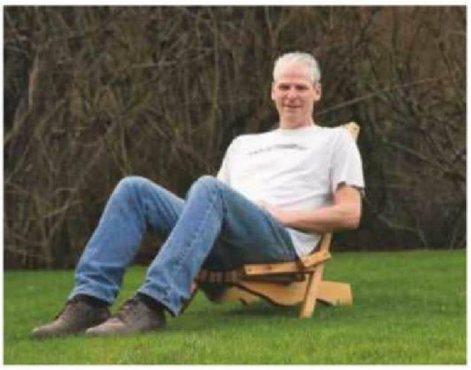


2 In terms of hardware, you'll need a total of 2.4m of No.8 threaded rod; eight × No.8 washers; eight × No.8 nuts; and eight × No.8 cap nuts

3 Next, it's on to the drill press, so start by setting up a stop block and fence. The 150mm and 698mm pieces each need to be drilled 20mm in from the ends. For the 305mm pieces, drill holes 20mm from one end and 54mm from the other. For the 1,016mm pieces, drill holes 20mm in from one end and 343mm from the other. For the 610mm pieces, drill holes 20mm in from the top, and 254mm in on the same end

4 The first threaded rod can be put in place by hand – this is the top of the back. Apply some wax to the threaded rod to prevent any squeaking. The easiest way to place the other rods is to hook them into a drill. They'll feed themselves in, which makes this part of the assembly very easy. After the rods come out the other side, place a washer and two nuts onto each piece. Use a hacksaw to cut off the excess rod, then put on the remaining washers and nuts. The final step in assembly is to install the stop blocks – the 50mm pieces. For the 610mm pieces (rear legs), measure 254mm inwards and glue the stop blocks. When assembled, the 698mm pieces will rest on these

5 In terms of the finish, you need to choose something durable. I used Arm-R-Seal from General Finishes, which I applied with a brush



6 The final step is to grab a nice tall glass of your favourite beverage, then sit back and enjoy summer!

CUTTING LIST

38	×	25	×	150mm	11 off
38	×	25	×	1,016mm	2 off
140	×	25	×	610mm	2 off
38	×	25	×	50mm	2 off
38	×	25	×	305mm	8 off
38	×	25	×	698mm	8 off

To polish or to sandblast?

Colin Simpson shares his designs for two natural-edge decorative tubes, one of which is highly polished and the other sandblasted

On the face of it, this project looks quite simple, and, in all honesty, the turning side of it is. There are a few problems to overcome, however, not least how to hold the log on the lathe so it can be hollowed out. My method is to make a homemade mandrel, although other turners might choose a different way.

While the finished piece is purely ornamental, the process required to turn it is certainly interesting. Needless to say, it's likely to be a conversation piece when your woodturning friends discuss how it was made.

Mounting the log

Yew or laburnum or any of the fruit tree branchwoods are ideal here – and the more buttressed or out of round the branch, the more interesting the finished piece. I chose cedar branchwood (**photo 1**) as I wanted to sandblast the exterior to create a textured finish. If you're using a different wood, then the finished piece looks great with a highly polished surface.

Start by marking the centre of the log. It doesn't necessarily need to be at the pith; just use your judgment to locate this point (**photo 2**). Mount the blank between centres, making sure you have a good, firm grip with the four-prong drive. If the bark is loose or likely to come off, it's safer to remove it by hand – I use an old screwdriver (**photo 3**). For turning the outside to a rough cove (**photo 4**), I use a bowl gouge, with the wings ground back, rather than a spindle roughing gouge. There's no need to turn it down to the finished dimension at this stage. Next, turn a spigot at one end to fit your chuck (**photo 5**), then mount the piece, bringing the tailstock up for extra support. The tailstock support isn't absolutely necessary, but does provide a more secure hold.

1 The more out of round the log, the nicer the finished piece

2 Guess the centre point at both ends

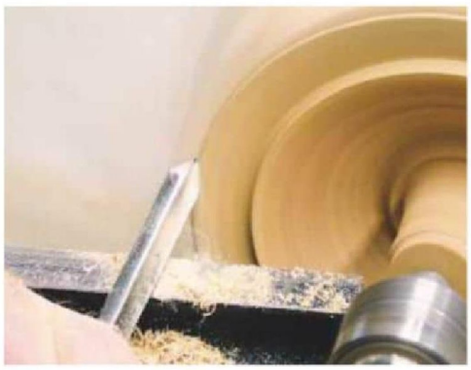
3 If the bark is loose, remove it before you start turning

4 Turn a cove in the log, keeping the natural-edge at both ends

5 Cut a spigot to fit your chuck

6 Mount the piece on the spigot and start to hollow at the tailstock end

7 This cedar tears out quite badly…



8 … but a shear cut with the spindle gouge…

9 … greatly improves the surface

Use a 10mm spindle gouge to start hollowing the log at the tailstock end (**photo 6**). Note this cut is really going against the grain, but with the tailstock in place, it's difficult to cut with the grain. Using sharp tools and close-grained timber, you shouldn't have too much of a problem, but with this cedar, I experienced really bad tear-out (**photo 7**). This isn't a problem when removing waste wood, but when nearing the final shape, it needs to be eliminated.

Drop the handle of the gouge down low and use the wing of the tool to cut fine spiral shavings (**photo 8**). **Photo 9** shows the greatly improved surface finish that can be achieved with this cut after just one pass, and **photo 10** shows the type of shavings you should be getting.

Hollowing out

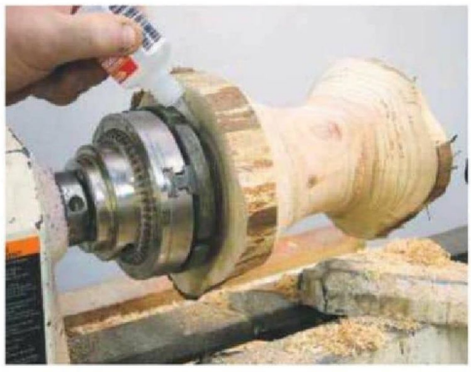
Before you hollow this end too much, you'll need to cut a chucking point. I use a parting tool to cut this with the chuck in expansion mode (**photo 11**). For strength, allow some extra around the recess. Once this chucking point has been cut, continue hollowing below it. You'll need to reduce the diameter of the stub that's being supported by the revolving centre (**photo 12**), but keep the tailstock in place for as long as possible. When you can't go any further with the tailstock in place, turn the stub down as small as possible

10 You should be getting fine spiral shavings at this stage

11 Cut a chucking recess at this end…

12 … and continue to hollow the piece below it

13 Turn the stub down and then twist it off by hand



14 I glued the piece into my chuck with CA adhesive

15 Use a spindle gouge to drill a hole right through the piece

16 Widen the hole using a spindle gouge, working from the smallest diameter to largest

17 Reverse the workpiece and hollow the other end in the same manner

18 Keep the spindle gouge over on its side and use the bottom wing to make the cut

then stop the lathe and twist it off by hand (**photo 13**). This is far safer than attempting to turn it off with the tailstock still in place.

The chucking point should be strong enough to hold the piece without tailstock support, but if you're in any doubt, or turning a very soft wood like I am here, then ensure to glue the piece into the chuck jaws using CA adhesive (**photo 14**).

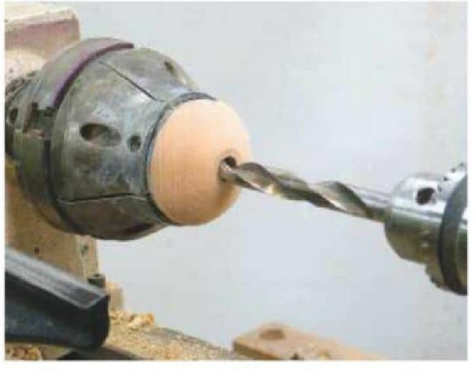
Shaping the tube

With the tailstock removed, drill a hole down the piece's centre. You have two options here: use a drill bit mounted in a Jacobs chuck held in the tailstock; or, drill the hole using a spindle gouge (**photo 15**), as I did. With the tool resting on its back on the toolrest – handle held down – gently place the tool tip in the very centre of the revolving wood. Hold firmly and raise the handle until it's horizontal and in line with the axis of rotation. Push the tip into the vase to drill a hole. Remove often to release shavings and prevent binding. Drill right the way through, then use the spindle gouge to widen the hole (**photo 16**). Continue to widen beneath the chucking recess until you've reached about halfway through and you're happy with the shape. This part of the tube can now be sanded.

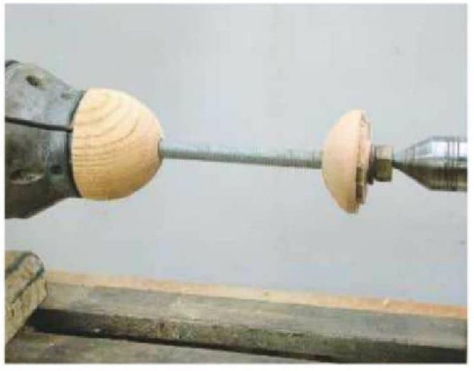
19 Once you're happy with the curve, sand this end to a finish

20 This photo shows my homemade sanding stick for narrow areas...

21 ... which helps to keep my fingers away from potentially dangerous places



22 Make two domes with holes to fit your studding



23 The completed mandrel should look something like this

24 Tighten the workpiece between the two domes

25 Turn away the last chucking point and blend in the curve

26 Refine the outside shape using a bowl gouge

27 If the bark comes away, clean up the natural-edge

Sanding the piece

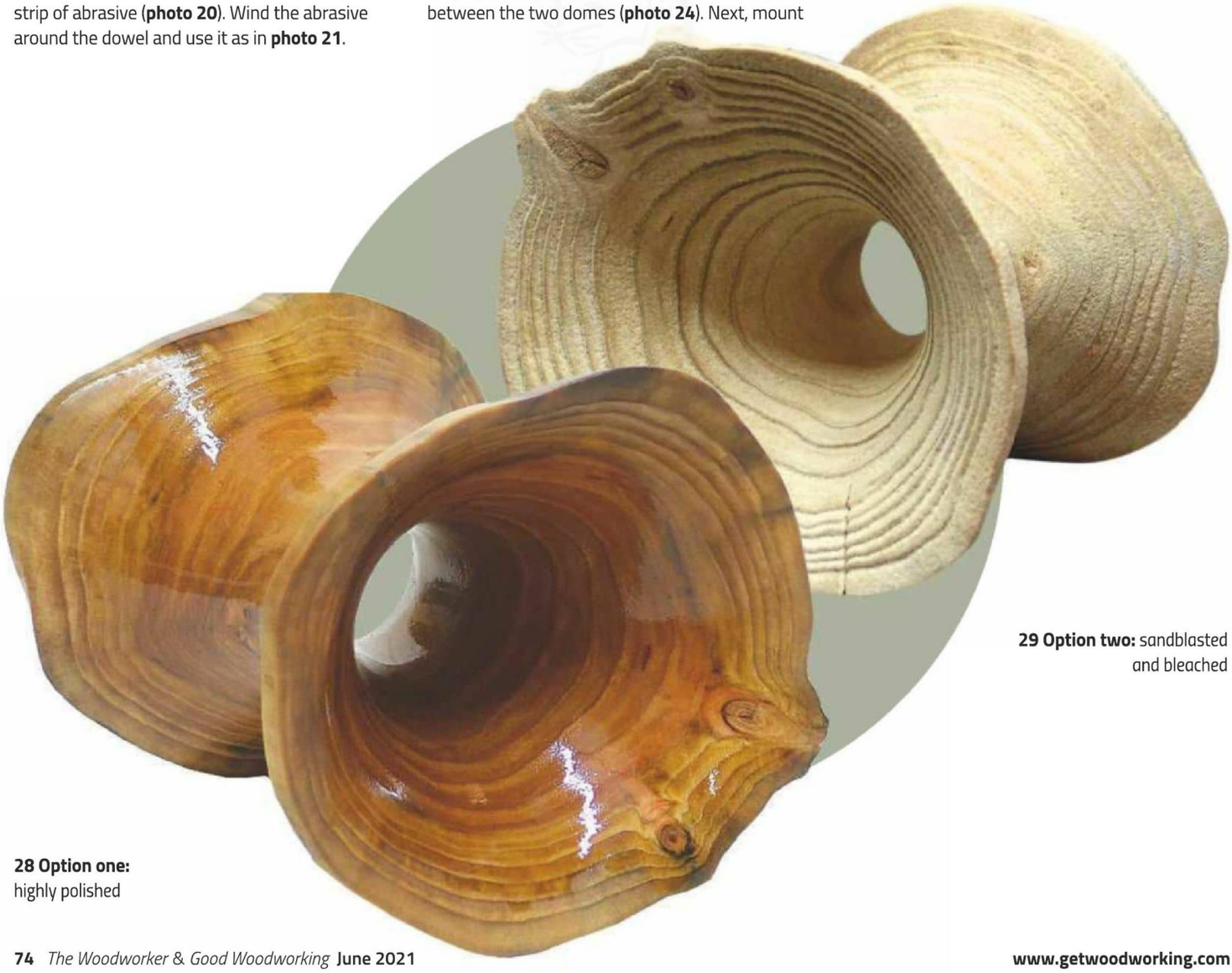
Reverse the tube and mount it in the recess, then hollow the other end in the same way. Again, I initially used the tailstock for support (**photo 17**) but at some point it needs to be removed to allow shaping to be carried out (**photo 18**). Glue the piece into the chuck jaws if you think it will help – I did! Take gentle cuts using the spindle gouge and blend the curve in with the other created at the opposite end. Sand this end to a finish. I used a mixture of hand sanding in the narrow part and power sanding where possible (**photo 19**). When I couldn't reach by hand sanding, I used a piece of dowel with some soft foam stuck to its circumference, a slot cut in the end to hold a strip of abrasive (**photo 20**). Wind the abrasive around the dowel and use it as in **photo 21**.

Making a mandrel

The piece needs to be reversed again in order to turn away the chucking recess and blend in the final curve. My method for this is to make a mandrel. You'll need to turn two dome shapes from scrap material and drill a hole through the centre of both (**photo 22**). You'll also need a length of studding. Mine was 12mm in diameter, so the holes through my domes were 12mm. The finished mandrel should look something like that shown in **photo 23**. You can, of course, alter the size of the domes to suit your needs. I cushioned both of mine with duct tape, to prevent damage to the workpiece, then mounted the tube on the mandrel, securing it by tightening two nuts, clamping the workpiece between the two domes (**photo 24**). Next, mount the mandrel in your chuck, gently turn away the chucking recess, then blend in the curve (**photo 25**).

Two options

Finally, refine the outside cove (**photo 26**), then sand to a finish. If the bark stays intact, I think this looks great, but if, like with mine, the bark is loose, then I advise removing all traces and hand sanding this edge (**photo 27**). As I said earlier, these pieces can look nice with a good, polished surface, so sand down to 1,200 grit and apply a wax or oil finish (**photo 28**). However, the reason I used cedar for this project was because I wanted to sandblast it. **Photo 29** shows the end result once sandblasted and bleached.



28 Option one: highly polished

29 Option two: sandblasted and bleached

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KEEP ON COOPERING

Passionate about preserving the ancient craft of coopering, **Jonathan Manby** – Master Cooper at **Theakston's Brewery** – talks to **John Greeves** about the specialist methods and tools used in a cask's creation as well as skills required

Jonathan Manby is one of the last traditional Master Coopers still working in England. Joining Theakston's in 1995 having qualified with an Advanced City and Guilds in cabinetmaking and furniture renovation, 20 years later, he found himself being honoured as a Liveryman of the Worshipful Company of Coopers and given the Freedom of the City of London. "Before I came into the coopering world," says Jonathan, "I always thought I'd go into furniture making." Looking back on how his career plans changed, and reflecting on his current position of Master Cooper, this ancient craft, now part of him, is one he passionately wants to preserve.

When he first started, there were 12 other brewers' coopers in the UK. By 2005, only five remained. Having recently qualified as a journeyman cooper, Jonathan's apprentice, Euan Findlay, comments that he "loved every minute" of his apprenticeship, and is "excited to continue learning" from Jonathan as his formal training draws to a close. Committed to helping the coopering tradition live on, Euan says he's "honoured to be one to the country's few remaining craft brewery coopers."

Wet coopering, a skill with an initial training period of up to four years, cannot be learned overnight and, for Jonathan, "requires a keen eye and aptitude for detail in order to joint, raise and bend staves, to size casks and finish to a high standard." Unlike other wood craftsmen, a cooper keeps his tools on the bench. Working at the block with a block hook, a bick iron – cooper's anvil – is used to work the hoop iron.

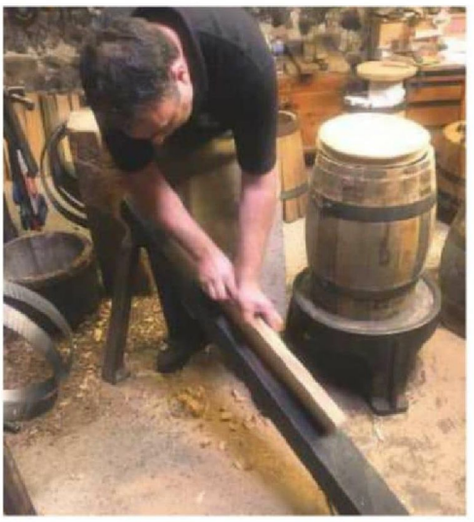
Overview of a cask

Made in various sizes – and traditionally referred to as casks – a barrel is just one size of cask holding 36 gallons. A pin holds 4.5 gallons; firkin 9 gallons; kilderkin 18 gallons; hogshead 54; puncheon 72; and a butt, 108 gallons. The wooden components that make up a cask are called staves; the top and bottom are both called heads or headers; and the rings, holding the jointed staves together, are hoops. No glue

2 Stave blank, listed stave and bent stave

3 Listing the stave with a side axe

4 A jointer plane puts a bevel or angle on each stave



5 Pushing the stave down onto a jointer plane

6 Hollowing the stave using a hollowing out knife

1 T&R Theakston Brewery's Master Cooper, Jonathan Manby, working on a cask

All photographs courtesy of **Jonathan Manby & Euan Findlay**

7 Hollowing continues on the block

8 Backing the stave using a backing knife

9 Raising up a cask – note staves inside raising hoop

10 Raising up the cask with hammer and driver both visible

or other adhesive is used in their construction. Beer is pumped into the bunghole in the side then sealed with a bung. Before serving the beer, a tap is hammered into the keystone situated in the top head. Casks have a convex shape and bulge at their centre – called a bilge – which makes them easier to roll and manoeuvre. The ends of the staves are called chimes and the hoops are usually made of mild steel. These are only fitted once the barrel has been fully shaped; temporary truss hoops securing the shape are replaced by these permanent riveted hoops.

Timber

The oak timber required must be straight-grained and knot-free. It's all quartersawn, so the medullary rays – which run 90° to the annual rings – stop the timber from being porous. Ironically, suitable English oak is hard to find, so the timber is sourced from the Black Forest in Germany. This is air-dried roughly for 12 months before being examined and then dressed. These days, Jonathan mainly makes firkins, kilderkins and pins, although he's familiar with casks of all sizes. Besides making new casks, much of his work involves their repair and maintenance. With the price of timber at an all time high, recycling is paramount, so wine casks, for example, are broken up and cut down, allowing smaller ones to be built.

CONSTRUCTION

Staves

The timber is cut to an exact length and thickness, with widths varying due to the fact it's quartersawn. This is known as a stave blank (**photo 2**) and the process called 'listing' (**photo 3**). Jonathan then joints the staves up using a wooden jointer, as he explains: "You put an angle on each stave edge (**photos 4** & **5**), which these days is carried out using a 6ft electric jointer." This is all done by eye, without the help of templates. The butt jointing must be very accurate in order to prevent leakage, and the cask is subjected to around 30 pounds of pressure per square inch.

Jonathan then locks the stave he's working on into his block hook, using a hollowing knife to remove the inside of the stave (**photos 6** & **7**). He then turns the stave over and 'backs' it by removing the two outside edges (**photo 8**). "Basically, you're making one side of the stave convex and the other concave," he confirms.

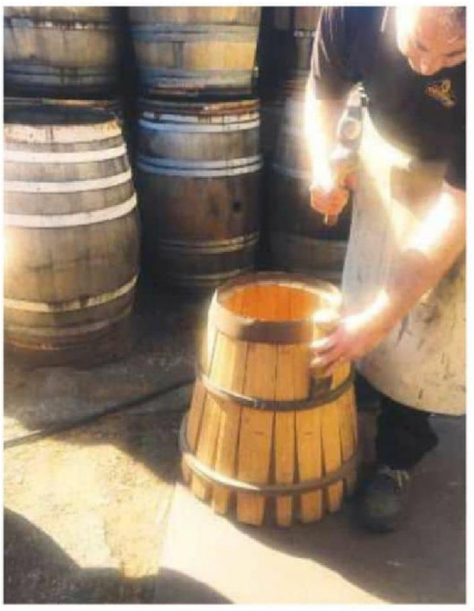
Raising up the cask

When enough staves are positioned, it's time to 'raise' the cask. Jonathan holds a raising hoop in his hand and places the first stave on the outside of his leg, using it for support as he works the staves into the hoop (**photos 9** & **10**). "You keep pushing back, maintaining the pressure against your leg until all staves are in place," he says, roughly 18-22 of which are required to make a cask, whether firkin or kilderkin. Once the cask is raised up, a runner or truss hoop is then driven over the top. Each size cask has its own dimensions and set of temporary trusses, with hoop sizes in ¼in diameters.

11 When sizing up the cask, a line is chalked around the inside, indicating where the groove will finish up

12 Sizing up the cask using internal diagonals and a piece of wood with bent nail, to calculate capacity

13 Cask raised up and almost ready for bending



14 Preparing for bending – final adjustment

15 Firing the cask

Sizing the cask

Next, the cask has to be sized to its finished capacity. The cask is the actual measure, and in the brewery industry, the cooper must judge this to within a pint of its capacity. Using a marking gauge, Jonathan puts a line around the inside, indicating where a groove will finish up (**photo 11**). Using the raised cask's internal diagonals and a piece of wood with a bent nail on it, humorously referred to by Jonathan as his 'computer', the capacity can then be calculated (**photo 12**). "Sizing up the cask can be difficult and it's one of the key things that has to be right, as we only have a pint tolerance. We're dealing with great pressure inside the cask while at the same time ensuring the correct measure goes out to every pub," he explains.

When distilled whisky is maturing in its cask or barrel, a small volume, called the 'Angel's Share', is lost due to evaporation. This is unlikely to happen with ale, however, due to its limited shelf-life, which is just four weeks.

Bending the cask

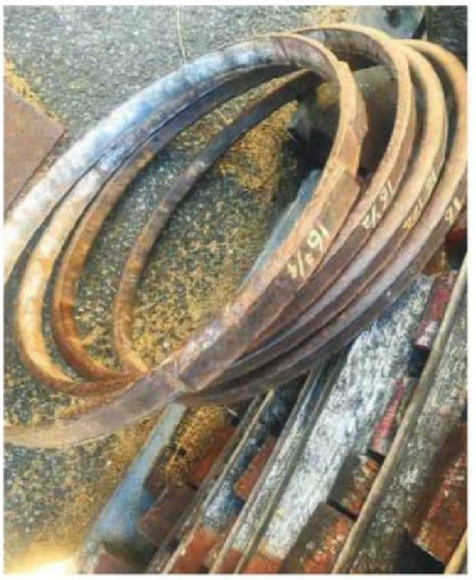
Once sized, the half-built cask is then ready for 'bending' (**photos 13** & **14**). If Jonathan is working on a run of casks, he'll put the raised one in to steam for about 40 minutes, before dragging it out using a wire rope, which is secured around the bottom. A hand winch draws the bottom in as truss hoops, knocked down using a 4½lb hammer and driver, maintain pressure on the timber's side. "Once you've pulled it into shape with the wire, we put a clip around the bottom to hold it in place, then remove the wire rope," Jonathan explains. The cask is then turned over and a truss hoop knocked down. When working on a cask, Jonathan says it's essential to have at least two hoops in place at all times. The cask can then be placed over the fire (**photo 15**), which warms up the inside and dries the natural resins, setting the barrel shape into its 'bent' form. Eventually the truss hoops will be removed (**photo 16**) and finished riveted hoops permanently put in place.

Shaving the inside & working the chime ends

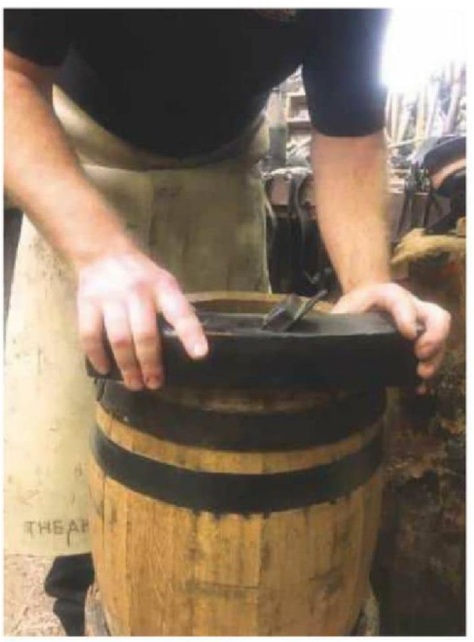
Work can now begin on the cask interior using an inshave – a plane for shaving or dressing concave or inside faces of barrel staves. Various sized casks will have different radii, thus requiring different inshaves. Once the inside has been dressed, one of the end hoops is removed anda ketch hoop put in place, allowing the chime ends to then be worked. To level off the stave ends, a curved – topping – plane (**photo 17**) and an adze are called into service. Once levelled off, a curved plane – a chiv (**photo 18**) – shaves off the inside of the chime ready for the croze, which puts a groove into the cask (**photo 19**). This must then be repeated on the opposite end.

Preparing the heads

The 'heads' are pieces of wood, usually dowelled together to form a circle, and fitted into the cask ends (**photo 20**). The top head



16 Different size truss hoops for varying cask sizes. These will later be replaced by permanent hoops



17 Using a topping plane on the chime ends

18 A chiv, used for rounding the cask ends, gives a perfect curve, before switching to a croze...

19 ... which is used to make a groove in the barrel head

20 Preparing the heads. Timber held together with dowels, which will be cut on a bandsaw

21 Using the heading knife

has the taphole, and Jonathan uses a compass to calculate the size of the head. These are jointed up and held together using two wooden dowels, with a piece of Norfolk reed placed between each joint. A bandsaw cuts the slightly oval heads, marked out on the timber, then it's back to the block (**photos 21** & **22**) where a heading knife is used to cut the front of the back head, such that it fits the groove. The head is then turned over and a side axe (**photo 23**) used to remove the rough, before adding a chamfer with a heading knife (**photo 24**).

Putting the heads in, drilling bung & tap heads, cask cleaning, belly & end hoops

After the heads have been made, the end hoop is removed and the cask head placed inside. From the other end of the cask, the head is manoeuvred into a groove with the grain of the timber in opposite directions; this keeps the cask round and mitigates against any shrinkage (**photo 25** & **26**). The back head is fitted first, then a bung drilled into the 'bung stave' – the widest in the cask. A silicon bronze fitment will be screwed in at a later stage.

The top head – where the tap is added – can now be fitted. If the top head doesn't easily fit into its groove, a knocker-up through the bung stave is used to position it. The end hoops are then replaced and the cask exterior cleaned off using a downwright tool (**photo 27**). The marking gauge is utilised here and chalk lines drawn to indicate where the permanent belly hoops will be fitted (**photo 28**), using hammer and driver (**photo 29**). All permanent hoops are made on the bick iron and riveted together using blunt nose rivets. A cooper's

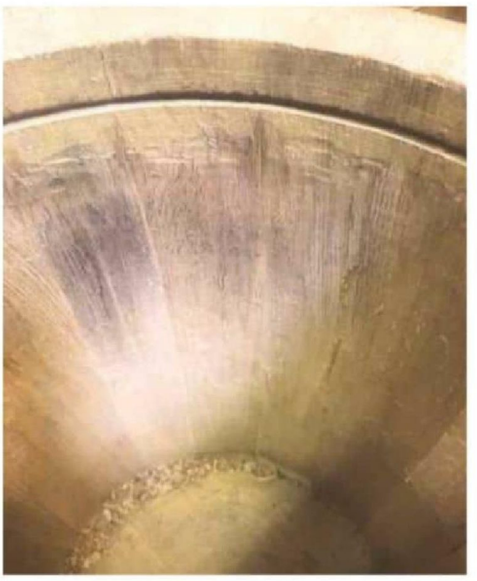
BARREL MAKING TERMS

Chiv – used for rounding the ends of a cask to give a perfect curve
Croze – used for making the groove for the barrel head
Downwright – used for drawing joints on whiskey casks
Cooper's axe – used for lifting new staves (wooden slates)
Driver – used for tightening the hoops
Heading knife – used for cutting the front of the backbase on the barrel (edges are shaped to fit the groove)
Topping plane – used for levelling staves in the barrel end
Trussing adze – used to hammer on hoops
Hammer – 4½lb hammer for hitting down the driver to secure either trusses or hoops
Bick iron – cooper's anvil for making the hoops and attaching rivets
Auger – to drill a bung hole or taphole
Inshave – used to level out joints on the cask interior
Cooper's bar – used to put endings down as a hammer doesn't have a large enough surface onto the hoop
Compass – used to determine the size of a head
Knocker-up – a bent bar for knocking the head into position

22 Work continues on the cask head

23 Using an axe to prepare the heads

24 Side view showing heads being prepared



25 Looking down into the cask. A groove at the top indicates where the top head will be fitted

bar puts the end hoops down (**photo 30**), as opposed to a hammer, which doesn't have a large enough surface.

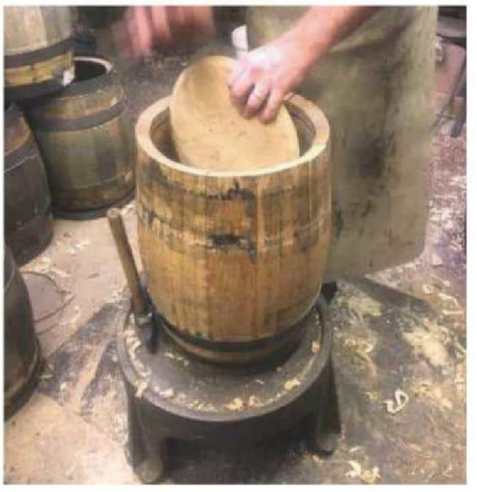
Painting, branding, numbering & block marking

The chime ends – porous in nature – are then painted red, which also allows identification. Each cask is branded using firebrands and assigned an individual number – so its history can be traced – along with the brewer's name. "Once this task is completed, we can add our block mark," says Jonathan. Acting as identifying initials, the block mark tells those looking at the cask who worked on its construction. If repairing a broken cask stave, a cooper puts their block mark on that particular component. According to Jonathan: "In the olden days, when you were on piece work, that's what you got paid for."

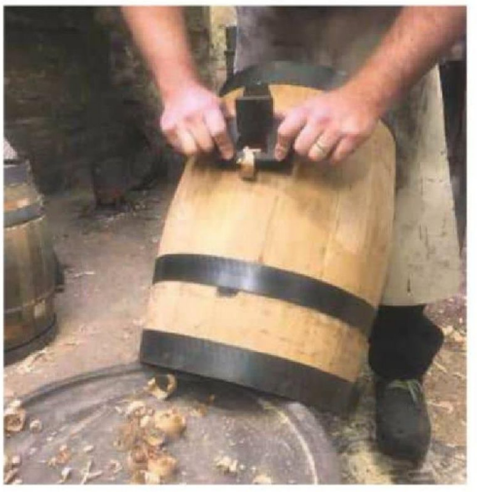
Today's concern, however, is different, and highlights the steady decline in wet coopering, which has been steadily falling since the 1950s. If this craft is to remain, then these traditional skills must be kept alive and passed on to future generations, which will ensure that this particular form of coopering not only enjoys a long term future, but is also given the true support it ultimately deserves.

FURTHER INFORMATION

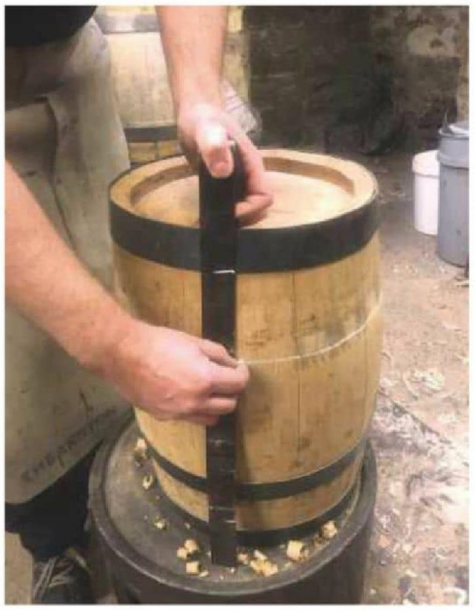
To find out more about the Theakston Brewing Company, see **www.theakstons.co.uk**



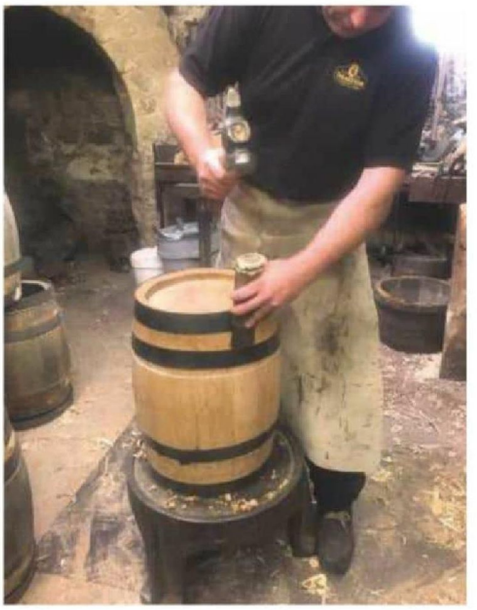
26 Manoeuvring the head into the groove



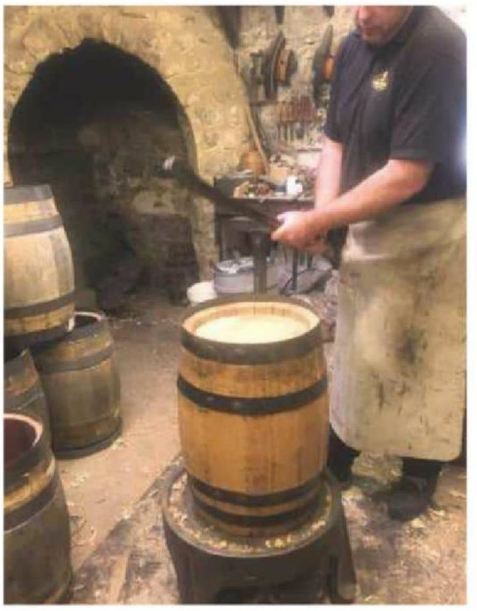
27 Using a downwright to clean up the exterior



28 Marking for the belly hoop



29 The belly hoop is driven down using a hammer and driver



30 A cooper's bar is used to put the end hoops down

The seat with no feet

Tony 'Bodger' Scott makes a garden seat that won't foul a mower

All done. Close up, sanded and sealed, the seat looks thoroughly welcoming

From time to time, my shed gets too full of dust and I need a break, but every garden seat I've seen has legs – and they're a pain. Every time you cut the grass, you have to move the seat, cumbersomely mowing around each leg, or buy a strimmer and go around the bench a second time once you've put the mower away. I wanted an easier solution.

Construction

Eight 150mm coach bolts later, I had the beginnings of an answer: four stout joists, half-jointed around a pear tree (**photo 1**). That still left me with a worry: could the two joists on the underside of the half-joints cope with weight that would tend to open them up? I decided to arrange the first two planks of the seat so that they held the vulnerable joints together (**photo 2**). It was then merely a matter of fitting more planks across the joists; an octagon seemed a neat compromise between elegance and strength (**photo 3**). The seat isn't exactly symmetrical, but the tree isn't either.

The outermost angled pieces were simply lined up with the inside corners of the squared ones and trimmed off along the outside edge. A little wood-filler for the screw heads, some sanding, a couple of coats of teak oil, and the result is fairly unobtrusive (**photo 4**), yet sturdy enough to jump up and down on. The seat doesn't seem to have bothered the tree, and two years on, it's still growing and producing handfuls of pears for me and the local wasps.

1 The core structure. I started with one coach bolt to hold the first joist; a spirit level on top allowed me to accurately drill a hole for the second coach bolt, then guided the placing of a parallel joist. It was then a straightforward task of positioning and marking half-joints for the cross-members

2 Bracing the half-joints. Placing the first two planks for the seat along the length of the lower joists meant I could screw in to both sides of the joints, strengthening the joists considerably

3 Half done. Filling in with planks was fairly easy. Gaps between the planks let the rain run off, and undercutting the ends of the joists avoids scraped calves while making the seat look lighter

4 Unobtrusive. From a distance, the seat looks a little like a frisbee that's hooked itself on to the tree!

Les Thorne takes things up a notch, turning a pair of 1.8m high architectural columns on his large capacity lathe

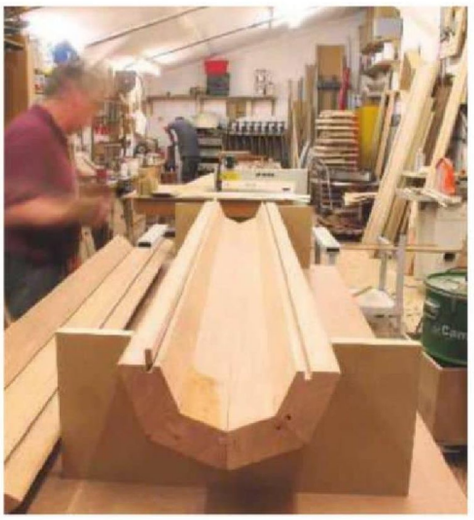
TURNING BIG!

When I first started my turning career, I vowed to never refuse work based on the fact it was either: 1) boring; 2) too big; 3) involved a difficult timber. This created problems in itself as the capacity of my lathe seemed to grow with each enquiry that came in. Having been in business for some 20 years, I've now developed a reputation for turning big projects, in terms of both length and diameter. The large diameter jobs – up to 1.8m – tend to be mouldings for door frames and windows, with one requiring less than 25% of the finished circle, the rest being waste.

I've managed to increase my lathe's capacity by adding two extensions, giving around 2,800mm between centres and providing plenty of capacity for turning architectural work. This particular job, for a well-established local building company, was unusual in that some of the columns were required to fit into a screen, with the windows fitting into the column sides. I'm lucky to have such a clever brother, who produced the blanks for the project in the workshop next door. Having an input into the manufacture of work such as this is very important. Doing so will ensure it's laminated up properly and won't open up during turning.

The timber is coopered to accommodate a drain pipe running up the middle. This method results in less timber being used and therefore a lighter blank. Although taking longer, it's preferable to making them from blocks.

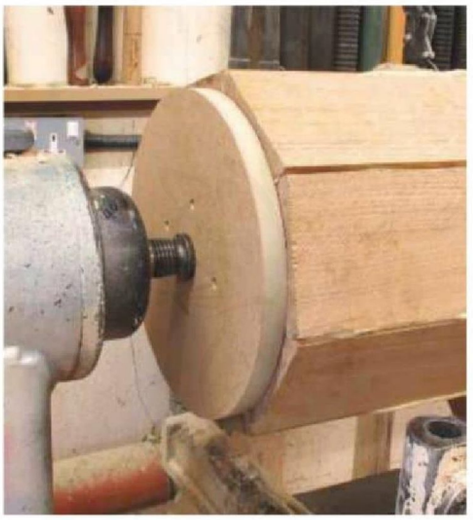
1 The porch columns are made from kiln-dried European oak. I start by drawing out a section according to the dimensions, then machine it. The angle on each is 22.5°



2 Here, Stephen is using a cradle to hold the columns. The loose tongue makes the joint much stronger. As well as increasing the gluing surface area, it also aids construction

3 Clamping is really important and these ratchet straps offer the only practical method of holding the timber together while the glue dries. I've found that a good quality polyurethane glue is perfect for this type of work

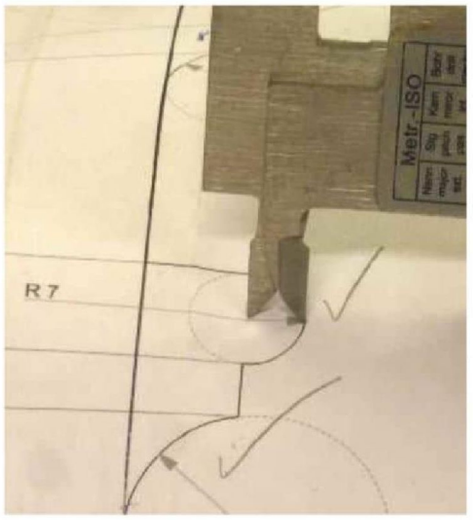
4 Always ensure you use enough straps and clamps. On this job, every 2ft seemed to be about right, with the glue just squeezing from the joints. If I'm feeling nervous about the joints, I'll leave the straps in place as I start to rough down the timber



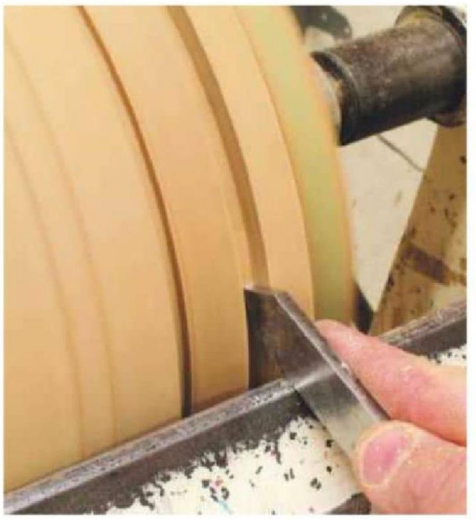
5 An octagonal section of timber, made to fit into the hole, was glued and screwed to a piece of MDF before being attached to the end. It could then be mounted on the lathe

6 The Axminster Jumbo Drive is fine for work of this size, but I like to insert it into a 38mm hole, which ensures it has some support on the outer edge. In addition, I always use a live centre with a ring and a point, which provides extra stability

7 Off we go. On a piece like this, I keep lathe speed at around 250-300rpm. The spindle roughing gouge is locked to my side and the cut made by moving my body left and right. You can see how strong this makes the cutting edge



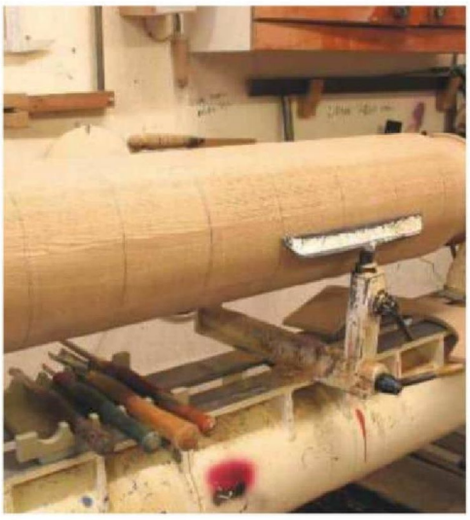
8 The blank is now round but not to size – I prefer to work the tailstock end first. The top has a simple shape and I'm working from full-size drawings, which always makes things so much easier



9 The sizing cuts are completed using the same method as for smaller work. There's no need to use bigger tools just because the project is larger – just make sure you're not overhanging the toolrest too much

10 The bead on the end is shaped using a spindle gouge. On large width (25mm) beads like this, mark the centre, then roll the curve away from the line, leaving the pencil mark on the timber

11 The major stock removal can now take place. The spindle roughing gouge is used like a big spindle gouge to remove the stock as quickly as possible; a bowl gouge, although slower, is a safer option, as it's less likely to run back on you



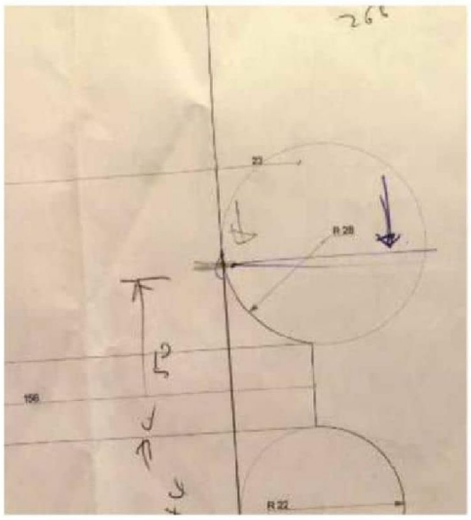
12 Here you can see the various diameters marked on the column. The bottom third is parallel before gently tapering to the top, which ensures the shaft will look properly proportioned. Using the architect's drawing program, I was able to work out the sizes

13 As the timber's diameter is too large for callipers, we made up some MDF sizing gauges. These allowed us to mark each dimension as we worked our way down the column

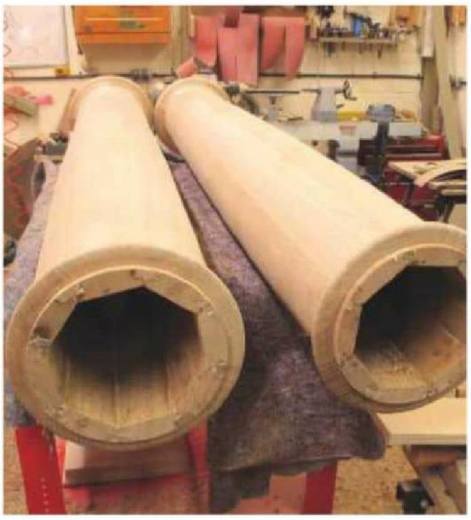
14 I worked my way down to the correct size using a 13mm round skew, doing the same with the remainder of the length. On reaching the correct size, ensure the cut is as light as possible otherwise you may damage the fibres on the project's surface

15 Achieving a smooth, subtle curve on a piece this long is never easy. You can see the position of my head in this photo – my eyes are on the far side of the column, focusing on the shape as it appears, as opposed to what the tool is doing

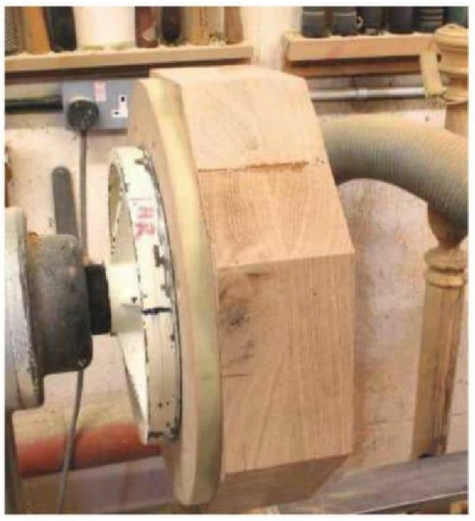
16 No matter how good your tooling, you'll find it difficult to cut it all perfectly. Sanding is a very important part of the whole process; I attach the abrasive to a length of board, which helps to 'iron out' any discrepancies



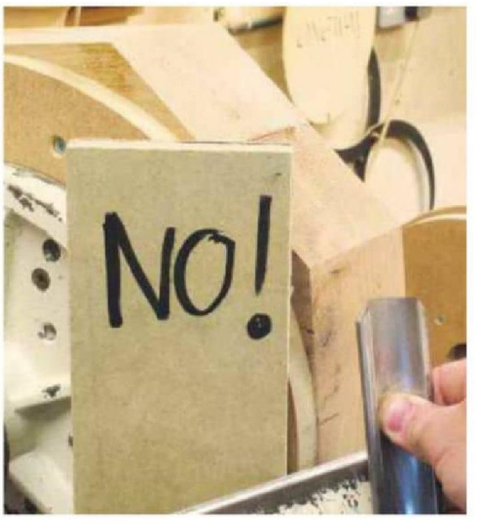
17 Due to the diameter of the bottom moulding, I decided to make this separately and glue it on, which would save timber and machining costs. We had to decide on the best position for the join, which in this case was just above the curve



18 Here you can see the spigot created on the bottom of the shaft. This was cut in using a parting tool, to no fixed diameter, as I had to retro-fit each to the others in turn

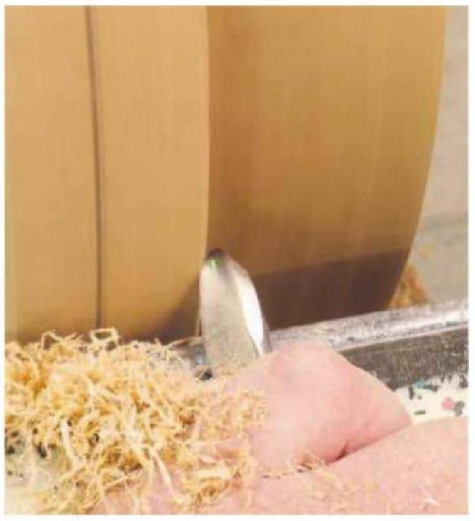


19 The grain is running horizontally on this piece rather than vertically, as with the shaft. I screwed it to an MDF faceplate, carefully placing the screws to ensure I wouldn't cut into them



20 Never use the spindle roughing gouge on grain orientation like this; it'll grab the end-grain as it revolves, causing a major accident, and even leading to tool breakage in some cases

21 A 13mm bowl gouge is the perfect tool here. Be mindful of the wood splintering, which occurs due to the timber being laminated up. Work the timber just as you would a bowl blank

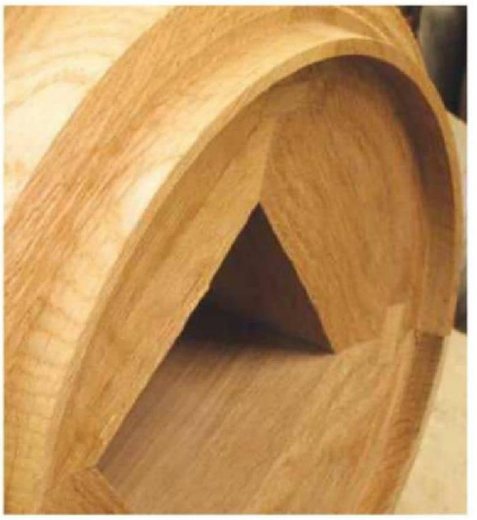


22 The shaping of the bottom bead is best done using a 13mm signature gouge. You can see that by using a pull cut, I'm working from the smaller diameter to the larger, so in effect uphill, cutting in the direction of the grain

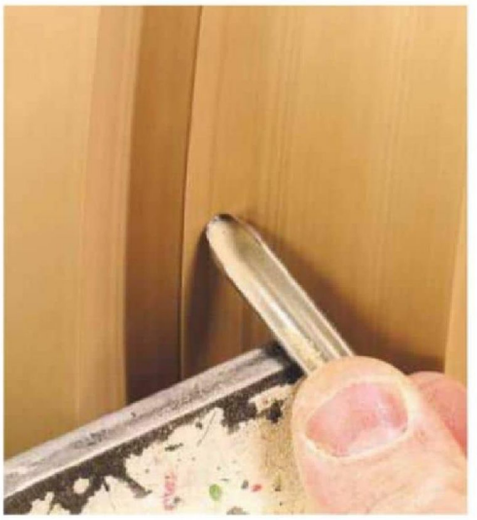
23 As I cut a spigot on the column before taking it off the lathe, I'm able to transfer this size onto the base's face. The hole up the middle will allow the project to accept a drain pipe, as mentioned earlier

24 The bulk of the female part of the joint is removed using a gouge, in the same manner as you'd hollow a bowl. The sides are trued up using a round skew chisel, or bedan tool

25 I've unscrewed the faceplate, which allows me to offer the dimension up to the column. This is undoubtedly the best method to ensure you get it right, and time spent now will save any problems later on

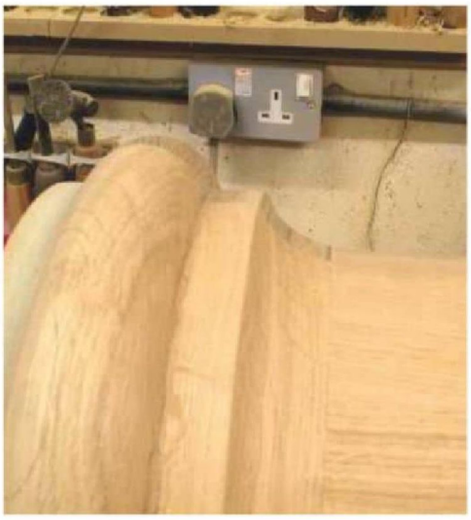


26 Once the correct internal diameter is established, I take the external size down to just over what I'm going to need. Doing as much of the shaping as possible now means you can use a higher lathe speed, thus making the cutting easier

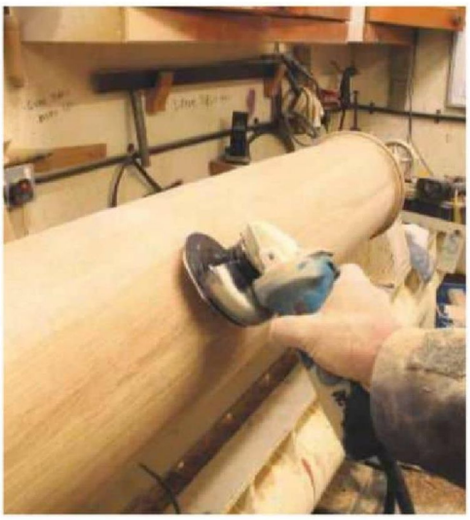


27 A perfect shot of a small tool working on a big project. The 10mm micro bevel tool leaves a glassy finish on the oak, as well as fitting easily into a tight curve

28 The male part of the joint – the spigot – can now be fixed into the base using polyurethane glue. Pressure from the tailstock clamps the piece in place while the glue dries



29 Leaving the diameter of the column slightly oversize at the bottom allows me to blend in the shape, creating a flawless curve like this. The quality of joint is paramount in terms of the project's appearance and integrity

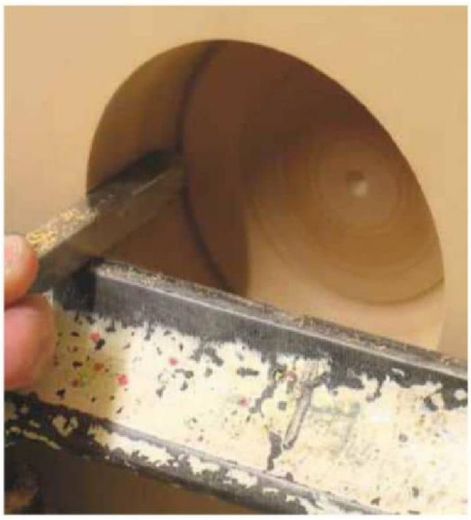


30 The columns are going to be left 'au natural', so therefore need to be sanded to a good finish. Normal sanding techniques, while slower, will work, but I prefer to use an angle grinder fitted with a 130mm disc

31 You can see the results here. This photo demonstrates why I wear a full face air-fed respirator, which ensures I can work comfortably and safely in a dusty environment. I'm yet to find a dust extraction system that can cope with this

32 The tops are now glued and screwed to the columns. The bases have been manufactured flat, which ensures a good mating surface to where they'll eventually sit. Flat is better than concave as it stops any water ingress

33 The last piece of the puzzle is the square capital for the top. This particular design has a square top, which I wouldn't normally get involved with, but as the column required a hole running up its middle, I decided to turn it out



34 As the piece was centred on a faceplate, I had to first remove the middle using a gouge, as with a small bowl, then clean up the sides using a bedan tool, which is perfect for making them parallel

35 The columns were then returned to my brother's workshop where the final touches were added. Finally, the square capitals were screwed in place using a good quality wood screw, which then completed the job

36 The architectural columns in situ, ready to be painted, tying them in with the rest of the building

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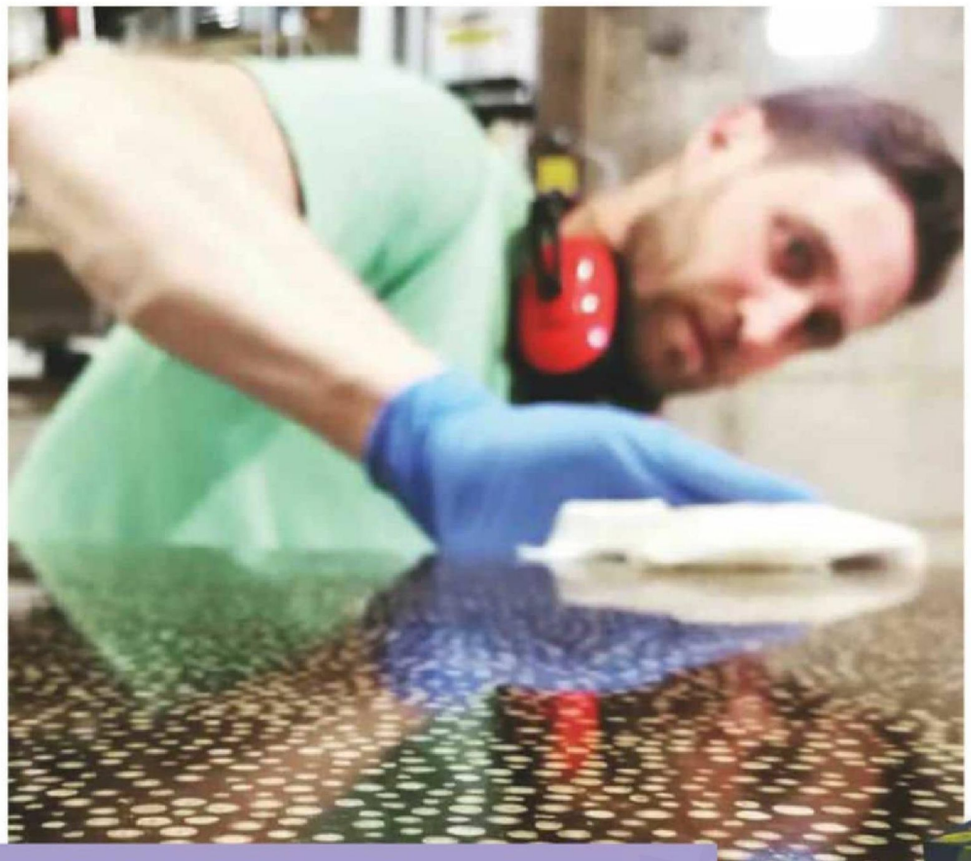

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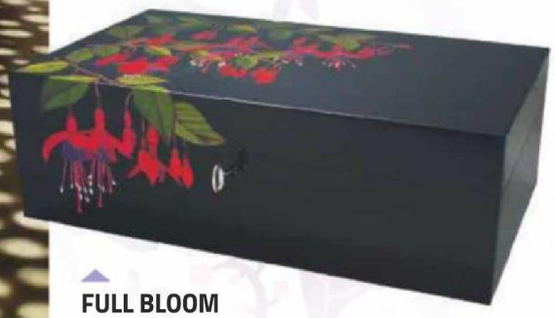
Awarded Bespoke Guild Mark No.465 for his stunning 'Sika' console table, self-confessed 'materials geek' Laurent Peacock fuses custom-made surfaces and unexpected material combinations, which keep the viewer guessing and wanting more – Martin Pim-Keirle delves deeper



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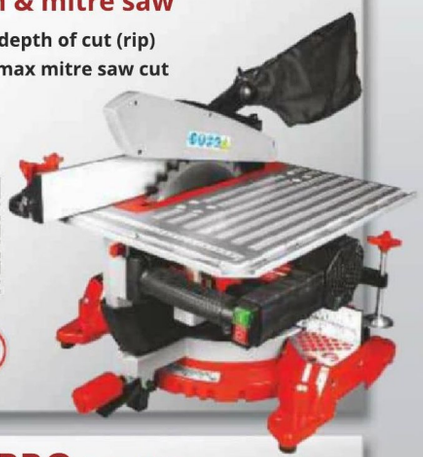

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- This space is available only to private individuals wishing to buy or sell woodworking machinery and tools.
- The maximum value of any item for sale must not exceed £500. A small fee is payable for items offered at over £500; please ring **07402 735 093** for details.
- Each coupon is valid for one free insertion in the next available issue.
- The publisher accepts no responsibility for errors or omissions in this section.

Name _____

Address _____

_____

Postcode _____

Daytime tel no. _____

Signature _____

My advertisement (max 20 words please) reads as follows:

_____

_____

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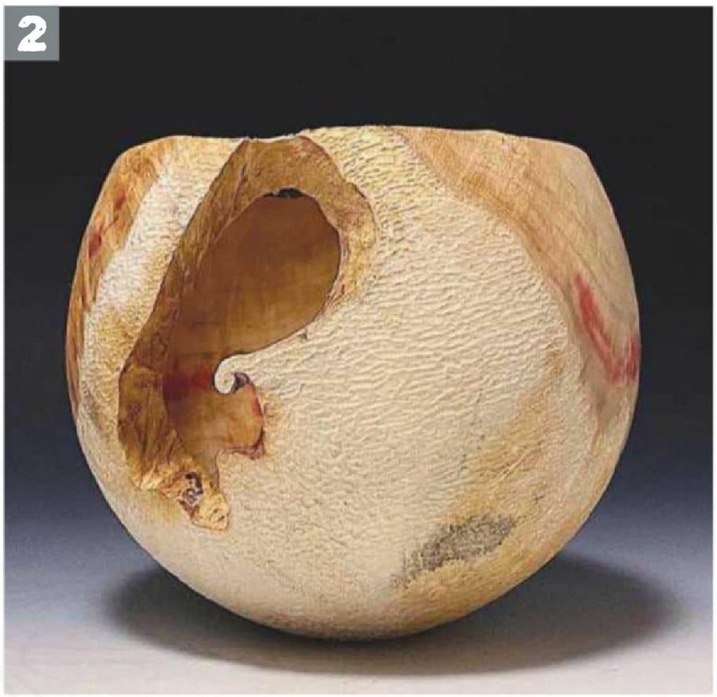
Please write your advertisement in **BLOCK CAPITALS** and send it to:
The Woodworker Marketplace, MyTime Media Ltd, Suite 25, Eden House, Enterprise Way, Edenbridge, Kent TN8 6HF. You can also email your free ad to: **tegan.foley@mytimemedia.com**. Send/email a photograph of your item and we'll include it with your ad for **FREE**

TAKE 5

There's something of a magic feel to this month's selection of woodworking gems from Instagram, including a stargazing chair fit for a Viking and a carved lily made to honour a Russian legend



1. Viking stargazing chair in oak by **@edwoods_original**
2. Stunning boxelder turned bowl by **@naturalselectionstudio** – 4.5in tall × 5.5in diameter
3. Beautiful custom hardwood sideboard by **@sawyer_design** featuring hand-blown borosilicate glass accents by **@lammiglass**
4. Multi-layered button by **@sauerbuttons** turned in blackwood, boxwood and magic medicine nut
5. 'Turk Caps Lily Carving: the legend of Zlatorog, Golden Horn Part 3' by **@gabriel_wild_woodart**

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

WE SHARE YOUR PASSION

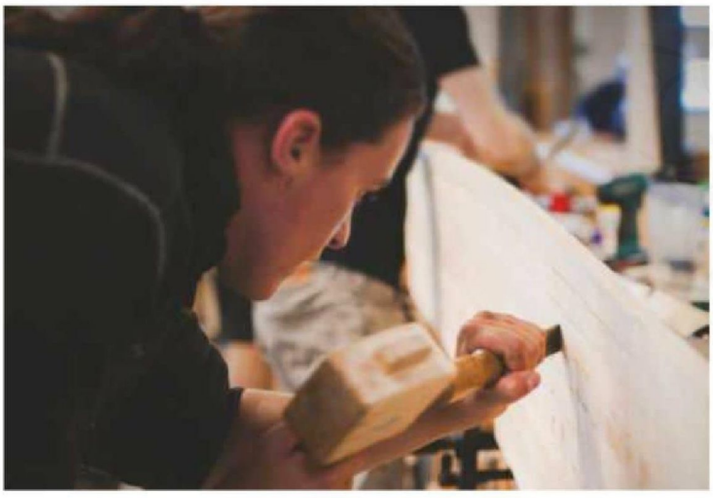
Axminster Tools are specialists who share your passion for great craftsmanship. We do this by offering the products you need, the knowledge you trust and the committed service you deserve. As a company we're constantly seeking new ways to help the woodworking industry and the communities we support in building a sustainable future.

COMMUNITIES

Axminster wouldn't be Axminster without the people we work with and the communities within them. That's why it's so important to us that we are able to support them; financially where we can, but also through sharing our time and our knowledge. One of our passions is in connecting people; we like to share and create connections between existing communities and build new ones. We've seen strong communities built around our stores, on our forum and more recently through our social media. In January 2021 we launched Woodworking Wisdom and the promise of three live video sessions a week. It has created the ideal platform for interaction between fellow makers and an opportunity to ask our experts questions as they work. We can't wait to watch this new community grow.

ENVIRONMENT

We're deeply concerned about the world we live in and we're committed to reducing our carbon footprint and the impact we have on the environment. We've been operating our main site on a 'zero to landfill' basis since 2014 and we continue to look at ways to improve our packaging. We constantly evaluate our product and the materials we use to ensure the strength and quality remain while asking if there is a better alternative for the environment. This year we're teaming up with Grown In Britain who will be supporting us in ensuring the timber we use is sustainably sourced from properly managed forests. We're looking forward to sharing what we learn with our customers and communities.



EDUCATION

We're passionate about woodworking; the craft, the industry and everyone in it. It's important to us that we play our part in ensuring that the industry continues to grow and thrive, attracting new craftspeople and developing and sharing the skills of existing members. We actively support a number of educational establishments and have been working alongside organisations including The Furniture Makers Company, Institute Of Carpenters and The Queen Elizabeth Scholarship Trust to help bridge the education skills gap.

CUSTOMERS FIRST

We know our customers come from different backgrounds with varying levels of experience but they all share the same desire for a job well done. We pride ourselves on the calibre of our staff and we work hard to ensure you're getting advice from people with both up-to-date product knowledge and real industry experience. We're here to help those who want to develop their craft at home and we support businesses in achieving their goals. All while ensuring our customers receive the best possible service however they choose to shop; online, in store or over the phone.

AXMINSTER TOOLS

We share your passion.

To find out more, **visit one of our stores**, search **axminstertools.com** or call **03332 406406**.

For the complete Axminster experience and to keep up with events, news and much more, browse knowledge.axminstertools.com and follow us on social media

AXMINSTER • BASINGSTOKE • CARDIFF • HIGH WYCOMBE • NEWCASTLE • NUNEATON • SITTINGBOURNE • WARRINGTON

Rated **'Excellent'** on Trustpilot

RECORD POWER
ESTABLISHED 1909®

THE NEW STANDARD FOR WOODTURNING

We are proud to introduce our new range of turning tools, made in the UK at our in-house production facility. Designed in consultation with and tested rigorously by professional woodturners, they represent a new standard in quality and value.

When you buy a Record Power turning tool you are investing in many years of manufacturing expertise and knowledge from a brand with a rich heritage of woodturning specialisation.

"The new Record gouges have fantastic edge longevity and strong ergonomic handles. All you need in a quality woodturning gouge: stay sharp, feel good and turn well."
Andrew Hall RPT, Professional Woodturner and Tutor

ONLY
£99.99

3-Piece HSS Bowl Turning Tool Set

This set contains the three essential tools for bowl turning - 3/8" bowl gouge, 1/2" domed scraper and 3/16" parting tool.

103720 - **£99.99**

3-Piece HSS Spindle Turning Tool Set

This set contains the three essential tools for spindle turning - 1" spindle roughing gouge, 3/8" spindle gouge and 1/8" parting tool.

103710 - **£99.99**

Free online educational videos available at **recordpower.co.uk/turningtools**

View our full range at recordpower.co.uk Bowl Gouges | Spindle Gouges | Spindle Roughing Gouges | Skew Chisels | Scrapers | Parting Tools

All prices include VAT. E&OE.

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MADE IN THE UK

Over 100 years
Experience • Knowledge
Support • Expertise

Incorporating some of the most famous brands in woodworking, Record Power's roots stretch back over 100 years.

RECORD POWER
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For more details visit recordpower.co.uk or contact your local stockist

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