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Taper:	2 Morse taper
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Woodturning 317



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Online Review



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Woodwork on the web

To find more great projects, tests and techniques like these, visit our fantastic website at:
www.woodworkersinstitute.com



Hello everyone and welcome to the May issue of Woodworking Crafts



The year is leaping forward it seems, May now, how long before summer? Not long at all. Hopefully some of the outdoors projects in the April issue may have inspired you to get creative in the garden in time for better weather. I've said it before but I am a fresh air woodworker, I prefer working outside to being stuck in the workshop – weather permitting, of course. You can do many tasks, building and applying finishes just as well as you can indoors.

A walk in the forest

That brings me neatly to two things – one, our very own Mr Outdoors, Gary Marshall, who writes so knowledgeably about Woodland Ways, is taking a well-earned break to imbibe the beauty and majesty of the forest, but he assures me he will return a little later in the year with more fascinating information about woodland and the environment. I always read his articles and learn something new every time.

A new series

The other thing which is generally done indoors for very practical reasons is making joints. Just as woodworking is nothing without tools, it is also equally nothing without joints. There is very little you can make without fixing it securely together somehow. So it seemed about time to take a good look at woodworking joints, from the simple to the more complex, the strong and the aesthetically pleasing and sometimes both in the one joint. So we start a new series, easing ourselves in, looking at tools you need, the facilities you need and making that first all-important cut. Next month we will look at the deceptively simple butt joint and then each successive month we will tackle different kinds of joints and the various ways you can make them. So keep reading and hopefully you can explore joint-making for yourself and improve your skill level at the same time.

73

Anthony Bailey, Editor
 Email: anthonyb@thegmcgroup.com



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Design INSPIRATION

A dining suite is an important set of furniture. It's easy to get wrong, so good design is everything, from comfort to style and durability – it all matters. Here are some solutions using wood rather than glass or chromed steel



Dining table and chairs with grey laminate top and upholstery to match, by Martin Humphries

PHOTOGRAPH BY GMC/ANTHONY BAILEY



A simple, elegant oak chair design, by Chris Tribe

PHOTOGRAPH BY CHRIS TRIBE



An Arts & Crafts-style dining table, by Mark Ripley

PHOTOGRAPH BY GMC/ANTHONY BAILEY



An extendable dining table with contrast extension pieces in place

PHOTOGRAPH BY GMC/ANTHONY BAILEY



An elegant, dark-finish suite with a delicate-looking back design

PHOTOGRAPH COURTESY OF SHUTTERSTOCK



An unusual dining chair with angles and exposed jointwork by Andrew Preston

PHOTOGRAPH BY GMC/ANTHONY BAILEY



An oak table with a 'hayrake' stretcher underneath, by John Bullar

PHOTOGRAPH BY JOHN BULLAR



An elliptical drop-flap table with flared legs and crossover stretchers, by Mark Ripley

PHOTOGRAPH BY MARK RIPLEY



PHOTOGRAPHS BY BRENDAN DEVITT SPOONER

Dining table and chairs

Fine dining courtesy of
Brendan Devitt-Spooner



A matching set

To accompany the pair of sideboards/ display cabinets I made which were featured in issue 39, the clients also desired a dining table and a set of chairs. The whole set was to be made in a combination of the timbers used for the cabinets, thus being English oak and English ash but also featuring sapele as a nod to some of the existing pieces of furniture. Oak was going to be used for the table top while ash was used for the table underframe as well as the chair frames.



TABLE DESIGN AND BUILD

The clients wanted an octagonal table with an 'across flats' dimension of 1350mm. This would give each edge a length of about 520mm. In an ideal world, 600mm is desirable to give the diner enough elbow room – being octagonal with meeting angles between each facet made this less of a problem – the height to be a standard 736mm.

Frame construction

I always begin making a table by constructing the frame first. This has the benefit of having it ready to accept the top soon after it has been made and not having a large top leaning against the wall where it might be subjected to damage and undue movement.

Essentially the frame consists of two cross-frames which are separated by eight vertical legs. The components were first roughed out from 50mm ash boards and machined slightly oversize to rest for a few days, allowing for any movement in the timber before being prepared to the required dimensions. The cross-frames had a cross-section size of 90 x 45 mm. The legs were also 45mm thick but four of them were 100mm wide and the other four were 70mm wide.

The cross-frames were joined using a simple cross-halving joint. Other joints could be used but I like having the continuation of timber in each piece. The joint could be strengthened further if it was felt necessary by screwing the two pieces together from underneath. I cut the joints on the router table with the height set at fractionally less than half the thickness of the member. It is important to get the depth right as too shallow will result in the pieces not fully going home or if too deep there will be a void on the inside of the joint. Rather than cutting to the full depth of the joint I stopped short by a millimetre. This would allow for final edging with a hand plane to achieve a tight fit. Putting the two pieces together I prefer to use a G-clamp and slowly pressure them together, rather than using a mallet or hammer, as I find it gives you a little more control and less risk of damage.

Joint cutting

With the two crosses complete, the mortises could now be set out. I took all the measurements from the cross-halving joint to ensure that the upper ones would correspond with the lower ones. I cut the mortises using a 16mm bit on my

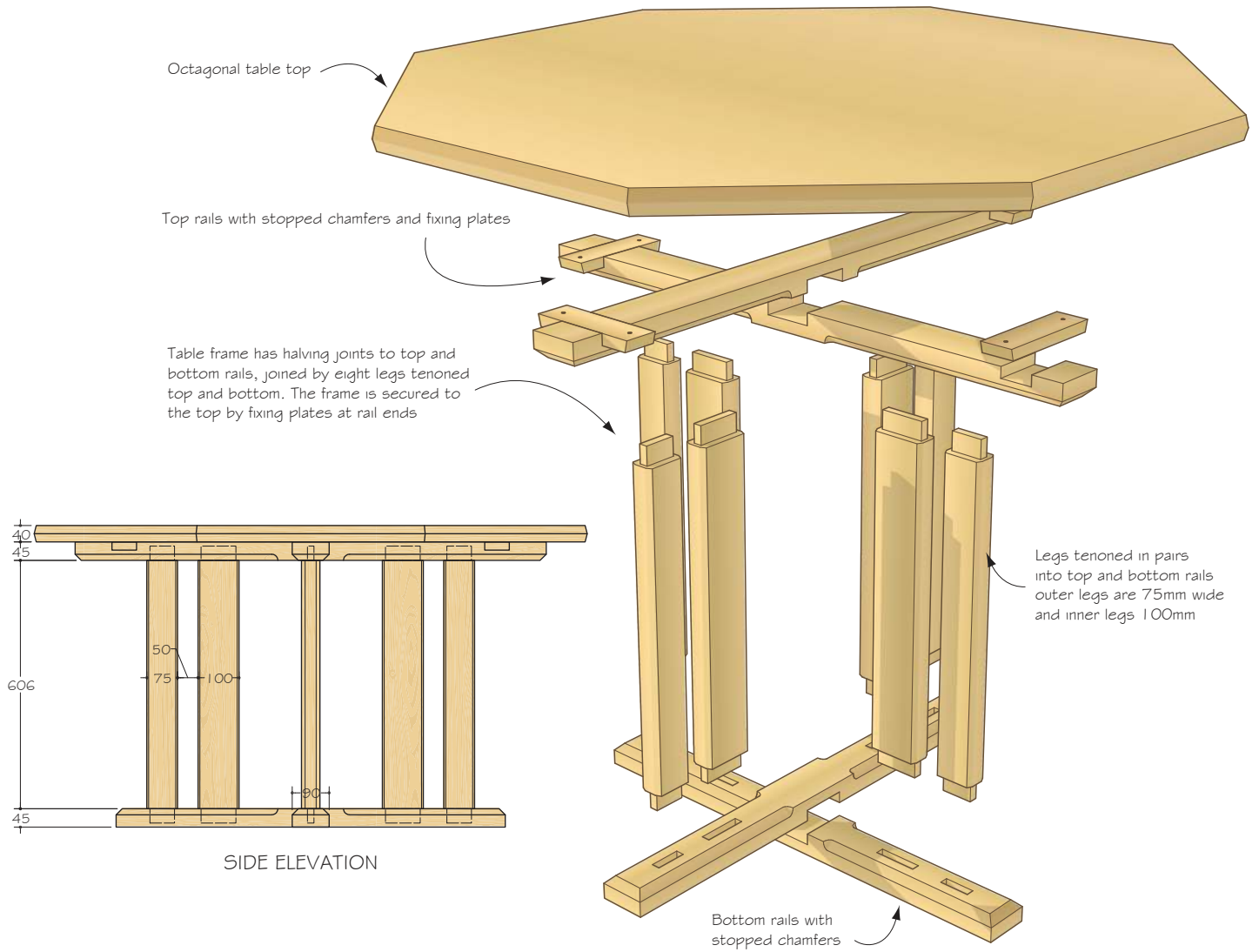


mortise, setting the depth to 40mm to prevent any breakout. With the mortises complete, the legs could now be tenoned. Before marking them out I needed to ascertain the actual length of them, bearing in mind the thickness of the table top. Allowing for a little 'glue gap' I arrived at a length of 678mm. Tenons can be cut in many ways. I am fortunate to have a tenoner which, after a set-up, can form the cheeks very quickly. The length of the tenon could then be cut on a bandsaw and cleaned up with a chisel.

A dry run was now tried to make sure all the joints went together. Eight sash cramps needed to be used along with scrap pieces of timber to prevent damage to the ash. Attention could now be turned to the shaping and finishing of the components. Before this I glued up the two cross-frames using a pair of G-clamps on each and scrap timber for protection. Once the glue had dried they were passed through a wide belt sander to achieve two flat frames. Using a bearing guided bevel router bit a bevel was formed on the facing faces of the two frames. A similar shape was formed on the legs by passing them through a spindle moulder with the appropriate cutter. The last operation before sanding, finishing and gluing was to form the trenches on the top side of the upper cross-frame to accept the joining plates which would hold the top down. Like the halving joints they were also formed by passing over the tablesaw with the blade set at a depth of 20mm. See drawing (page 8) for details.

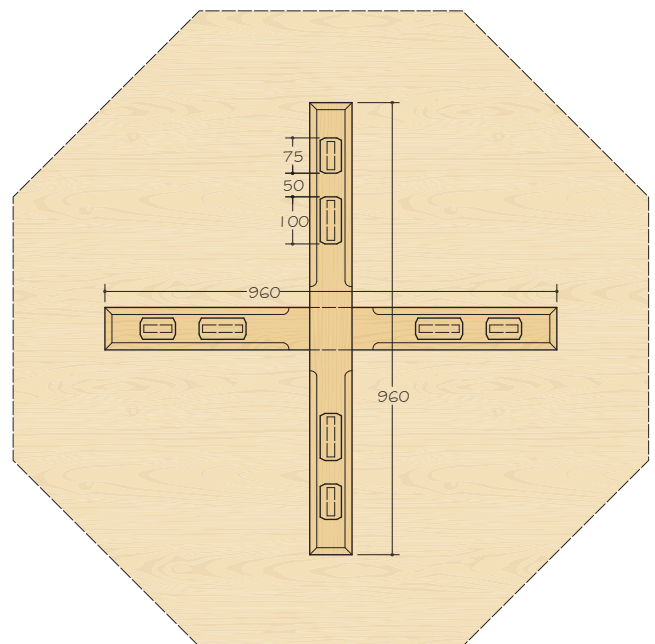
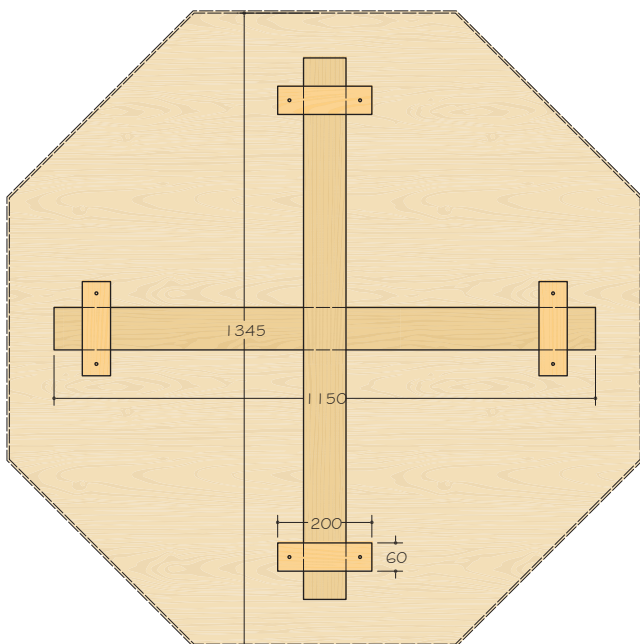
With the components sanded and finished the whole construction was glued together using PVA and left to dry. Once it was held together with eight sash clamps, moving it was not an easy task, so it was where it would not be in the way for a few hours. ➤





PLAN VIEW OF TOP RAILS AND FIXING PLATES

PLAN / SECTION OF BOTTOM RAILS AND LEGS





Making the top

With the underframe complete, attention could be focused on the top. When the frame components had been machined I had also roughed out and machined six pieces for the top. It is good practice to make up tops from smaller-width pieces for a number of reasons. Primarily, the resulting wide board would be less likely to curl or undulate. It is more practical to machine up smaller pieces as they are easier to manhandle. The planer and thicknesser's width also limits the size. I started out with widths of around 260-270mm.

Jointing the top

After re-machining the six pieces I laid them out to determine the best 'fit', marking them with a large pencil triangle so I knew which way they would go back together. Grain orientation and colour would have an influence on the alignment. Before I moved on to the joints I marked out the octagon. This was important as it determined where the grooves holding the loose ply tongues would start and finish.

I decided to make up two halves of the top. I machined the grooves on the edges but not for the long centre join. The boards went together using 6mm birch ply tongues having formed the grooves with a $\frac{1}{4}$ in grooving cutter on the spindle moulder. It is a tight fit in a $\frac{1}{4}$ in groove after a little reduction in thickness. With the tongue ends shaped to fit into the grooves, the two table top halves were glued up after a dry test fit.

The two halves were then thicknessed through the big speed sander then I formed the grooves to join them both together with a loose tongue. The two tops were sanded and joined immediately, avoiding any movement in the wood, so the joint between the two was almost perfect. A little work with a scraper plane fine-tuned the surface. Because the speed sander has a 1100mm capacity and this top was 1350mm wide, the rest of the sanding was done on a pad sander.

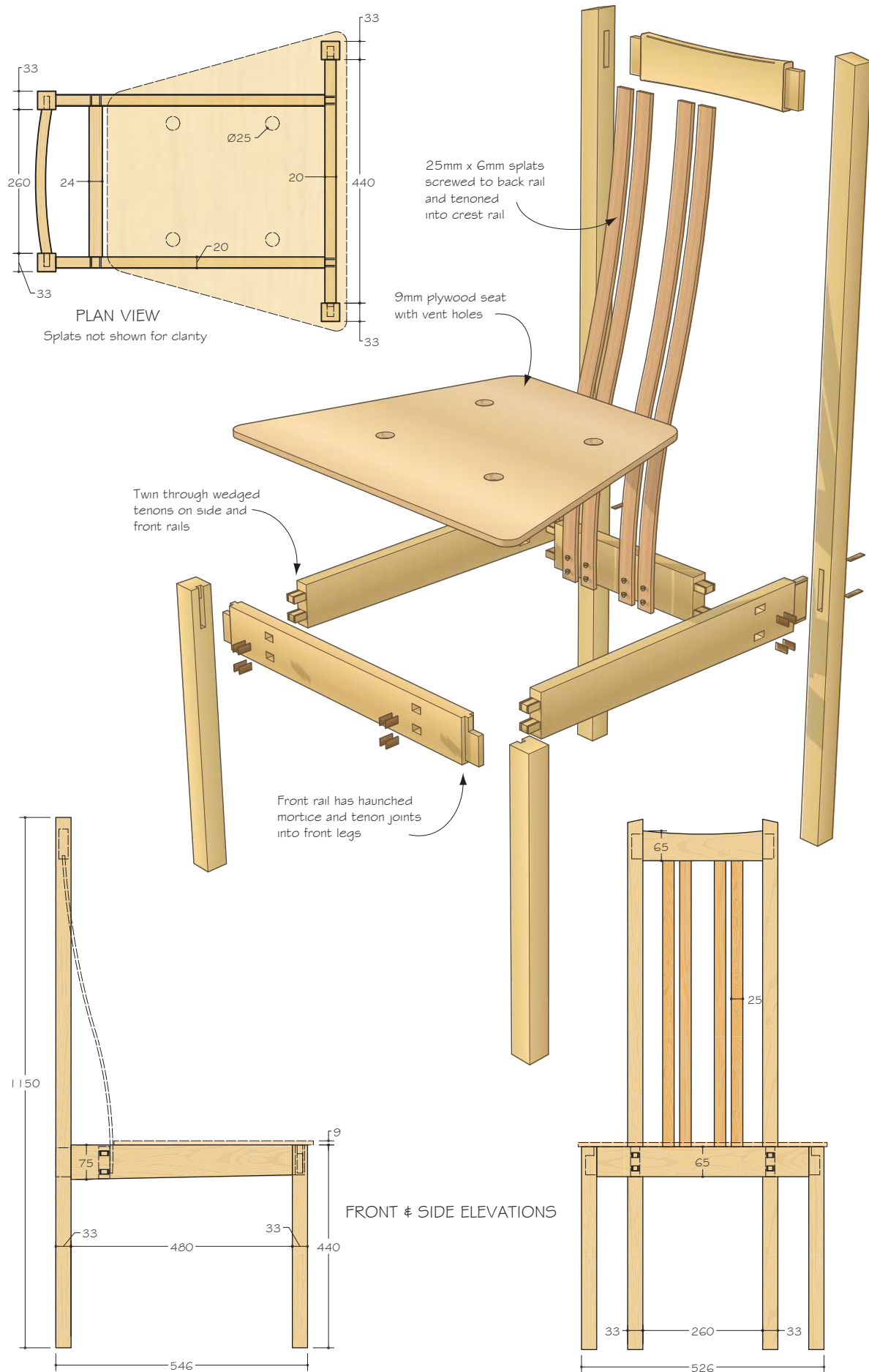
Shaping

After an overnight dry, the top was then sawn to 1350mm square using a portable saw. Using the dimensions from the

scale drawing the 45° lines were marked out and double-checked to make sure all edges were the same length. I put the top on to the table frame upside down, on protective pads on the frame to minimise any damage to the top. Using a bearing guided bevel cutter I routed the underside edges and then turned the top over and repeated the cut on the upper side. To clean up the edges the top was secured upright in a vice and hand planed, then each edge washed and sanded.

Before attaching the top the underside was finished with two coats of Danish oil. Fixing the top was simple, basically screwing up through the frame blocks. The fiddly bit was aligning the frame with the top so that each arm was equidistant from the edge and central to the edge length. I used 2in No.12 brass countersunk screws. Old fashioned? Possibly, but it complements the quality. The top was finished with satin Osmo oil, applied with a cloth and left overnight. I did this three times and finally cut it back with a little Vaseline on 0000 wire wool, which gives a silky finish. The final act was applying felt pads to the underside of the frame as it would be sitting on a tiled floor. These would compensate for any slight undulations and also make it easier to move around. ➤





SET OF DINING CHAIRS

The chairs which completed the suite were based on a successful design that I have used many times over the years. As with most chairs they are an exercise in mortise and tenon jointing. The chairs were made from ash with oak wedges. The splats were made in sapele to match the existing furniture in the clients' room.

Joint setting out

The first operation was to machine all the individual components as shown in the drawing.

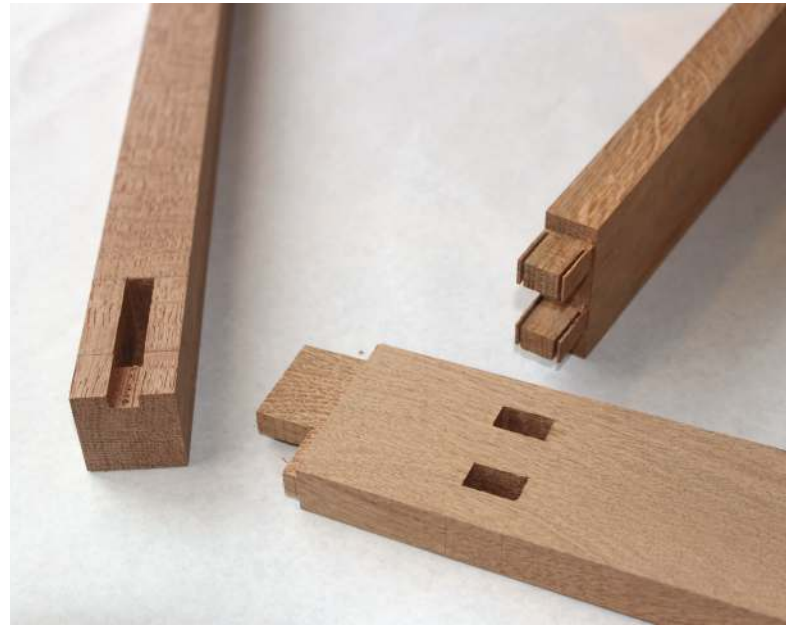
Attention then focused on setting out the pieces and marking the joints. The side rails slightly tapered towards the front so it was worth spending time aligning the grain so it followed the 'uphill' slant towards the front. I began by marking out the rear member-to-side rail joints. Working from the rear of the rail a marking knife line was made at the 34mm point. Then a sharp pencil line at 54mm followed by another at 21mm. The reason for using pencil is that a knife requires wasting a lot of time and wood trying to erase the marks. The mortises were 10mm thick and positioned as shown on the drawing. The rear member had 22mm marking knife lines all the way round at both ends. Using a mortise gauge the top set was marked from the top edge on both sides and each end of the rear member. The gauge was then reset for the second set and again the appropriate spaces marked. It is always good practice to clearly mark the waste so that no schoolboy errors arise.

Joint cutting

Before cutting the mortises I used a knife to sever the grain at each end of the mortise marking. It is far easier to position a chisel in a small groove than guessing on a pencil line when cleaning up the cut.

I used a chisel mortiser but other methods could be used. The tenons were cut using a bandsaw, on the waste side of the line. As most of the joints are 'through' varieties, the finished joint has to be a good fit as it will be seen. Using scrap timber of the same section, trial cuts were made to ensure the end result was good. The two end pieces of waste were removed on the bandsaw, but the middle piece was cut away with a coping saw. The width of the tenons was reduced to 21mm, again on the bandsaw, and the shoulders cleaned up with a chisel.

With this part of the 'subframe' complete, the front rail-to-



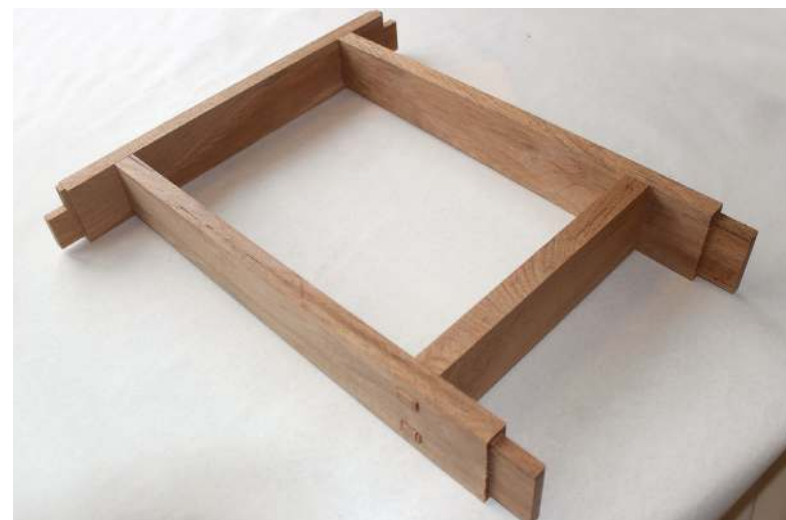
side rail joints could be made. The joint was the same apart from the spacing. Alignment on the front rail was important so a 'square' frame resulted. Using the inner dimension of the rear member, it was marked on the front piece and then 1mm added. The second line would be 18mm further on. This would give a 1mm tenon shoulder.

Tenoning

With the subframe joints complete the tenons were cut on the ends. These were 10mm thick and centred on each end. The ones on the side rails were already marked off at 34mm. The front rail had shoulder lines marked out at 26mm from each end. Using a tenoner I cut all these in one go, only changing the length stop to accommodate the two lengths. I aimed for a tight-ish sliding fit. If it is too tight, fitting can be a bit of a hassle. Conversely if it's too loose and the joint is relying on the glue, a chair has many dynamic forces operating on it. The rear tenons were stepped in by 5mm on each end and the front joints were square haunched mortise and tenons.

Leg mortises

The mortises for the legs were marked out, centring on the leg. The rear leg had through mortises, so care was needed ➤



in cutting them. I cut from both sides to negate any breakout. The front ones were blind with a 5mm-deep haunch recess.

Crest rail

The final joint was on the crest rail, again centred on the leg. This joint had to be marked out at 90° to the other mortises. It was a blind joint, 27mm deep. The chair was dry-assembled so a final measurement could be made for the crest rail shoulders. 52mm was added to the tenons and the rail cut to length. The crest rail would be 20mm thick but the joint positioned to one side to allow for the curve. After cutting and fitting, the crest rail curves were marked. I keep various curved templates I can offer up to produce a suitable radius. The curves were cut freehand on the bandsaw and cleaned up with a spokeshave then finished on the pad sander. The underside of the rail was marked out for the 1/4in mortises that house the splats.

A standing chair

At this point I now had a chair that would stand up ready for the final details. The tapers on the side rails were marked,



sawn and planed. All the saw cuts for the wedges were cut on the bandsaw. I had waited until now as the delicate ends would be less liable to accidental damage. All the components were sanded and chamfers applied. The next operation was making all the wedges for the joints from a strip of oak 10mm wide and 2mm thick. Lengths of 25mm were cut off the strip, then held against a bench stop so I could use a chisel to form the wedges.

Pre-finish

Before the gluing-up, the various pieces had a finish applied. The outside sides and the front side would be left unfinished as further work would be done after gluing, trimming the protruding tenons. I used Danish oil, brushing it on, leaving it to dry for a few minutes and rubbing off with a clean cloth. It would be a complicated glue-up and have to be done in stages.

Assembly

The rear member was glued to the sides using scrap pieces of timber that fitted between the protruding tenons. A sash clamp was used to squeeze the joint together. This was removed while the wedges were tapped in with a hammer, ensuring they went in to the same depth. The wedges would hold the joint together. It was set aside once I'd made sure it was not 'in wind' (twisted) by placing it on a machine bed to check for flatness. Once dry the tenons were trimmed and the outsides sanded and finished. The front was attached using the same procedure. After that had dried, was trimmed, sanded and finished, the front legs could be glued.



It was laid on a sash clamp bed with scrap wood at each end and left to dry, making sure the legs were parallel with each other. The final stage was gluing the crest rail and the side rails to the rear legs. Making sure the crest rail was aligned correctly saved embarrassment later. Once the protruding tenons were cleaned up, the splats were made and attached. I had prepared these earlier from sapele and finished at 25mm x 6mm. They were fitted into the mortises on the underside of the crest rail and screwed into position on the inside of the rear member using round-headed brass screws.

The seat

The seat base was made from 9mm birch ply and formed in a trapezium shape. All the corners were radiused and edges rounded over. Finally, four 25mm holes were bored to allow for airflow out when the seat is sat on. The base was covered in hide by a local upholsterer.

The clients are very happy now they have the complete suite. ■

'As most of the joints are "through" varieties, the finished joint has to be a good fit as it will be seen'



The oak, ash and sapele variant dining chairs are the latest iteration of Brendan's favourite chair design

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POF1400ACE			
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Replica mahogany display case

Louise Biggs ticks all the boxes with this replica display case

My customer had an antique mahogany display case which he had bought years ago to hold a collection of antique silver spoons. As his collection grew he found the need for a second case and as the one he had 'ticked all the boxes' he approached me to see if I would be prepared to replicate the case. The existing case was checked for any signs as to who had made it and, as there were none, I agreed to replicate the case, although credit for the design goes to the original maker. My addition to the design was to add a seal that would make the case more airtight to help prevent tarnishing.

Tool list

- Tablesaw
- Planer/thicknesser
- Router and router table
- Mitre saw – electric or hand type
- Gent's saw
- Square
- Marking gauge
- Chisels – various sizes
- Strap cramps
- Marking knife
- Drill and drill bits
- Small G or F-cramps

Stages of making

1 Sections of Brazilian mahogany for the top and bottom of the case were cut and planed to width and thickness. The length of each piece was left longer than required. Using the external measurements of the original case the sections were cut to length with a mitre on both ends.

Rebates were required for the bottom panel and a test piece of thin plywood covered in fabric on both sides was used to set the depth of the rebate. On the top of the lid the rebates needed to be cut so the thin glass would sit flush with the top edge of the timber, a test piece of glass was used in the same way as the plywood. The rebates were cut on the router table using a straight cutter.

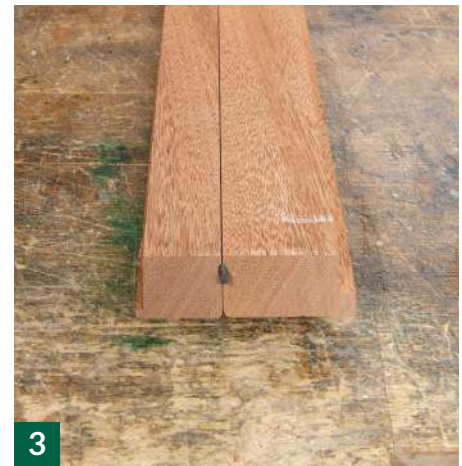
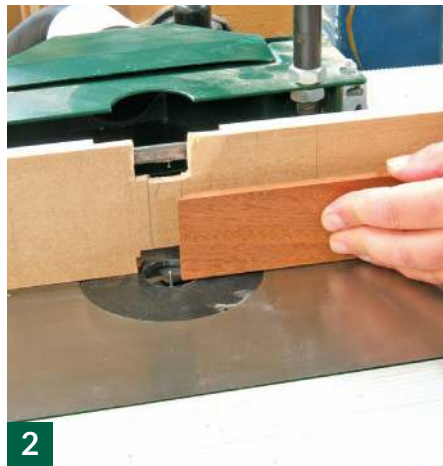
2 To act as an air seal a small, round upholstery piping used for cars would be set into the top edge of the base. A shallow half-round groove was cut into the lead edges of the lid and base using a core box cutter set up in the router on the table.

3 When the half-round groove was set to the right depth the rubber piping just compressed slightly between the lid and bottom of the case.

4 Next a small groove was cut into the mitres to allow for a loose tongue to be fitted. The position of the cutter was marked on the fence and stop lines were marked on each section of timber. Supporting each section with the hands well clear of the cutting area, each mitre face was carefully dropped down on to the cutter and the grooves cut.

5 With the plywood tongues cut to fit, the bottom of the box was glued and clamped with a strap cramp keeping the corner blocks down from the top edge. The lid sections were then glued and a second strap cramp used to clamp the lid while holding it square to the base unit with the corner blocks.

6 The hinges were positioned the width of the hinge in from each side on the base unit and set so the edge rested against the rubber piping, a marking gauge was set and the marks transferred for both hinges on the base. A second marking gauge was set for the depth the hinge would be cut in. ➤



7 A gent's saw was used to cut down the shoulder line of each hinge at an angle, being careful not to touch the saw on the inside edge. The depth the hinge needed to be set equalled the depth of the half-round groove for the piping.

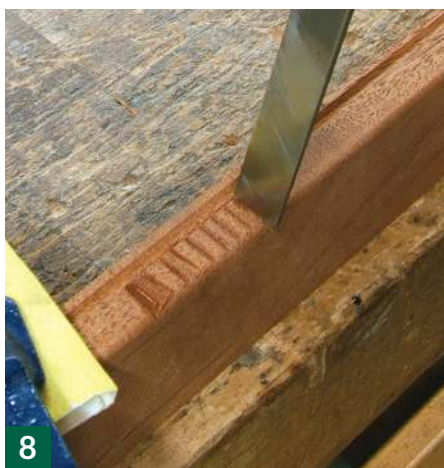
8 With the shoulder lines cut the waste was removed using a chisel, first by chipping along the area as shown and then cutting in from the back edge until a level recess was formed. The hinge was held in position to check the fit with a section of rubber piping in place; once happy with the position and fit of the hinge it was screwed into place and the stage repeated for the second hinge.

9 The lid and base sections were aligned, with the top leaf of the two hinges positioned so they rested against the back edge of the lid. This way the hinge positions could be easily transferred on to the lid and the previous stage repeated to fit the hinges into the lid.

10 A box lock was fitted to the front edge of the base unit. The position of the lock pin and the bottom of the keyhole were marked out and the corresponding size holes drilled through the front. The sizes of the holes will vary depending on the size and type of lock. By drilling the holes first any breakout on the back edge will be removed when the lock is fitted.

11 For a box lock two sets of dimension have to be marked out on the back face and leading edge. The first set is for the outer plates of the locks, the polished areas that are seen. The second set marks the recess required for the body of the lock to be fitted, the inner workings. Once both sets of marks are set the cutting out of the lock recess is similar to that for hinges. I tend to cut the inner recess first, cutting down the shoulder lines with a gent's saw and then removing the waste with a chisel.

12 The outer larger recess for the polished plates was then cut out in the same way. Once both recesses were cut any final adjustments were made for a tight flush fit of the lock. Once the lock was fitted in position the strike plate could be marked out on the lead edge of the lid and the recess cut to fit in much the same way.

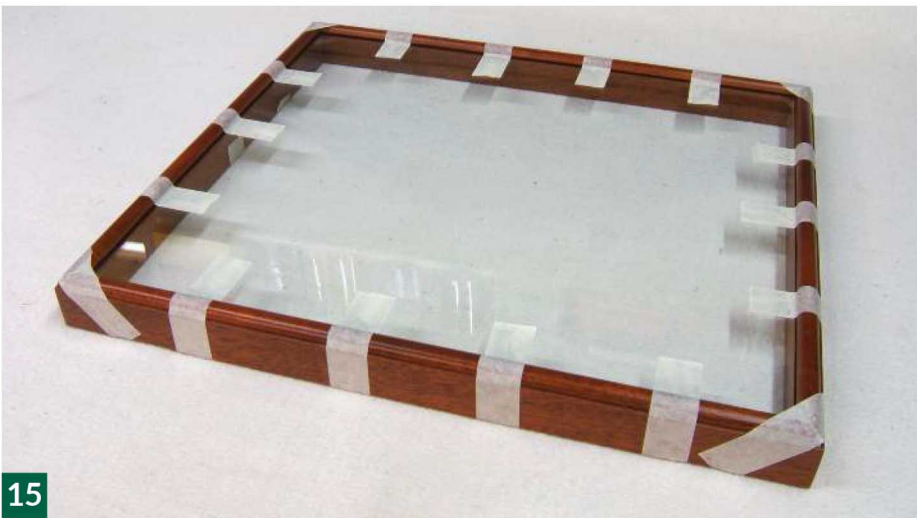




13



14



15



16

13 The glass in the lid would be held in place with a half-round bead. A rebate the thickness of the glass was cut on the underside of the bead which was half the width of the bead. Keeping fingers well clear of the cutter the rebate was cut on the router table.

14 The half-round bead was then mitred to fit within the rebate on the lid. Each piece was fitted in turn and held securely in place with masking tape in order to fit the next section. This formed a clean step between the beading and the top edge of the lid.

15 The beading, lid and base units were then stained and polished to match the original case. Once the polish had hardened, the glass was cut to size and the beading was glued into position and held with masking tape until the glue had set.

16 On the test pieces used to set up the grooves for the rubber



17

pipng, I tested the best glue and method for gluing the piping into position. I finally chose an all-purpose adhesive in a tube where the nozzle could be cut to produce a small hole so the required amount of adhesive could be positioned in the groove without a lot of excess glue being squeezed out on to the polished surface. The glue had the added benefits of a strong bond and drying clear.

17 The only area not protected by rubber piping for a seal

was across the box lock. The display case was lined in the bottom and on the base with faux suede, using the same method as I have shown in my previous box articles. With the hinges and lock fitted in position the display case was ready to display the growing collection of silver spoons. ■

Workshop extraction system

Neil Lawton's latest workshop installation is like a breath of fresh air...

One of my main sources of income is teaching woodturning and to that end we have a garden building, known as the atelier, that can be used for lessons. The original idea was to have all the machinery portable to allow the space to be multi-functional, and it still can be to a degree but I had a dilemma.

I have had a considerable increase in couples, whether it was husband

and wife, father and son, or father and daughter, wanting to attend bowl turning courses. I only had one bowl lathe I could transport up there so I had to teach these in the far less glamorous main garage workshop. There was also the tricky point of who got the big lathe and who got the small one, so a bit of an investment was required to rectify that with some more permanent fixtures.

1 Once deciding on the more permanent layout, the new lathes and main extractor were approximately positioned.

2 After pricing up individual parts it became apparent that buying a kit of parts and then adding to it to customise it, was more economical.



1



2



3 Masking tape was applied to the tubing and the cut line marked on using one of the mounting brackets as a guide.

4 The tube was cut by a hacksaw then a piece of abrasive was used to remove the burr.

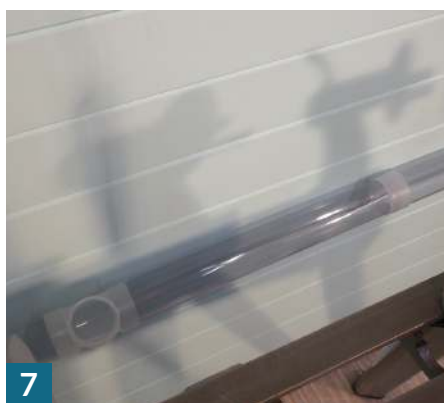
5 Starting at the furthest point from the extractor the tube was fixed to the wall. The kit contains the bracket screws and wallplugs if required.

6 Some effort can be required when cold to fully push the tubes into the supplied connectors, but this can be alleviated by heating them slightly with a heat gun.

7 It still is easier to push them together before trying to level them up though.

8 At the business end, a T-junction was fitted to connect the extractor and a blast gate and reducer to connect the small bandsaw.

9 Pose-able hose and hoods were then added for the lathes. ➤





10 A short length of old vacuum cleaner tube was added to connect the port from the bandsaw.

11 Any extractor this powerful can be quite noisy. Removing the exhaust tops and using hose to dampen this is approved by the manufacturer. In this case I used a couple of bought reducers and some old vacuum cleaner hose. Venting outside would reduce the internal volume more, but I must think of the neighbours.

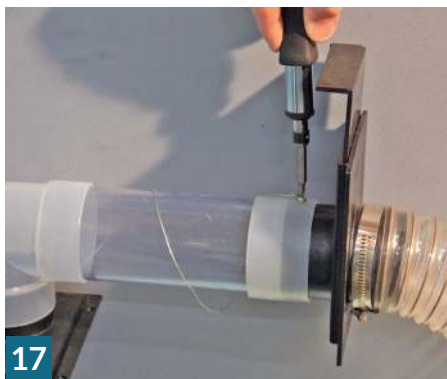
12 I originally placed a blast gate after the corner piece and intended it to go straight to the pen-turning lathes. After realising there was another gate and tee piece in the kit I made a small 'sweep point' out of softwood and ply. Blocking the front entirely makes the extractor try to suck the floor up so there is a 25mm gap at the bottom of the flap in the closed position.

13 The pen-turning lathes are not permanently set up and are only brought in for those courses, so I needed something that could extract from more than one source but could also be put away.

14 A piece of drainpipe was capped with an aerosol lid and drilled to accept two funnels that were hot-glued in, with the flexible tube attached, to connect to the main system.

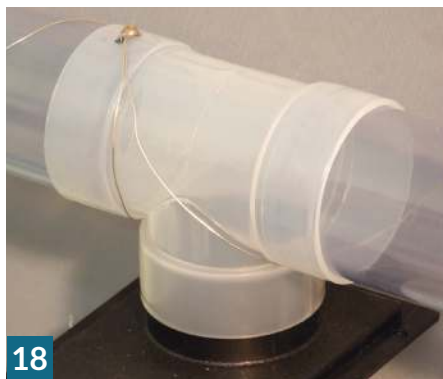
15 I had a spring clip I'd saved from a redundant fire extinguisher and, along with a bit of reclaimed oak, it made the perfect storage solution for the pen-turning extraction.

16 Static build-up can be a problem with a plastic tubed system so I decided to earth it. After a bit of internet research I chose this method. I stripped the insulation from some solid core wire and crimped a terminal on the end.



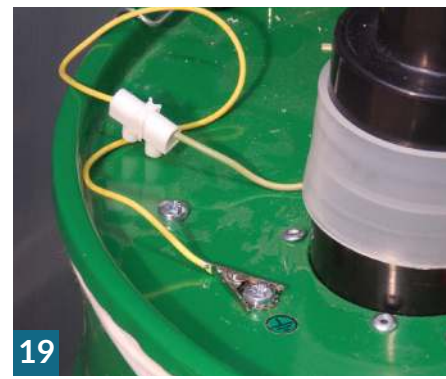
17

17 A small hole is drilled in the tube and the wire attached with a self-tapping screw. The screw is long enough to protrude through the tube and into the airflow.



18

18 The wire is then wrapped around the tube, linked with a crimp and screwed on at each connection point.



19

19 The earthed tubing was then connected to the main extractor by a piece of flexible wire and connected to the main earth point via a small crocodile clip. This provides a good connection without involving any electrical work and also means it's easy to disconnect when removing the top to empty the extractor.



20

20 A quick check with a test meter shows good continuity between the tubing and the extractor.



21

21 A second check shows a good earth all the way to the plug.

22 The completed installation, all ready to go. ■



22

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Triton chisels

Chisels take a bit of a pounding – can Triton's own set cut it? The **Editor** finds out for himself

Triton has branched out into hand tools that complement its range of power tools and work supports. Apart from developing users' brand loyalty, its tools are also reasonably priced and that is certainly true of this five-piece chisel set. The sizes cover the most useful ones, including a 6mm for smaller tasks and a 32mm suitable for paring. According to Triton the blades are 'high quality hardened chrome vanadium steel for superior performance and edge retention'. This is all for a typical discount price of under £30. The fully-forged tang is connected to the striking cap on the top of each chisel and designed to take repeat hammer blows. Apparently some care was taken in designing the ergonomics of the soft-grip handles. These are construction chisels, so although the sides are bevelled, they still have square edges, making them unsuitable for fine work such as dovetails.

On test

Triton claims on its website that the blades are precision ground for maximum sharpness straight out of the box. Do not take that as a literal

statement – ground yes, maybe quite well ground but, as you can see, a typical chisel back isn't flat for a start and the leading edges are ground – but not honed. In other words, preparation is essential before use.

Number one was using a 300 mesh diamond plate, then 1000 mesh with lapping fluid, in order to flat the periphery areas of the 32mm chisel back. This is necessary for getting a good meeting edge on the blade and for accurate paring or mortise cutting. Next, the bevel was honed in the same manner using a honing guide. After stropping using metal grinding paste on an 'end-grain' MDF block, I was able to get a good cutting edge. The ergonomic handgrips worked perfectly well but I wasn't so keen on the grip profile. This is very much a matter of personal taste of course.

Conclusion

These are cheaply priced chisels which work well but they need preparation, maybe more so than a more expensive set. For some tasks a 9mm blade would be desirable but maybe I'm asking too much here. The wallet is a convenient way to carry and care for them.



Note the amount of flattening needed



A keen edge on a 1000 mesh diamond plate



Paring with a newly honed edge

At the typical asking price you have little to lose for a very handy set of chisels.

Triton five-piece bevel edge chisel set 6, 12, 19, 25, 32mm.

Typical price online: Around £27-£30
www.tritontools.com/en ■

Celebrating British Craft

OXO Gallery, London 8-19 May 2019



www.findacraftsman.com
Backing British Craft

AXMINSTER
Tools & Machinery

The Guild of Master Craftsmen and Find A Craftsman are proud to announce an exciting event celebrating excellence in British craftsmanship. To raise awareness of the importance of preserving the best of British craft for future generations, this engaging exhibition will showcase quality and expertise across a range of traditional and contemporary crafts, including some of the winning entries from the British Woodturner of the Year Competition.

Also featured will be hands-on activities for all ages, combining traditional woodworking skills with innovative approaches, and demonstrations by leading figures in British woodcraft industries, notably including:

- **ANDY HIBBERD**, a fine artist, printmaker and woodcarver educated at the prestigious City and Guilds of London Art School. Combining the disciplines of painting, printmaking, carving and sculpture, he creates unique, multimedia three-dimensional pieces and editioned prints. Visit www.andyhibberd.co.uk and Instagram @Andyhdesign
- **PETER BENSON**, who has been woodcarving since he was a small boy. After retiring from teaching at a grammar school, he set up the Essex School of Woodcarving. He has travelled the world teaching his art, but today spends most of his time writing and teaching nearer to home. He writes books on the art of netsuke and whittling and is a regular contributor to *Woodcarving* magazine.
- **RICHARD IRVINE**, an accomplished greenwood carver and qualified teacher with over 20 years of experience in the field of outdoor learning. Richard develops children's skills



as part of the Forest School programme as well as running professional development workshops and recreational carving days for adults.

Visit www.richardirvine.co.uk

- **DAN WESTALL**, who has been a bushcraft teacher for many years. Together with his wife he works from a patch of woodland in Shropshire to encourage schoolchildren and teachers to connect with nature through learning bushcraft and Stone Age skills. He has also acted as a medic and survival consultant on various TV shows. Visit www.outback2basics.co.uk
- **OLIVER CHAMBERS**, an industrial designer and owner of the premium product design company, Herston. As a Dyson-trained industrial designer with over 15 years' experience, Oliver has developed successful products for brands such as Dyson, Joseph Joseph and Shark Ninja. Visit www.herston-uk.com
- **MARK BAKER**, an accomplished woodturner and author of numerous articles and books on turning. Mark has demonstrated extensively at clubs, symposia and other shows and events around the world. He is Group Editor of GMC's four woodworking magazines and also Editor of *Woodturning* and *Woodcarving* magazines.

Celebrate British Craft at the Oxo Gallery in London from **Wednesday 8th to Sunday 19th May**. Come and join us!



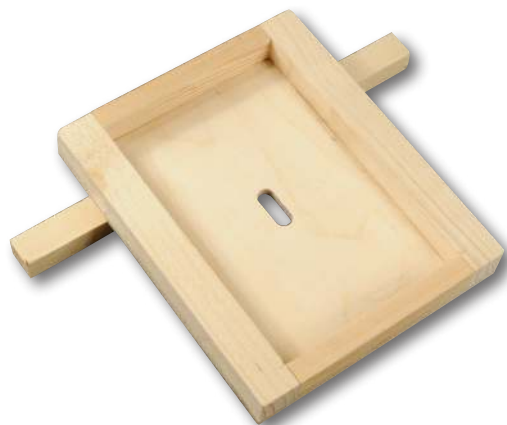
Key cabinet

The **Editor** holds the key to a simple project

A simple, but very useful, small-scale project for keeping all your keys organised and easy to find. There are a number of router-based operations that are used to create this key cabinet. It can be made from solid wood or multi-laminate birch ply, and at a size to suit how many keys you have – you've no excuses for losing them ever again.

The jig

1 The keyhole cutter is a natty little tool for making a hidden slot for a screwhead to sit in so we can hang this cabinet on the wall. However, the catch is that the head is obviously larger than the slot cutting section above it. To avoid mistakes, we need what you might call a 'tray jig' in which the router will sit to restrict movement.



2 Glue and fix battens in place on to your plywood base so they allow the router to move in one direction only.



3 Work out the desired limit of travel for the router and then glue and fix battens between the battens in step 2, to allow the router to travel that distance in the jig.



4 Place the tray jig on the back panel to ascertain the correct position and then fit a crosswise batten underneath the tray jig at the chosen position. ➤



5 With the jig resting on battens lifting it clear off the bench, place the router at the top end of the tray jig. Switch on and plunge the cutter so the widest part that will create the keyhole entry point goes into the jig base, and slide the router along to create the full-length slot – you may need a deeper second pass to machine right through. You now have visual access to the slotting area and the jig is ready for use on the back panel of the cabinet



6 The resulting keyhole slot is neat and very functional



The cutters

I have used no fewer than seven cutters on this project, several of which are non-standard, but fun to use.

- The basic joint work is rebating, done with the small but excellent Wealden tenon cutter, which gives a very good result.
- Next is the smallest size Wealden keyhole cutter.
- The projecting top section of the back has a small Trend stopped ogee profile on a bearing guided cutter.
- A Trend 3mm spiral cutter was used to drill the holes for the piano hooks.
- The hinge cutter gives a good, clean finish and minimal edge tear-out.
- The door has a pattern made with a face mould cutter – this has a bearing mounted on the shaft for template following. This must be used with a thick template so you can take shallow passes while the bearing can still contact the template edge.
- The door edge has a small ovolo moulding created by setting the cutter down enough to make slight step shapes.

‘Necked’ cutters

Home woodworkers, unlike specialist tradespeople, seldom use narrow-necked cutters like the keyhole cutter, but there are times when such cutters are very handy. They are great for making dovetail housings, which are often used for casework and bookshelves.



The downside of necked cutters of any kind is that they have to cut at full depth in one pass. You simply cannot plunge in several depth passes like a straight cutter can.

To remove the bulk of the waste, first use a straight cutter that is narrower than the width of the opening into the joint, and do repeated passes to near final depth. Fit the desired necked cutter and make the cut from the end, thus creating the final profile while taking out a minimal amount of wood. It avoids burning, chip clogging, and cutter breakage – plus it improves blade life and your working experience.



MAKING IT

1 Cut and plane all components to width and length, except for top and bottom pieces and the door, which is trimmed to size later. If using solid wood for this you may need to carefully edge joint pieces together for the door and back panel – which should be thick enough to accommodate the piano hooks.



1

2 Mark out the cabinet top position on the backboard and the shape for the projecting top, also the keyhole positions on the reverse side. Use the keyhole jig to machine the keyhole slots while the top is still square.

3 Jigsaw or bandsaw the top curves and sand to a smooth, even, finished shape. Use a small bearing-guided ovolo cutter to run around the top edge, making sure you start and finish before the marked line of the cabinet top.

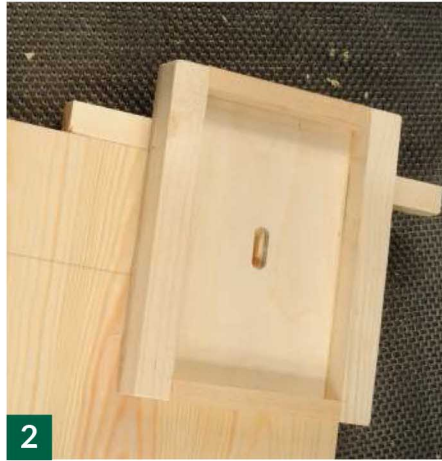
4 To make accurate holes for the piano hooks that hold the keys, a 3mm spiral cutter is ideal for drilling with the router. Use some abrasive taped to the baseplate if necessary to stop the router from wandering.

5 Use a tenoning cutter, or a 19mm straight cutter with a through fence in place, to machine a rebate on the ends of the cabinet side pieces. Use a square-cut push block behind for accurate support and to avoid breakout.

6 The cabinet sides are also rebated so they sit along the sides of the back panel without projecting too far, for aesthetic purposes. Do this at the same cutter and fence settings.

7 Now cut the top and bottom to fit when the side pieces are in place. All components can be sanded and glued and pinned in place. For simplicity, the hinge recesses can be machined to the full depth of the folded hinge into the cabinet carcass, and simply surface-fixed to the door. You don't need a jig for just two recesses, but you do need to clamp a batten along the cabinet side to give more support for the router and fence.

8 The door is cut to size and a template made for the bearing-guided face moulding cutter. Make sure you use an offcut in the middle for support and keep the router tight to the edge of the template and machine at an even pace. The template is pinned to the door blank and the blank sits on a rubber router mat. The edge has an ovolo shape routed on it. Finally sand, apply a finish, and fit the hooks, hinges, knob and a catch. ■



NEWS & EVENTS

All the latest events and news from the world of woodworking



PHOTOGRAPH BY GEOGRAPH SHAWN FERGUSON



PHOTOGRAPH COURTESY OF SHUTTERSTOCK

From this – to this?

A recent news story brought back an old memory for the Editor...

In my late teens in the 1970s – which, of course, was a long time ago – I was a photographic assistant working near Marble Arch in Central London. Along with two photographers, another assistant and two vehicles full of big-film camera kit, we were making our way north west, driving and avoiding Birmingham. We were on our way to Portmeirion Italianate village on the coast of North Wales for a fortnight photoshoot, arriving about six months after the film crew shooting *The Prisoner*, with Patrick McGoochan finally departed – does that TV series ring a bell with older readers?

So there we were, progressing up a major A-road through Oxfordshire. It crossed over a railway line, which I now know to be the Varsity Line, linking those two great seats of academic learning, Oxford and Cambridge. It was strange though – there were no railway lines, no track ballast, all completely smooth as if swept clean by a giant broom. A lone wooden signalbox

in pristine, newly painted condition sat there looking forlorn – as well it might, because Dr Richard Beeching's axe had finally fallen on an underused line. The age of the 'white heat' of new technology had arrived – the Concorde passenger plane, TSR-2 bomber, the Post Office Tower, motorways, containerised rail freight. It was all going to be so very different, with British Railways becoming British Rail as it struggled to throw off its smoky, clanking, neglected Victorian mantle to stay relevant and modern.

Well, now Concorde has gone, the TSR-2 was strangled at birth, the Post Office Tower is now a Grade II listed building, motorways are complete madness – but at least container freight continues to grow and go, by road and rail.

So here I am, writing this 46 years later – almost a lifetime away – and a developed proposal for an Oxford to Cambridge Expressway for road and a reopening of the railway, but following roughly similar routes, is

going to cut a great swathe across the countryside, connecting all points in between, including motorways and major centres such as Milton Keynes. The western end of the old Varsity Line is being brought out of its freight-only mothballed state and back into passenger use. Moving eastwards, the central section of the railway line will have to negotiate around significant conurbations. Thankfully the eastern end is already in use.

The Expressway will inevitably cut through a lot of ancient woodland and green belt territory and even the railway line won't be guilt-free as it evades already developed areas in order to snake its way towards its final destination.

Thinking back to that lone signalbox sitting there on an empty trackbed with a signal arm set at danger, is a reminder of how truly wonderful hindsight really is...

Google:
Oxford to Cambridge Expressway

EVENTS

Weald of Kent Handmade Fair, Penshurst Place
4-6 May 2019, Tonbridge, Kent, TN11 8DG – a fun family day out, lots of crafts stalls, music, food and drink, held in the striking landscape of Penshurst Place. RHS and English Heritage cardholders get free entry
www.thecraftshows.co.uk/kent/spring

The Good Life: Revive, Recycle, Restore, 5-6 May 2019,
Weald and Downland Museum, Singleton,
West Sussex, PO18 0EU
www.wealddown.co.uk

Woodworks@Daventry, 10-11 May 2019, Daventry Leisure Centre, Lodge Road, Daventry, NN11 4FP
www.tudor-rose-turners.co.uk

Makers Central, 11-12 May 2019, NEC Birmingham, B40 1NT
www.makerscentral.co.uk

Devon County Show, Westpoint 16-18 May 2019,
Exeter, EX5 1DJ
<http://westpointexeter.co.uk>



PHOTOGRAPH COURTESY OF THE DEVON COUNTY SHOW

Devon County Show

Nunhead Cemetery Open Day, 18 May, 2019, Nunhead Cemetery, Linden Grove, London, SE15 3LP – walks, talks, choir, food and drink and bodgers among the trees...
www.fonc.org.uk/2019-open-day.html

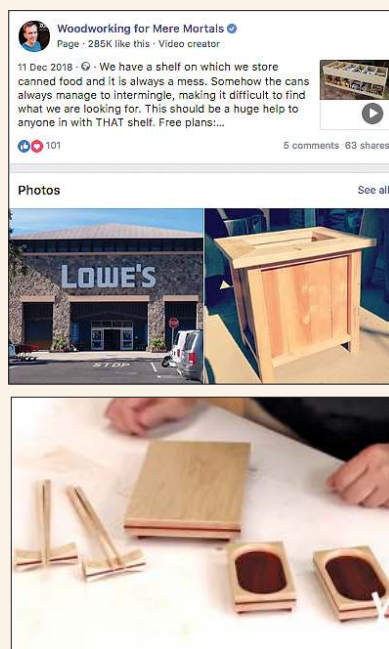
The Great Scottish Spoon Hoolie 24-26 May 2019,
Tir na Nog, Balfunning,
Balfron Station, Scotland, G63 0NF
www.thegreatscottishspoonhoolie.co.uk

Web links for you

Facebook

woodworkingformeremortals.com

This website is woodworking for us ordinary folk with limited experience, time and resources. Plenty of useful projects to make here, including simple sawhorses that don't require cutting compound angles to construct them.



Instagram

@woodworking_lovers

The weird, the wacky, the improbable – you know how it goes... some interesting ideas to spark off though.



YouTube

15 Vintage Campers that will take you back in time

Back in issue 47, Michael T Collins made a storage box for a teardrop camper trailer. If you love retro designs like that, this video – which includes some restoration detail – is a pleasure to watch.



Website

Ordnance Survey Walks – You don't need to buy a paper OS map if you want a hiking, biking, walking experience. Visit the Ordnance Survey website for loads of ideas for exploring the urban and the countryside in the UK. Everything from fell walking, beaches and old military sites to a walk by the Thames – it's all here and it's free and that includes maps.

<https://getoutside.ordnancesurvey.co.uk>

Also: Download OS Maps app on your smartphone



Remembrance seat project

There have been so many stories commemorating WWI, but for the **Editor** this one was, well – personal...

A country boy

We live in an agricultural workers' terraced cottage that just happens to be situated close to some very expensive and desirable detached dwellings. We all get along quite nicely. Our property is early Victorian and started out as a bakery, becoming a general store before the whole row became owned by local gentry, later to be sold off. Consequently, in researching its history we have found many and varied people who once lived here. The Homewoods had a son, Harry, just before the turn of the 20th century. He grew up here and commuted to London on the now-defunct railway line. The railway station on the outskirts of the village is now part of a large back garden, deeply buried and grassed-over. He worked at the Selfridges store in Oxford Street.

The fallen

His name is on a dedication board, hidden away in Selfridges, to all those employees who fell in both World Wars. He, along with all the other 'old boys' from our village school who died in that great conflict, had his details

From the Roll of Honour website
'Harry Homewood Private 143058, B Company, 4th Battalion, The Machine Gun Corps (Infantry) Killed in action during the German Spring offensive 14th May 1918. Aged 26. Son of Mr & Mrs G Homewood of Church Road, Newick. Born and enlisted in Newick. Buried St. Venant-Robecq Road British Cemetery. Robecq, Fr. 248.'

and photograph compiled in a big album by the headmaster of the village primary school at the time. A proud image of him in uniform standing next to a bench, a photographer's prop, in a studio and shot on a bellows plate film camera using natural light had caught my attention. We found him mentioned on the Homewood family grave in our village churchyard, but this photo told us what he actually looked like and the bench or seat

was, however tenuous a link, still an interesting artefact from that time. Careful examination of the slightly soft, indistinct image revealed it to be an Arts & Crafts design painted all over in white, apparently. In fact, it had a hint of Charles Rennie Mackintosh about it – it certainly seemed inspired by him.

A love seat

I called in our brilliant illustrator, Simon Rodway, for his opinion about



Simon Rodway and myself had a lengthy discussion about how best to interpret the design



Private Harry Homewood standing behind the seat which is the subject of this article, and above, his war medal

MEDAL PHOTOGRAPH COURTESY OF RICHARD CATTEMOLE

PHOTOGRAPH COURTESY OF ST MARY'S CHURCH, NEWICK

Simon's initial 3D sketch based on the photograph



how doable it would be to copy it and see if he could pull out any of its features more clearly. It took a while – Simon is a busy person – but he sent me the initial 3D sketch before we had a meeting to pore over the photograph in more detail. The panel ends had the distinctive splayed shape, inturned feet and flattened arch that were Mackintosh style. The seat width was enough for two sitting very cosily and, as if to reinforce the symbolism of the seat, in a circular shape on the end panels were Paisley-type interposed teardrop shapes – yin and yang, as Simon described it. I certainly felt it invited cosiness, closeness. This prop was a lovers seat – it had to be. The sad thing was that, whether there was someone special in Harry's life or not, that life was cut tragically short. He was never to experience a lifetime partnership, he was just another casualty of a hideous conflict. It made the seat more poignant and worthy of a project that would link him in some small way with our house, where he once lived.

Baulks of oak

1 Having decided to make this a personal project there was the small matter of executing it. I had two very large, heavy baulks of European oak sitting in the workshop which I avoided using for the Glastonbury chair in issue 47 but now their time had come. Instead of painting over wood grain I wanted the beauty of the oak to show – it would be criminal to slap gloss paint all over it. Hopefully I could get everything out of both boards



Two very heavy, thick baulks of European oak with some nice ray figure



A Speed square is really handy for rough marking out with its raised edge

without needing anything else. They were thick and weighty so somehow I needed to cut them down into more manageable pieces on machines that weren't designed for timber this big.

The cutting list

Simon then sent me drawings with basic dimensions so I could work out a cutting list. Ideally I would have bought in boards of the right thickness and width but this would be the best I could do by splitting thick boards down the middle. This carried a risk because kiln-dried timber can spring out of shape when 'deeped' down the middle – a risk I had to take.

2 The components in order of importance were the long ones, because I could add width but not length, so the ends, the curved crest rail, seat, stretchers etc., but starting with the ends. The boards were about 230mm wide and 70mm thick so I measured panel length plus a waste allowance.



Cut depth at maximum on the compound mitre saw with a top-quality blade

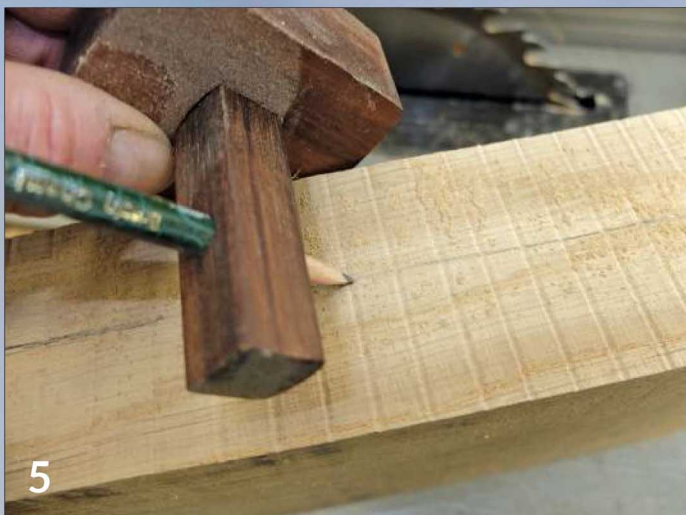


Each split board had different marking to allow quick re-matching together

3 Each thick chunk displaying silvery ray figure was cut off using my compound mitre saw, then split down the middle on the bandsaw.

4 The blade was almost new but it had a kink from cutting some recalcitrant chunks of fire log material. I regretted using it and had to mount a new, undamaged blade after the first couple of cuts. ➤





5 Pencil line shows up much better than a marking point. Note the damaged bandsaw blade marks



6 Cutting the initial rectangle needed to cut out the crest rail running at maximum cut depth (blade stationary for photo)



7 Attempting to work out key datum points for the crest rail curvature

5 Then the sliced-down boards were marked down one edge with a pencil gauge for a clear line and fed on edge through the bandsaw again. Thus, each end panel would be a four-board width and the re-matched grain was marked across to show what piece belonged to which after cutting apart. The same procedure for the seat, but using a piece that had less interesting grain.

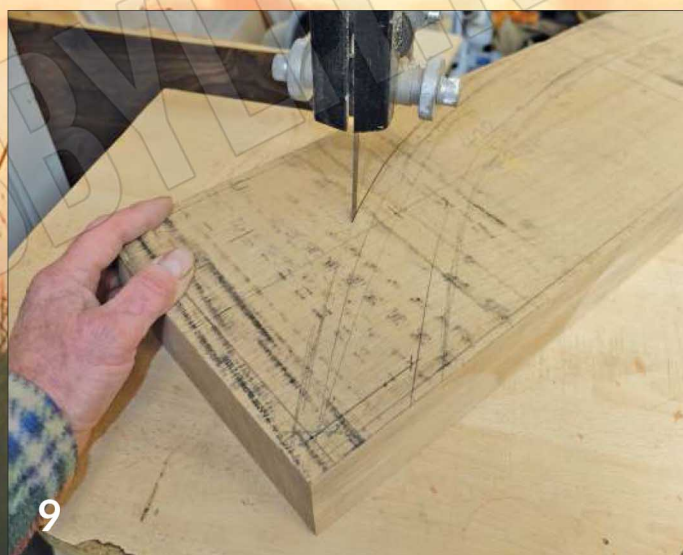
The crest rail

6-7 The curved crest rail was a problem. I didn't want to commit to drawing out the template yet, so I did a very rough mark-out by scaling off the drawing and adding extra wood either side of the marked-out curves.

8-10 This meant I knew I had that critical component which I then split down through the edge, again freehanding through the bandsaw. If it had stayed as a rectangular block it would be too tall to go under the bandsaw guides – a crafty move, I thought. As the cuts progressed it looked as if I might be running short of oak. There were the armrests, the back rails, stretchers and centre back splat to be done. Rather than panic, it occurred to me that I probably had some chunks of new or reclaimed oak in stock, which I could raid, so all was not yet lost...



8 Springing a steel rule against some panel pins for marking the curve



9 The drawn lines plus a generous waste factor as the template is yet to be made

Prepping

11 Once everything was rough-sawn, it could all be fed though the cabinet thicknesser, each batch of parts at a time. Aside from being noisy and messy with chippings I quite like this mindless task, just keeping a check on things such as grain 'plucking' or 'printing' where the rollers press on chippings, marking the wood and, of course, finishing at the correct final thickness in each case.

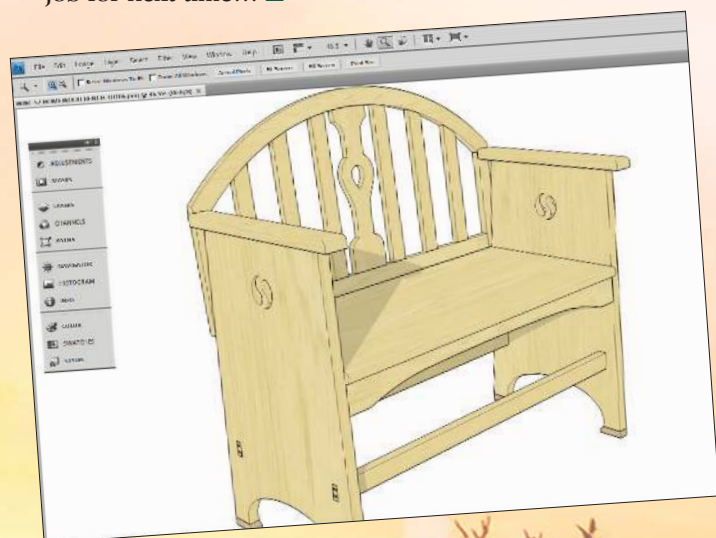
12 Faces first, marking the best one to work off, then the other face, then back again to remove any defects on the first face. The edges could be dealt with afterwards, generally by feeding through the tablesaw to get them square, then feeding through the thicknesser.

Next issue

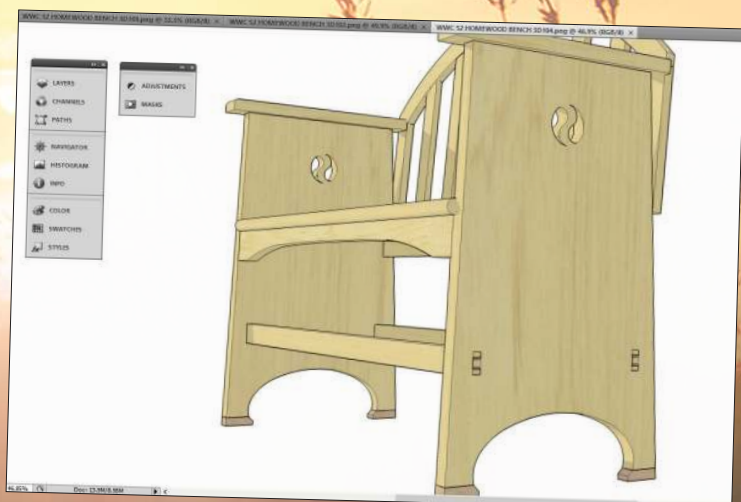
Before making any joints or doing any shaping, the crest rail template had to be made exactly to shape – but that's a job for next time... ■



Split down the middle, there's always a spare if the first attempt goes wrong...



The crest rail thickened nicely and the bandsawn offcuts might just find a use later on



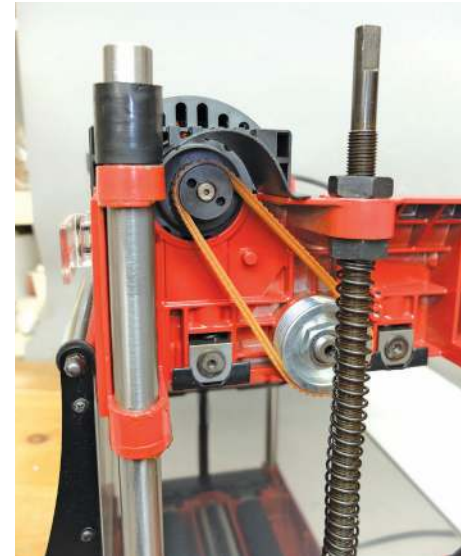
Simon's 3D drawings with a wood-grain effect are bringing the love seat back to life



Checking the thickened stock is truly square



Checking how level the beds and rollers are to each other



The cutterblock drive pulley. The height adjustment nuts are to the right

Axminster benchtop thicknesser test

A first look at an essential machine from Axminster's new Craft range

Axminster took the wise decision to drop its Hobby title from many of its machines and instead put together a range of machines under the Craft badge, suitably upgraded in spec where necessary. It means a more consistent choice and better quality without compromise or the cost of bigger Trade models. Ideal for the home woodworker or smaller workshop in fact, benchtop thicknessers are a perfect example.

The AC318BT has the standard Craft livery. It is a typical model of this type of machine produced in the Far East. The manual is generally very easy to

understand and worth reading before you start. The machine is heavy, care is needed unboxing and setting up – not quite portable. It lacks a few extras you might expect on a more expensive machine but it does the same job, which is simply thicknessing and nothing else. To describe it in a nutshell, the brush motor sits on four columns with a gear chain rise and fall mechanism and a pulley drive to the cutter block. The blades sit on springs and can be replaced by undoing a series of bolts that press a metal wedge against each blade. A special jig ensures correct height setting from side to side when tightening up a new blade. Any

variance in cut height from side to side can be checked and corrected by making a simple jig, as shown in the manual.

To adjust the cutter block height, change the pulley belt, lubricate the gear chain or change cutters, you simply remove the height winding knob and undo the top casing bolts so the top and end covers come away completely for unfettered access – all with the power unplugged of course. The extraction port is a rather small 50mm dia. and its plastic cutter block cover can be undone for blade changing while restrained on an aluminium link chain.

The infeed and outfeed table slip down in line with the machine bed and they can be levelled by undoing adjustment bolts.

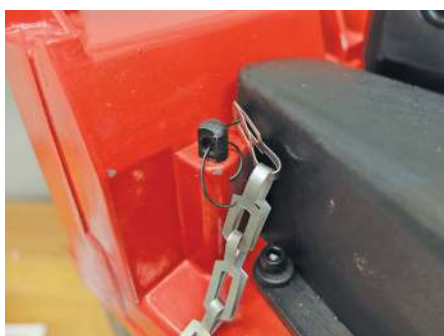
In use

If you aren't used to a thicknesser of this type, its potential might not be obvious. I already have one, albeit a professional model, but it doesn't take up much space. With just one

machine you gain the advantage of thicknessing all sorts of stock – so long as an existing sawn surface is flat this machine will take care of the rest. Once one surface is flat and smooth, turn it over and do the other face. Perpendicular edges can be flattened and squared on a tablesaw and then run through the thicknesser again if the stock isn't too wide. In other words, a compact machine with fold-up beds can efficiently and quickly produce timber ready to use and without needing an overhand planer most of the time. I have mine mounted on a low box so it sits out of the way below the nearest machine surfaces. The Craft model needed no setting up, as it cut parallel from side to side and the shiny bed didn't need any waxing first, the wood went straight through. I did start gingerly with the depth setting as I wasn't sure how capable the motor was of driving the wood through. In



First a piece of softwood for a trial cut with rather a lot of chippings



The safety link for the cutterblock cover



One of the bed adjusting bolts – very easy to alter the height



Tightening up a bolt holding a blade. Note the height-setting jig



This wide mahogany board went through perfectly

fact it coped perfectly, even with a wide board. Extraction is necessary as 'printing' of shavings on the planed surface occurred without it. I did get very slight 'snipe' – the step that occurs at start or finish of a board. I fiddled with the folding bed heights until I got it as good as possible considering a straightedge showed that beds and rollers weren't true to each other. Either side of the cutter block are rubber drive rollers and at the infeed side a series of anti-kickback pawls to prevent wood getting ejected. If wood does jam there is a standard rubber-booted on-off switch and a thermal reset button in case of overload.

A point to note – the cutter block cover is linked to the casting next to it, by a weak-looking aluminium link chain and two feeble little steel rings. This is done so you are reminded to refit it immediately you have done any maintenance. As there is no kind of safety interlocking, the machine can be run without the cover which is a total NO. The reason the security link seems so weak is not to do with saving money, it means if the link got caught in the running cutters, no great damage would be done to machine or operator.

On softwood there was very fine



The anti-kickback pawls, rubber drive rollers and the cutter block

'tramlining' from the cutter edge, but for some reason it disappeared when I put some wide hardwood through, probably a tiny burr was hanging on the blade edge which got rubbed off in use.

Conclusion

After my favourite, the compound mitre saw, a benchtop thicknesser is a must in my opinion. Being able to process timber ready for jointing is key to making a project. This machine should satisfy that requirement well in the home workshop. ■

Tech spec

Axminster AC318BT benchtop thicknesser
 Motor input: 1,800W brush motor
 Cutterblock dia: 48mm
 Cut speed: 18000 cuts per minute
 Feed speed: 7m/minute
 Blades: HSS resharpenable (Axminster can provide this service)
 Max depth of cut: 2.5mm
 Max capacity: 318mm wide x 153mm high
 Dimensions: 600 w x 360 d x 480mm h
 Weight: 30kg
 Price: £299.94
 Visit: <https://www.axminster.co.uk>



Restoration of a Small chest of drawers

Small chest, big problems as the **Editor** discovered

If you ever ask a cabinetmaker how much it will cost to make a small table or a large table, there will be a drawing-in of breath and the answer: 'Well you see, they both have four legs, four corners, four sets of joints, so the big table won't be so much more expensive, it's just the extra material costs really.' So you mean the small table is going to be expensive – comparatively speaking? 'Yes.' Er, thanks, bye...

My point being that a small piece of antique furniture takes pretty much the same time and trouble to restore as a big piece. And so it came to pass, with this grotty little mahogany

chest. It was probably part of a bigger construction originally and got hived off at some point, a thing in its own right, bodge repaired and finally unloved and gasping in the workshop dust and muck of ages past. Bit of a job to do here then.

Nothing's impossible

1 Only good for the bonfire. Don't tell me that – I'm a restorer and this piece has family associations. But you can't make any money on a project like this anyway.

2 Damage to all the keyholes and a random hole below this one where a newer knob must have been.

3 Most of the drawer-front mouldings were missing or separated. This drawer had been held together with steel straps and pop rivets.



1

4 The muck inside was gross. It had to be vacuumed, then brushed wearing a dustmask all the while.

5 An old toothbrush is perfect for teasing muck out of corners. I collect them for jobs like this.

Carcass repairs

6 The carcass was missing a part on the top so I cut a replacement strip with half a dovetail at each end to fit the gap.

7 It all fitted in neatly. Plenty of PVA glue, really not worried about using authentic hide glue. This piece isn't particularly special. ➤



2



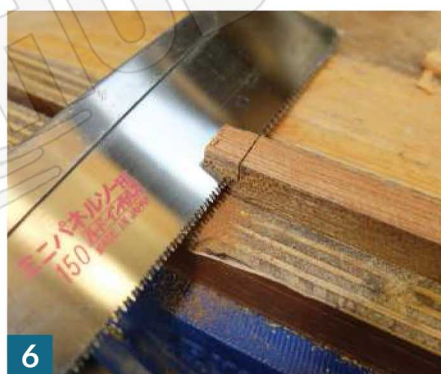
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8 Planing the new piece in situ and the carcass is then whole again.

9 The plinth was missing at one end and a new previous front section had been bonded on with builder's mastic, so that had to come off.

10 A chisel got rid of most mastic and a warm heat gun did the remainder, leaving it clean for regluing. A new section would need to be routed to match.

11 The top needed regluing to the carcass. A scrape clean and plenty of glue plus careful clamping would deal with that.

12 There were odd holes at the back of the top where an upstand must have been. I found an old section of mahogany that would match well.

13 Using a cove cutter the ends were scribe moulded and the long edge profiled.

14 A bit of sanding, taking the sharp corners off to simulate age. It should match with the carcass top.

15 There were various small holes and drawer keyhole damage, which was filled using Prestonett glass fibre reinforced filler, which is easy to shape and sand.

Drawer box repairs

16 Now it was the turn of the drawers. The steel straps were the first to go, by drilling out the pop rivets.

17 The thin pine drawer bottoms were carefully reglued back in place with PVA applied to the separated edges.





18 One drawer needed a strip of knife-cut veneer glued in the shrinkage gap.

19 All the runners were trimmed down and new slips glued in place.

20 The pop rivet holes were glued, plugged and the pine plugs trimmed off.



Knobs and mouldings

21 I had been given a whole box of tiny turned beech drawer knobs which would replace the damaged or missing ones. I left them to soak in dark-stained Danish oil.

22 The damaged mahogany knobs were twisted out of their holes, the old glue giving way.



23 More moulding on the router table using a small cove cutter on the edge of a thin, wide board, cutting each strip off before moulding the next section. A sharp chisel was used to mark where to cut.

24 A pretty good fit. A thin line of glue and masking tape to hold each new section until dry.



25 The unwanted hole was plugged using a tapered-down piece of mahogany and trimmed with a flexible flush-cutting pullsaw.

26 Any moulding overhang around the drawers was carefully planed off, avoiding the carcass sides.

27 Where the drawer runners had been missing, the drawers' sides had torn away. The damaged area was slotted on the router table, stopping short of the front edge, and an infill piece glued in. ➤



28 The new drawer knobs had a smaller diameter fitting. Rather than plugging the old holes with beech dowel, which would break up when drilled to the correct diameter, I used my good old friend carbon fibre, which stays in one piece.

Drawer fitting and finishing

29 Meanwhile the knobs were being heavily coated in sanding sealer to give a shine quicker than French polish could.

30 The drawer fronts were lightly rubbed down with 320 mesh foam-backed abrasive.

31 Then the drawer fronts were swamped with brown dye before wiping it off again, so they would all have an even finish.

32 Before completing the drawer restoration, the drawer stops were removed and the pins punched in. This was so the drawers could be set in an even distance all round.

33 First of all the runners had to be trimmed so each drawer would slide smoothly in its designated opening.

34 The bare top was dyed to match the drawers and the carcass after the upstand was glued in place.

35 The top and the drawer fronts were garnet polished to achieve an even finish and colour. Much easier without the knobs in place.

36 The new drawer mouldings were looking too light – a touch of Vandyke Brown in the French polish would do it.



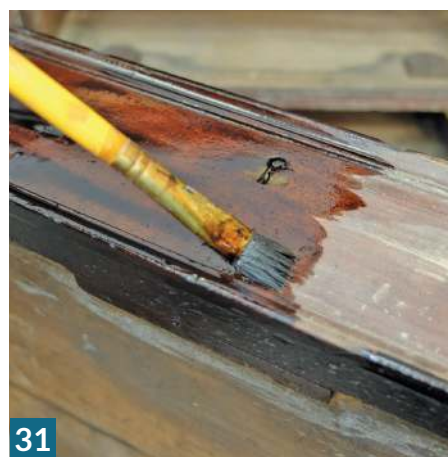
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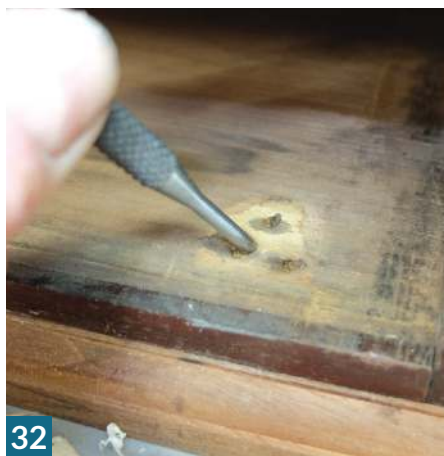
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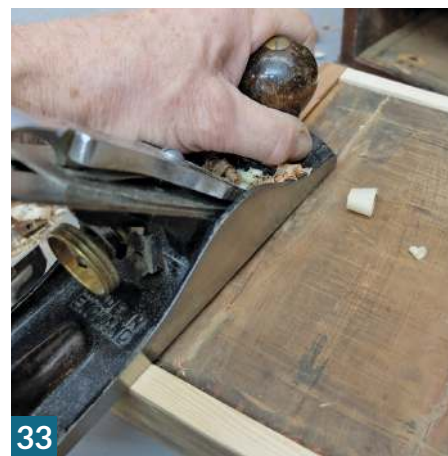
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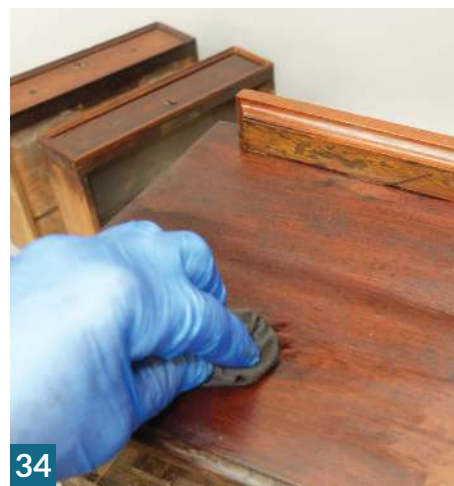
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36



37 Several coats of modified, darkened garnet polish would be needed to get a match and any filler touched out as well.

38 Now a light buffing with '0000' wirewool to remove the high gloss of the French polishing.

39 The carbon fibre plugs were drilled to the correct size, producing plenty of waste.

40 CA has to be used as carbon fibre won't stick properly with PVA glue.

41 A couple of edge defects filled by rubbing on a dark, hard wax filler stick.

42 Now for a hardening paste wax all over. A dark wax applied with plastic scourer pad would make the wax adhere and fill any tiny gaps. It was then buffed off with stockinette cloth.

43 New drawer stops were put in place with PVA glue. Each drawer was pushed in the correct amount. This in turn pushed the stops back slightly to their correct positions and the glue was left to set.

44 The job was complete except one knob was out of line. I had drilled each hole correctly but the original maker had got one knob out of alignment. I managed to run a junior hacksaw blade under the knob base without scraping the drawer front.

45 That knob had its spindle cut off and replaced with – guess what? Carbon fibre and a new plugging and drilling of the drawer front before refitting.

46 Finally the job was complete, looking completely different to the tragic case I first had to deal with. ■



46



The Sylva Foundation

‘Helping trees and people grow together’

PHOTOGRAPHS BY GMC/ANTHONY BAILEY EXCEPT WHERE OTHERWISE STATED

I make no apologies for quoting Sylva’s own mission statement right at the beginning because it expresses everything that the Foundation stands for in just one simple sentence. I had the good fortune to visit it recently at its base in Long Wittenham, Oxfordshire, at the invitation of Joe Bray, the leader of the new Wood School. I had previously met Joe briefly at Rycotewood, Oxford College, where he is still a tutor three days a week, the other two days now helping to set everything up at the Wood School and other activities on site, increasing

to full-time in September once he has left Rycotewood. His enthusiasm is boundless regarding Sylva – so what is it and why is it so special? That is what I had come to discover for myself.

Starting to grow

Let’s start at the beginning. It is an environmental charity which was started 10 years ago by several chartered foresters, of which the current CEO of Sylva, Dr Gabriel Hemery, was one, having moved on a very short distance from the Earth Trust which is situated barely a mile away down the same road. The word

‘Sylva’ is derived from the Latin meaning forest and expresses the starting point from which the founders of the charity made it grow. Their task was based on very real concerns for the state of our forests and their management or mismanagement, as well as the need to educate, influence and inform. It is a very big task and they aren’t alone in this as there are a number of organisations in the UK dedicated to the environment and the welfare of our forests and woodlands, of which this country has precious few compared to other countries. Being foresters by profession their major

aim was to tackle the issue of the vast number of mismanaged or unmanaged woodlands and forest areas.

To quote Sylva Foundation's own objectives:

- We provide up-to-date information and online tools to support owners of the 72% of woodland in private hands – helping them manage their woodlands more sustainably for the benefit of everyone.
- We help children and young people understand the importance of trees and woodlands for sustainable living and how to manage them well. We provide online tools to support teachers and other educators who use woodlands for learning.
- We underpin our work with robust science – much of which we commission or co-ordinate ourselves – and apply that intelligence to influence policy and practice in Britain's forests.
- Through the Sylva Wood Centre in Oxfordshire, we offer people who design and work in wood the space, facilities and additional training they need to innovate, create and establish businesses. Pioneering initiatives like this will, in time, help increase the economic as well as environmental value of wood and trees.
- We believe we're unusual in the way we work – often blending science and art to challenge perceptions and change behaviours, and we are well-respected for working collaboratively with more than 40 other organisations in the sector.



Joe Bray (left) and Dr Gabriel Hemery (right) – Gabriel expounding on Sylva's mission to teach

Expanding footprint

A local couple, Martin and Audrey Wood, became patrons of the charity and five years ago Sylva, which had been managing its key objectives from an office, suddenly found itself in possession of a farm at Long Wittenham, gifted to them by the Woods. This altered the dynamic considerably. It now had a footprint on the earth and the chance to change its intended goals. Now it could not only promote good forestry practice and protection and enhancement of the environment, it had a place where it could begin to practise what it was preaching. And thus, the old corrugated iron-clad agricultural buildings are slowly being transformed, one by one, into spaces for craftsmen and women to work and learn using forest produce, i.e. timber. It is also a place where the younger generation,

such as at the local primary school who come every day of the school week to learn, in the outdoor shelter of the forest school on the site.

Busy workshops

Although the new Wood School is the most recent addition, I was not aware how well developed the main workshops are. I was given a tour and met more than a dozen craftspeople who either had 'hot-bench' shared bench space in the middle of the vast building or were small businesses being run from the workshops located along each side behind closed doors. There is a massive boiler system economically heating the building using wood waste and a machine shop which is still being better equipped – a spindle moulder is next on the list of acquisitions but the mainstays are the big Martin dimension saw and thicknesser unit. Everyone can 'buy time' in the machine shop to help cover its costs – this is all noted on a chart on the door. Joe was keen to emphasise how co-operatively everyone works. A very friendly, helpful communal set-up where help ➤

Left: The main workshop area with boat and benches and plenty of natural daylight
Below: The Martin dimension saw and thicknesser unit





Creating a resin infill chopping board to be sanded and polished when the resin cures



Legs for a heavy, oak garden bench being readied for thicknessing



A boat interior newly varnished by Colin Henwood, the resident boat restorer



Various upcycled furniture projects in progress

is freely given between anyone when it is needed. As he pointed out, this positive atmosphere has created a place where everyone enjoys working. It has developed quite naturally and Sylva is keen to maintain this informal, pleasant setting for everyone's benefit. One problem it is trying to address is noise. Any machining using power tools in the main open area is disturbing to others, so it has to be done when it causes least nuisance. The hope is that putting up some sub-divisions will help reduce this problem.

One workshop is paid for by Rycotewood, which has a placement of two students who get the chance to work in a more commercial setting while learning at the same time.

Hotbench?

There is a problem – the notion of 'hot-benching' is intended to give graduates and others who are starting out in business a chance to ease into it without taking on the full overheads and administration that come with any new venture. But these craftspeople can be there for a long time, meaning it is difficult to offer spaces to new recruits. So one of the buildings nearby is due to be converted into new workshops later in the year, allowing two more proper, enclosed workshops and also providing machining facilities.

What has happened is that Sylva has created an organically grown, permanent creative community almost without trying. A place where skilled woodworkers can work and earn, learn and enjoy.

To give you a flavour of the range of endeavours there is a boat-builder and restorer, an upholsterer who also

Everyone's time in the machine shop is logged on a chart

SYLVA Wood Centre	
Machinery Usage Log	
Name	Time
John	10.00 - 11.00
John	11.00 - 12.00
John	12.00 - 13.00
John	13.00 - 14.00
John	14.00 - 15.00
John	15.00 - 16.00
John	16.00 - 17.00
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John	94.00 - 95.00
John	95.00 - 96.00
John	96.00 - 97.00
John	97.00 - 98.00
John	98.00 - 99.00
John	99.00 - 100.00

teaches, a garden furniture enterprise, another making 'live edge' tables and breadboards using coloured resin infill, a fitted-furniture builder, a cabinetmaker currently creating a modern design of campaign desk and a furniture-restorer and upcycler. When tea break or lunch comes around, there is also the modern refreshment area where everyone can relax, meet and chat.

Facts and figures

After an extensive tour of the whole site I sat down with Gabriel and Joe outside the timber-built offices, in the unexpected warmth and brightness of a pleasant spring day, to chat and try to understand the scale of the environmental problem they are trying to tackle and how Sylva was developing generally. Gabriel is clearly very knowledgeable and down-to-earth for a chief executive. 'It's good to have an excuse to sit in the sun instead of at my computer,' he remarks. I get the impression he would rather be sizing up a forest and its potential instead of being largely office-based.

He says "the amount of unmanaged woodland in the UK is 700,000 hectares. The area the charity helps support currently is 80,000 hectares (200,000 acres) equivalent to 109,000 football pitches, or half the size of the Greater London area". Clearly this is a figure he has reeled off many times before. The task of trying to convert this amount

of woodland to properly managed status with an emphasis on biodiversity is a Herculean task. Sylva provides information and software based on agreed UK forestry standards to help anyone, such as woodland owners, timber agents and others, to work on improving woodland so it can thrive and survive. They have had to take a several-hundred page document on the subject created by various Non Governmental Organisations (NGOs) and crunch it down to the essentials so it is less daunting for anyone trying to access the information. Where woodland management plans are in place, they can then be given a star-rating based on how well they are being implemented.

Running the foundation

Gabriel's own background is interesting. Having qualified in environmental science he went on to work at the Earth Trust nearby and oversaw the planting of 80,000 trees of varying species. He also went on a fact-finding trip to Kyrgyzstan to study the growing of walnut trees and how that knowledge could then be transplanted to the UK.

Aside from being the public face of the Foundation, Gabriel has many issues to address. He said: 'We are resource-rich but cash-poor. We are surviving and growing but we do need match-funded grant money to achieve our objectives.' He goes on: 'Getting the culture right where everyone here works collaboratively has happened naturally. You can't really invent that, we are very lucky, really.' I questioned the way in which the Foundation's aims are shifting from sylviculture to completing the lifecycle by felling, converting and making an end product.

'We are "slippy", you might say,' says Gabriel. 'We have the ability to change, which is essential if we are to survive and grow and be relevant and show others how things should be done – but we are, I suppose, "puritanical" in our methods. Things have to be done properly to be right.'

A forest of their own

Having discussed some of the nuts and bolts of keeping the Foundation afloat and the help given to others, it didn't take much for Gabriel to switch on to the subject of all the exciting things being done on the site, some of which Joe had already shown me on his tour of the farm area.

I asked if they cropped timber from their own woodlands. 'No,' said Gabriel, 'but if you look beyond us, you will see a vast array of saplings. Roughly 200 people have paid to have their own plot roughly covering the canopy size of a fully developed oak tree, so 25 saplings of different species in each plot.'

'We have own idea of what types to plant – typically native species such as oak and cherry, oak from France, giant redwood, red cedar, robinia and tulip tree, but many wanted to choose their own tree species either native or non-native. The eventual aim is to create a forest on what was open farmland a few years ago.'

'Gradually the trees will be thinned out, as is good forestry practice, until just one mature tree remains on each plot.'

'We are basing this planting on set criteria – including societal needs and replicating the warmer climate model which we expect to see over the coming years, which will be similar to the Mediterranean coast of France.' ➤



Woodcarver Simon Clements next to the patrons board, which he carved



The sign above the dedicated workshop for Rycotewood students



A neatly ordered tool cabinet in one of the side workshops



Boards neatly sticked and stacked outdoors under dry cover



The forest of saplings, the Charter Pole, and in the distance the remaining chimney and cooling towers of Didcot power station

Charter pole

And what is that pole thing I can see in the middle, I asked in ignorance. 'That,' said Gabriel, 'is a Charter Pole, carved by Simon Clements, the woodcarver who you passed just now working on a giant figure of The Gruffalo for the primary school,'

The Tree Charter was a project brought about by The Woodland Trust collaborating with people and organisations who all feel they have a vested interest in the preservation of woodland and wildlife. There are 11 Charter Poles sited across the UK of which this is one. The Charter has 10 key principles by which 'trees and people can stand stronger together'.

Anglo-Saxon house

Another project due to be built later in the year by volunteers who are paying to help cover the cost is the Anglo-Saxon House, a replica building of that period which will be raised in a space in the centre of the field of saplings. It will be a valuable educational resource and help inform knowledge about such early structures. A test section has already been assembled to test the strength of the components. Joe had

shown me inside one of the barns due for conversion. 'That is the material for thatching the house,' he said. It should be a fascinating sight seeing the building when it starts to take shape.

The Wood School

And finally, Joe's big project is running the Wood School. This is in a new building that echoes the shape of the existing farm buildings.

Many planning permissions have been applied for on site, so all new building work at Sylva has had to be done sympathetically and with the support of the local community. This all-timber structure is a learning space with tables and chairs and a white board screen, but it converts very quickly by moving the double-sided benches from the sides of the building ready for use. Already various weekend courses in green woodworking, paddle making etc have been run but the expectation is the building will soon get continuous use, including teaching school students and DT teachers' woodworking. Further courses in 2019 include treewrighting and timber-framing, hurdle-making, knife skills and whittling, spoon-carving taster



A stack of thatch intended for the new Anglo-Saxon house and a model showing how the house is intended to look

days, introduction to steam-bending for furniture, guitar maintenance and repair and thatching.

If you want to find out more about this amazing charity or book yourself on to a short wood-based course visit: <https://sylva.org.uk>

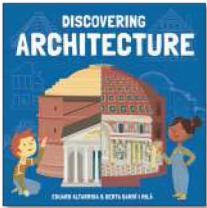
My thanks to Joe Bray and Gabriel Hemery for making me very welcome and letting me explore the whole site. The best of luck for 2019 and beyond. ■



Clockwise from above: The paddle-making course held in the new Wood School building; Expert green woodworker Peter Wood about to demonstrate turning a chair leg; A very proud Joe Bray in front of the brand new building

BOOK REVIEWS

The **Editor** has an urge to build the perfect place to live, but finds himself going to the dogs instead...

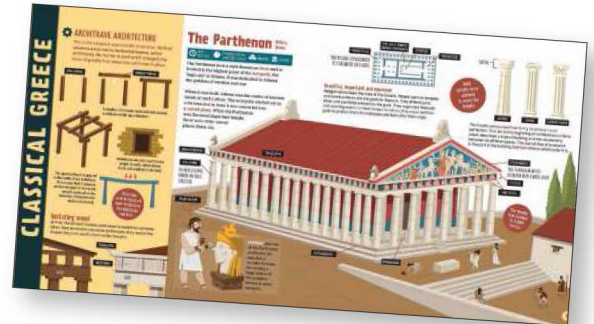


Discovering Architecture Eduard Altarriba & Berta Bardí i Milà

In the last issue I looked at a book called *My First Book of Relativity*, which was also co-authored by Eduard Altarriba. It is a real skill to turn a complex and potentially boring subject if delivered badly (I'm thinking of my school days here) into something fascinating, enlightening and fun. I believe there is a strong link between furniture design and architecture and there are plenty of examples of modern architects who have designed all the furniture and fittings for the buildings they created.

Some of the same structural dynamics also apply between the two disciplines. So here we have a book ostensibly written for children that seems equally suitable for adults. Both the writing style and the retro cartoon graphics make reading this book easy on the eye and informative at the same time.

From the pyramids to classical Greek buildings, the Romans, Byzantine architecture, Andrea Palladio – who has influenced the design of many important buildings – Japanese style, the Crystal Palace and the use of rivets, Art Nouveau, Gaudí, Mackintosh and his furniture design, Le Corbusier, Frank Lloyd Wright... the list of architects and styles goes

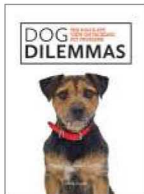


on and on and there is a concentration on the design features of buildings and the construction methods used. This book is an open invitation to aspiring young architects to consider a career in shaping our future, but also educating us adults too. Highly recommended.

PRICE: £12.99

ISBN: 978-1-78708-028-7

www.buttonbooks.co.uk



Dog Dilemmas – the dog's-eye view on tackling pet problems Sophie Collins

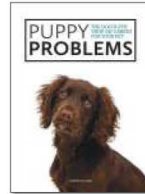
If you are a cat lover it's best to look away now...

Here we have a brace of books about man's best friend – but sometimes our unwitting enemy too. For me – or rather us at home – it's personal. We have acquired a rescue dog to fill the void left by our poor old collie-cross, Charlie, who passed on a while ago. The new recruit, Daisy, is an elderly Parsons Russell Terrier. Anyone who is familiar with them will know they can be very wilful and refuse to do what they don't want to do – dogmatic you might say. Doggie psychology is everything and this book has come just in time for us so we can bribe, I mean persuade, Daisy to mend her errant ways. In this handy tome we first meet the cast of featured dogs of different breeds. The chapter headings are: Whose Problem is it Anyway?; Dilemmas at Home; Out and About; and Working with Worries. You get the idea – understanding the stresses and worries our canine companions have and understanding their natural behaviour. How to speak 'dog', house training, learning to relax around other dogs and when to get professional help are just a few of the all-important issues raised by owning a pooch. Essential reading for dog owners.

ISBN: 978-1-78145-336-0

PRICE: £9.99

www.ammonitepress.com



Puppy Problems – the dog's-eye view on caring for your pet Sophie Collins

Dogs naturally bond with humans and can read our intentions and help us in all sorts of ways but, rather like children, they need to learn behavioural boundaries. To quote the late Barbara Woodhouse: 'There is no such thing as a bad dog, only a bad owner.' So, if we are to live in harmony and look after our close companion and friend we need to treat them well, and this book tells you exactly how to do just that. Start 'em young – too late for our Daisy, she needs the other book, but this one is dedicated to teaching them and us from the very start when they are oh-so cute. The chapter headings are: Brand New; Settling In; Heading for Adolescence; and In it for the Long Haul. The last one says it all really – a puppy, or rather dog, is for life. It's life, definitely, not just for Christmas. Aspiring dog owners want a dog but may not necessarily realise the responsibility that brings. So advice on peeing and more peeing, understanding 'discipline', barking and what it means and on and off the lead are just a few of the crucial topics covered in this rough, rough guide.

ISBN: 978-1-78145-335-3

PRICE: £9.99

www.ammonitepress.com

All books are available from:

www.gmcbooks.com

01273 488005



Running hare

Duane Cartwright carves a simple running hare that could be made in just a weekend

Things you will need...

Tools:

- Hooked skew
- No.2, 20mm
- No.3, 10mm
- No.5, 8mm
- No.6, 6mm & 9mm
- No.9, 5mm
- No.11, 3mm
- No.3, 6mm fishtail gouge
- Bandsaw or coping saw
- Handsaw

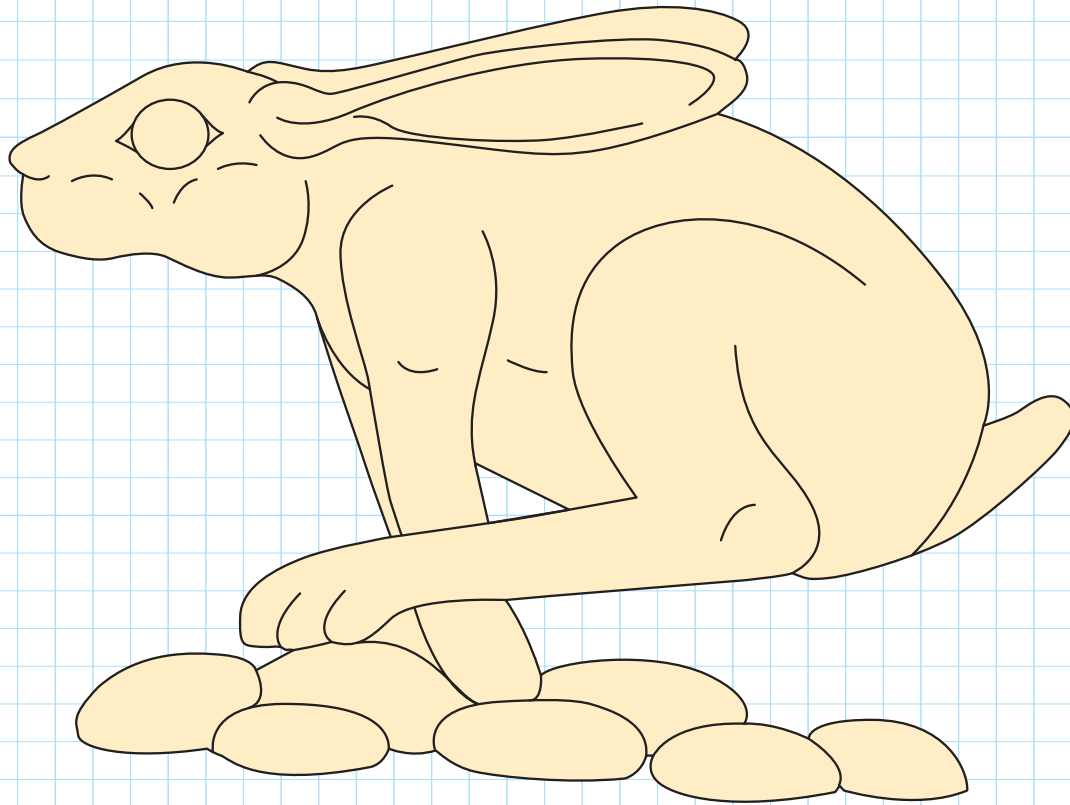
Wood:

- Mahogany
(*Khaya ivorensis*)
170 × 115 × 55mm



PHOTOGRAPHS BY DUANE CARTWRIGHT

This simple little running hare could be completed in a weekend, depending on the wood being used and how much spare time you have. I carved this by simply cutting out the side profile and shaping the body and head, but you could add more movement to the carving by having the hare turning on its front paws, giving the body a slight twist, or even turning the head slightly. Whether you follow the pattern or add the extra movement to the hare, I would recommend using reference material such as photos of hares from the internet. I've listed the tools I used as a guide, but this project can be carved with just a few basic carving chisels.

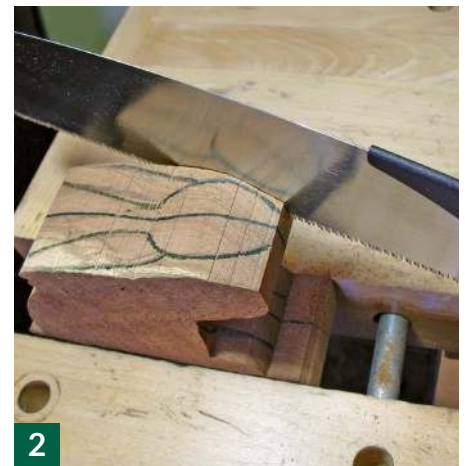


1 Transfer the design on to the wood, then cut out the profile of the hare. Draw a centreline around the carving and an oval egg shape on top of the head and mark the rough placement of the ears.

2 Due to the base, you can't cut out the top view on the bandsaw, so hold the carving securely and use a handsaw to cut away the waste on both sides of the head.

3 Using glue and paper, fix a scrap piece of wood to the base and attach to your carving vice or similar. With the carving secure, use a large gouge to shape and bolster in the hare's body. Use a deep gouge to carve the placement of the legs and ears. Carve down the front paws between the back legs and separate the ears to give the hare its rough overall shape.

4 Draw in the placement of the eyes, cheeks and nose, using the centreline as a guide to measure and mark in the eyes. Some dividing callipers will help to make sure the eyes are equally spaced. With one eye drawn in, draw some lines from the edges of the eye over the head to the other eye to make sure both are equally spaced. ➤



5 Use a No.9, 5mm gouge or similar and carve across the cheek, around the eyes and along the side of the nose. Carving both sides equally and occasionally checking from different angles will help to make sure the head is symmetrical. Then, with a shallow gouge reversed, round over and blend in the facial features and slope the ears in towards the head.

6 Once the head is carved and you're happy with its profile, you can draw in the eyes again.

7 Using the gouges that best fit the shape of the top eyelid, cut in, creating a stop cut. Then, with a shallow fishtail gouge or similar reversed, cut in rounding over the eyeball. Using the best-fitting gouge, cut in the bottom eyelid to create a stop cut, again using the reversed fishtail and a hooked skew in the corners to finish carving the eyeball.

'First, draw the detail of the ear using the sketch as a guide...'

8 Now move on to the ears. First, draw the detail of the ear using the sketch as a guide, then use a No.11, 3mm gouge or similar to carve the inner part of the ears. Carving the inside before finishing off the outside of the ears will allow for change or any errors/breakages that may occur.

9 You can now finish shaping the outsides of the ears. Use a medium sweep gouge reversed and be aware of the grain direction.

10 Use a veiner or V-tool to carve in the detail of the nose and the mouth, then refine/sharpen the detail on the sides of the nose with a stop cut created with the best-fitting gouge.

Top tips

1. Keep checking and looking from different angles to help keep the symmetry.
2. A white wax pencil will show up on darker wood, making your marks easier to view.
3. If you do not own a carving vice, use a larger piece of scrap wood and use a G-clamp or similar to hold the carving to your tabletop.





11 Draw a centreline down the front and back legs. This will help to keep the legs straight while you're rounding and shaping them. Use a hooked skew to carve out the area behind the front legs and above the back legs where they meet the belly. A drill can help to clean out this area. When the legs have been shaped, redraw the centreline on the back legs then equally space and draw the toes in place and carve them in using a veiner.

12 Once all of the heavy carving is done above the paws, carving under the back legs can begin. Start with a deep gouge and carve under the back legs to the sides of the front paws, separating the back legs from the base.

13 Use a hooked skew or similar to clean up where the front and back legs meet. The front paws will be part of the base.

14 You can now move on to the base. I carved it to resemble rocks. Use a pen to roughly mark where you want the rocks, then use a No.11, 3mm gouge or similar to mark out where you made the pen marks. With a shallow gouge reversed and using the corner of the gouge in the grooves made earlier, round over the rocks.

15 I chose to sand the hare to bring out the wood grain but I left the rock base with a tooled finish to add contrast. If you choose to sand, start at about 120 grit and remove all of the tool marks, sanding in the direction of the grain as much as possible. Then give the carving a good brush down before moving on to the next grit of abrasive, finishing with 320 or similar. With the sanding complete, give the whole carving a coat of sanding sealer, wiping up the excess as you go. When this is dry, use the finest abrasive you have, e.g. 320 grit or higher, to cut back the sanding sealer and remove any raised grain. You can then apply your chosen finish – I chose to use a microcrystalline wax for its durability. Finally, apply some crushed velvet to the underside of the base. This will protect any surface the carving sits on. Cut a piece of velvet a touch larger than needed, peel off the backing and apply to the base, then carefully cut around the edge with a craft knife.

16 Here is the finished hare in mid flight. ■

Drop-leaf oak kitchen table

By Michael T Collins

Table: from the Latin 'tabula' – a board or flat surface

When I was growing up, we always ate our meals at the Ercol trestle table.

It was where the family gathered, conversations were had and the hot topic of the day discussed, stories and jokes were told, meals were eaten, and my mother could keep an eye on us while we were doing our homework. Clothes were made on that table, and board games and jigsaws were puzzled over. Everything revolved around that kitchen table.

The history of the kitchen table can be traced back millennia – the ancient Egyptians first used them, although they were probably little more than a raised stone platform. By the Middle Ages, the easily transportable trestle table was used.

I was commissioned recently to make a kitchen table/island that would be an extension to a kitchen counter. The only criteria: it had to be the same height and thickness as the existing counter – 508mm wide and 1700mm long, with two offset drawers, a lower shelf and it needed a drop leaf. Other than that I had free rein to make this how and out of whatever I wanted.

Table top

1 I had one large board about 3600mm long that was perfect for the top. I first cut the board into manageable lengths, about 1270mm long and almost 80mm thick, and

proceeded to re-saw the board and then plane the sawn surfaces flat. There were a few areas where the saw marks still showed, but this would be on the underside.

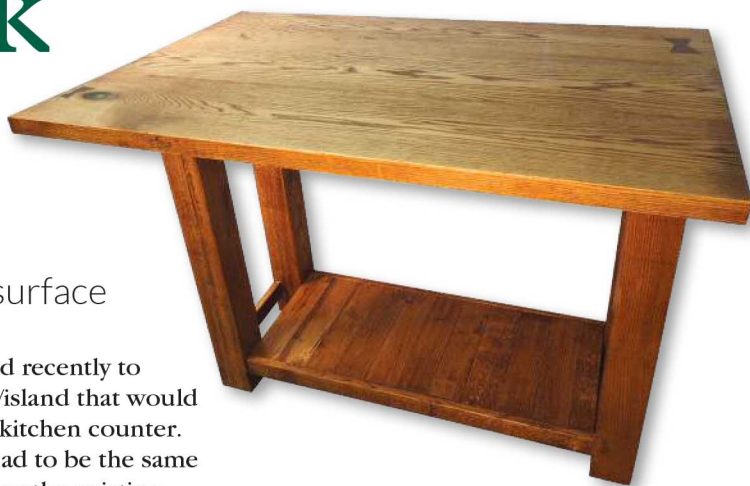
2 The boards were jointed with dominoes used for alignment and clamped. **Note:** Always apply clamps on both sides to keep wide boards flat. Be sure to keep the metal clear of the glue or you will have to deal with black marks caused by the reaction of the water, iron and tannins in the oak. Once the glue was dry any excess glue was removed with a card scraper. At this point I noticed there were two checks (cracks) in the boards that I wanted to secure with an inlaid piece of contrasting wood.

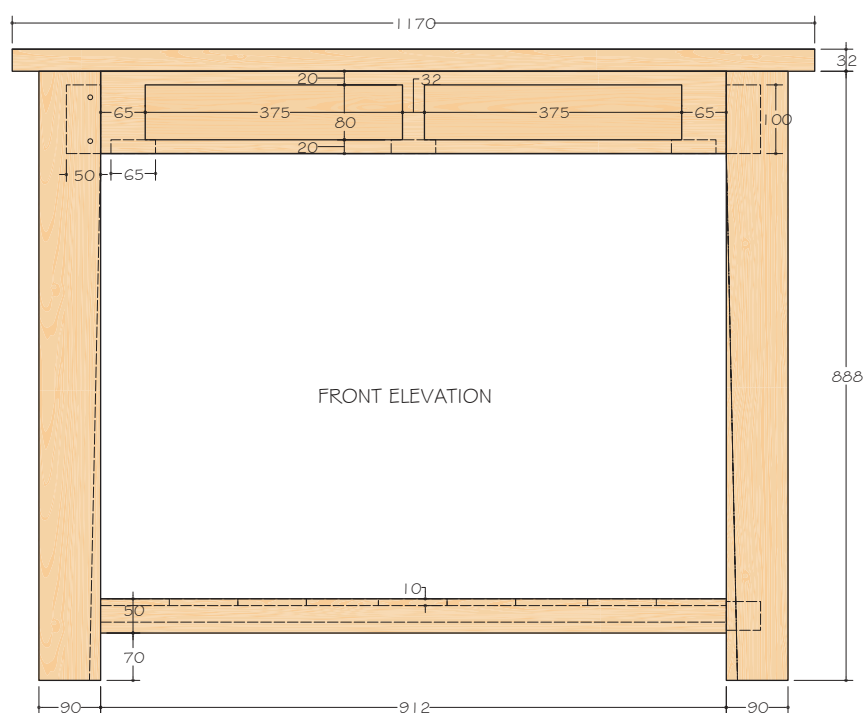
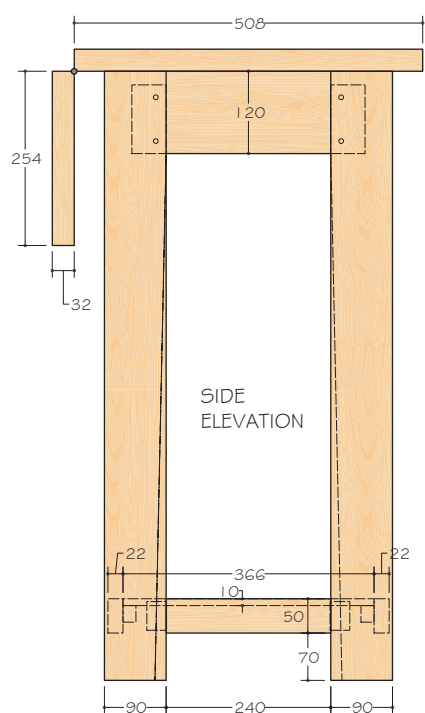
3 First, a 20mm thick dovetail key (bow tie) was made out of walnut and secured to the board in the desired location with a couple of dabs of CA adhesive.

4 Then the edges were traced with a marking knife.

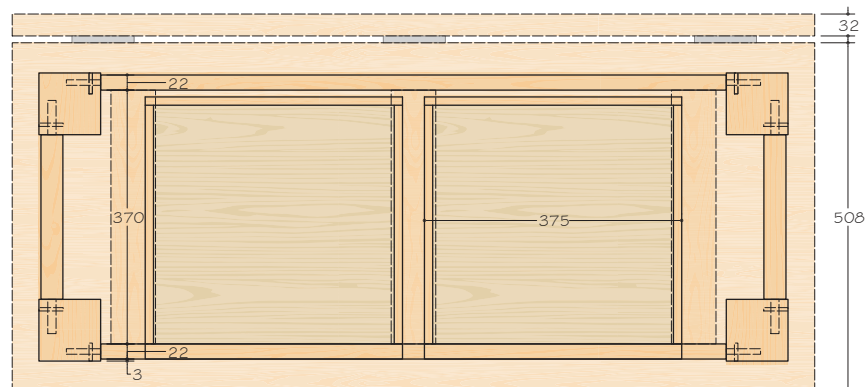
5 It was then a matter of chopping out the waste and cleaning up the recess with a router plane. Adding a slight chamfer on the lower edge of the key created a tight fit at the top. The key was then glued into place.

6 One of the edges was not quite as tight as it should be so, with a ball-peen hammer, I was able to 'squash' the wood fibres and close the gap. The same repair method was used on a smaller check in the drop-leaf board and a knot hole filled with resin. ➤





PLAN / SECTION VIEW



The legs

7 I had a hard time getting 90mm square stock for the legs, so to give the illusion of solid oak legs, some maple, poplar and other boards were laminated together. You can see from the image that the legs can be made from pieces of varying sizes. Then a custom 10mm ripped oak veneer was applied to the outside. By using this method, the seams were almost invisible.



8 Once the glue had dried the legs were planed to 90mm square and cut to final length.



The rails

The rails were all planed on one face and an edge.

9 To create a seamless flow of grain through the upper front drawer rail, 20mm was ripped off the top and bottom edges of the board, then I cut the drawers out and glued the parts back together. The drawer fit would be fine-tuned later. This method means that the front rail would be approximately 6mm less than the other rails. The other rails were all planed to final dimension. All layout measurements were taken from the face side. This way any errors would be to the back or inside.



10 I am a firm believer in taking measurements from the actual pieces, so, I mark the locations of the tenon shoulders on all the rails. (The total length of the rails was the distance between the legs plus 100mm for the two 50mm tenons.)



11 Once the shoulders were scribed, the mortise gauge was set to the width of a 10mm mortise chisel and then I positioned the tenon centred on the rails.

Orienting the legs

12 It's always nice to show your good side, and building a table is no different. I imagined the location of the table in the kitchen and positioned the legs to present the best faces on first encountering the table. Once I had the orientation, the legs were held together and a cabinetmaker's triangle used to fix the leg positions with the V-point of the triangle facing the viewer.



13 Now they were in the correct position, the location of all the

mortises was marked with a pencil. Over the years I have found this to be a crucial step and one that will avoid having to deal with mortises chopped in the wrong sides. To create the 3mm reveal, I moved the mortise gauge fence 3mm farther away from the spur closest to the fence. While it is relatively easy to get legs flush with the rails, if there is any errors a reveal hides this. I gauged the length of the mortises – 20mm down from the top of

each leg, 90mm long. The lower rails were 70mm up from the bottom and 50mm long. All the tenons in this table will be pegged (known as drawboring).

Chopping the mortises

14 All the mortises were chopped first. I started approximately 2mm from one end and, with the bevel facing the direction of travel, chopped out the waste. Once getting to the end, it was 'about face' and I walked the

chisel back – I marked the required depth on the chisel.

The tenons

15 Next the tenons were cut, sawing the shoulders on the waste side of the gauge lines first and then the cheeks.

16 I used a shoulder plane to tweak the fit.

17 The tenons were cut to size and all the mating mortises and tenons labelled.

18 The whole base was then dry-fitted and clamped firmly together – this allowed me to see any issues. I had a couple of shoulders that were not seating just right. A simple trick is to kerf in the shoulder on the inside. This way when it is pegged it will create a very tight joint on the outside.

The base

19 The base was then disassembled and a small chamfer planed on all the visible edges of the legs and rails. I followed this by sanding all parts with 180, 220 and 320 grit, especially the surfaces that would be harder to get to once the base was assembled. **Note:** Red oak is a very porous-grained wood and the finer grit sanding helps prevent the oak blotching when stain is applied.

Drawboring

20 The location of the peg holes was determined and, using a 9mm brad point bit, holes were drilled through the mortises. I used a piece of scrap wood sitting in the mortise to stop tear-out.

21 Once all the holes were drilled, the table was dry-fitted once more, using a brad point drill bit to mark the location on the tenons.

22 The holes on the tenons were offset 1mm closer to the shoulder. When the peg is driven through this offset, the joint would get pulled tighter together.

Glue-up

23 The short rails and legs were glued together with plenty of glue in the mortises and the tenons. There was no need to add glue to the shoulders as these are very small and end grain to long grain does not have good holding power. ➤



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24 I made my own pegs using a dowel plate. You can see the full method for creating pegs on my website and Instagram feed, @sawdustandwoodchips.

25 I tapered the pegs, drove them into place while the joints were clamped and peened them. It is easy to tell if they 'bottom out' because of the change in note as you drive them in. Once the ends were assembled, it was time to glue the long rails into place. But first I had to install drawer runners.

The drawer runners

26 For the drawers' runners three pieces of wood were dominoed into the lower edge of the top rails. An additional piece of wood was secured in the top centre. Once the three runners were installed, I was then able to glue and peg the entire top assembly and bottom rails to the legs.

The drawers

27 For the drawer construction I chose a very simple lap joint. This joint can be seen in many examples of old utilitarian kitchen furniture.

28 For the base of each drawer I used a piece of old 6mm poplar ply that slid into a 6mm groove, 6mm up from the bottom. The back of the drawer rests on this ply and is held in place with nails.

29 The sides of the drawers were planed to give a two-business card (1mm) gap on each side.

30 Once the fit was perfect, I drilled pilot holes and used antique cut nails to provide additional strength. Two blocks were glued on to the back rail. These were sized to allow the drawers to close flush with the front.

31 The glides for the drawers were pieces of poplar that were glued into place, leaving about 1mm side to side movement.

Lower rail treatment

32 The lower rails needed to support a shelf, so two ledges were screwed on to the back of each lower rail, creating a 10mm ledge. As you can see from the image, at this point I had already given the base a coat of stain.



33 I re-sawed some offcuts to 10mm thick and added a shiplap to each edge. These were positioned on to the rebate in the base. The shiplap will allow the boards to move with the seasons but not show any through gaps.

Finishing the table top

34 With the base complete, it was time to size the top. The top was ripped to 508mm wide and cut to 1170mm long on the tablesaw cross-cut sled. The drop-leaf section was ripped to 254mm. The top was sanded with 180 grit then water applied to raise the grain. This was followed with 220 and 320 grit paper and the end grain with 600. Any lower areas where the sandpaper did not reach I used a card scraper and repeated the sanding. A small chamfer was planed on all edges.

35 After many sample stains, the client settled on a red oak oil-based stain. The surface was flooded with stain and left for about 15 minutes before wiping off the excess. With oak, it is important to go back over with a dry cloth as the pores tend to weep a little. I applied the same finish to the base and left it to dry overnight.

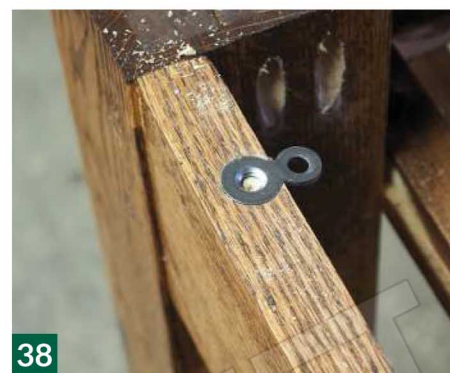
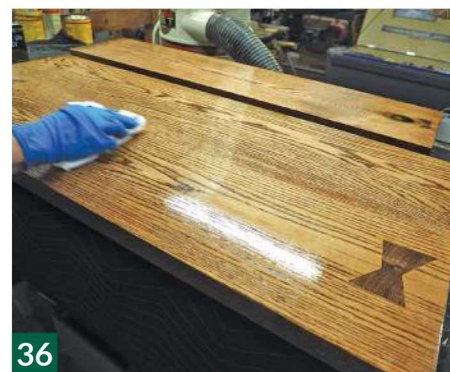
36 The following day I gave the whole table a coat of wipe-on satin polyurethane, allowing it to soak into the wood, then wiped off the excess. When dry the surface was scuffed with 320 sandpaper and I applied another coat. This was followed by one further coat which I applied with 600 grit sand paper. This created a very smooth surface to which I added four additional, thin coats of polyurethane. The legs had only two additional coats.

Securing the top to the base

37 A piano hinge was used to hold the drop-leaf in place, and two spring-loaded drop leaf supports were fitted.

38 I used figure-of-eight table top fasteners to secure the table to the base, which allows the top to move with the seasons. The top was permanently secured to the top of the legs at the hinge side with pocket screws.

Like my family's old kitchen table, I like to think this one will be a similar fixture for a modern family – a centre for the home to congregate around. ■



The table in position in its new home

Supplies: Table top fasteners and leaf supports from Rockler.com

Woodworking blog



Our man **Krishan** tells us more about his exciting journey working with wood

In January 2018 I made the decision to immerse myself in the world of woodworking. Great, but what do I do next and how do I do it? This was me right at the beginning of exploring the multi-faceted world of woodcraft – how exciting. I enrolled in an evening furniture-making course at the Royal Leamington Spa College and was blown away by the tools and machinery at my disposal to make ‘stuff’ – the woodworker’s equivalent of Aladdin’s Cave. With my initial project, learning basic joints with basic tools, I found I was using chisels a fair amount. Deep down I actually really wanted to own and cherish a lovely set of chisels so decided to buy new. I did heaps of research and settled on some Ashley Iles bevel-edged chisels – they’re awesome. Not too expensive, not too cheap, felt good to hold and generally had respectable reviews.

The more I have delved into the world of woodcraft, the more I have wanted to experience, to find what I enjoy and prefer. I was fascinated by the idea of green woodwork. A one-day course with Ian Varley (www.rusticcarpentry.co.uk) to make a three-legged stool, a week’s course to make a Windsor chair with Peter

Wood (www.greenwooddays.co.uk) and even a spoon-carving day with Dave Cockcroft (www.davecockcroft.com). It may seem obvious, but I was quickly learning that different styles of woodcraft called for the use of different tools. Hesitation was creeping in, and I was thinking this could be an expensive hobby – but I knew it didn’t have to be. I regularly rummaged around car boot sales, knowing great deals were waiting to be discovered, especially basic tools such as squares, marking gauges, bevels and even planes. The attractive aspect of this was that I felt secondhand tools had a story behind them with a new chapter to come. I was able to do this on a modest budget and in just over a year have collected a reasonable set of tools, as you can see from the pictures, mainly from car boot sales, some vintage fairs and the odd online purchase. The woodcraft discovery adventure continues and I am still bargain hunting or arguably, in some cases, collecting.

Krishan

Instagram @krishanvarache
Leamington Spa College
<https://wgc.ac.uk/page/93/royal-leamington-spa-college>



PHOTOGRAPHS COURTESY KRISHAN VARA



Coming next month in
Woodworking
 CRAFTS

ISSUE 53
 ON SALE
 09 MAY



PHOTOGRAPH BY GEORGETY CROSS/ANTHONY BOOKS

Building sheds

— *methods & materials*

- The Editor builds a remembrance seat
- Turn a bowl using a pole lathe
- Woodworking Joints Part II – Butt joints



PHOTOGRAPH BY GMC/ANTHONY BAILEY

PLUS: Using spokeshaves • Footstools project • News & Events
 Product tests • Ask the experts • Book reviews and more

KITTED OUT

Take a look at the gadgets and gizmos that we think you will enjoy using in your workshop

New Shokunin Japanese saws from Axminster

Japanese woodworking tools have long been regarded as some of the most finely crafted in the world. Made using the best quality steels, Shokunin is a collection of Japanese artisan hand tools. Unlike their western counterparts, these saws cut on the pull stroke. With the blade working under tension, this allows it to be both harder and thinner. As a result, they require less effort when in use and remain sharper for longer, giving a much cleaner cut.

Kataba crosscut saw is the equivalent of a western rip or panel saw. There is no limit to the depth of cut, allowing cuts across wide boards or sheet material, as well as trimming battens to length with its 240mm-long blade.

Ryoba is the ultimate tenon saw with one edge for ripping down cheeks and the other for cleanly crosscutting shoulders. The teeth leave an incredibly clean finish. It comes in three lengths: 210mm, 240mm and 270mm.

Dozuki tenon saw cuts smoothly and with ease. The nickel plating is highly reflective. By observing the reflection of the timber on the blade and keeping the reflection aligned the cut will automatically be vertical.

Tatebiki dovetail saw has an extremely

thin blade and fine rip cutting teeth. It is the perfect saw for cutting dovetails and other fine joints. Performance is exceptional, requiring very little effort.

Atsuba crosscut saw has a curved tip with teeth, which allows cuts in the centre of the board or panel using a gentle back and forth motion which gradually deepens the cut until the saw breaks through.

Jushi tenon saw has a stiff back spine supporting a 0.3mm thick blade with fine rip cutting teeth. The ultra thin, fine-

toothed blade allows precise, tear-free cuts with maximum control for detail work. The tooth profile and impulse hardening are perfect for cutting plastics.

Flushcut saw is for trimming of protruding tenons or dowels without marring the surrounding surface with its thin and incredibly flexible double-edged blade.

Prices start at £17.75 inc vat. For more information, visit axminster.co.uk.



PHOTOGRAPH BY GMC/ANTHONY BAILEY

The clear advantages of Osmo UV-Protection-Oil

Osmo UK has developed a quality finish to protect, maintain and restore exterior wood. Osmo UV-Protection-Oil has been designed to preserve the natural colour of the wood, leaving it looking in top condition throughout summer months.

Protection of exterior wood is of the utmost importance as the colour can fade after harmful UV rays damage the lignin within the wood. Osmo UV-Protection-Oil is a clear, satin finish for exterior application to vertical wooden structures only, such as doors, cladding, fencing etc. Based on natural oil, it does not crack, flake, peel or blister. This natural protective finish has been produced to resist the greying effect on exterior wood caused by exposure to the sun, maintaining the wood's natural aesthetics. The UV-Protection-Oil 410 consists of natural ingredients and is safe for use on children's play equipment, flower boxes as well as animal housing, while UV-Protection Oil Extra 420 contains additional

active-ingredients perfectly blended order to reduce algae and fungal decay and provide optimal protection during winter periods.

For horizontal/flat surfaces, decking, tables and benches, a pigmented finish is required to protect against the wood's natural greying process. Both Osmo Decking-Oil and Natural Oil Woodstain product ranges offer a wide selection of colours. The transparent nature of the finish allows the natural characteristics and aesthetics of the wood to remain, keeping its natural feel and appeal.

Typical price £62 for 2.5 litres.

For additional information on Osmo's range of eco-friendly wood finishes, visit www.osmouk.com, or call 01296 481220.



Machine Mart's New spring/summer catalogue is out now

The new Machine Mart catalogue is packed full of all the tools and equipment you need, whether you're a hobbyist, DIY enthusiast or professional.

Featuring more than 600 price cuts and new products, the new 508-page spring/summer catalogue is a must-have for anyone seeking a huge choice of tools and equipment at unbeatable value.

With more than 21,000 items of tools and machinery in stores across the country and online, you'll be sure to find the tools you need. To order your catalogue simply go online to www.machinemart.co.uk, visit your local store or call 0844 880 1265.



Snickers Workwear new 37.5 Technology – climate-control fleeces



Not only will you stay warm with these new 37.5 Technology fleeces, you'll look and feel cool too. With styles for both professional tradesmen and women, they excel at ventilation and moisture transport to keep you working comfortably wherever you are on site.

37.5 Technology fabric in the fleece is a very quick-drying material that captures and releases moisture vapour – such as your sweat – for superior coolness and dry working comfort.

Keeping a balanced work temperature is not just about staying cool and in great shape, it's a matter of your wellbeing and job safety. So check out the new Snickers Workwear 37.5 Technology fleeces to fit your workday.

Men's or women's 37.5 Technology fleece: £85.44 inc VAT.

For more information on the new 37.5 Technology fleece, visit www.snickersworkwear.co.uk or call the Snickers Workwear Helpline on 01484 854788

MINI TEST

Rapid A3 Profil drawing board

F&C editor **Derek Jones** decides to go back to the drawing board

There was a time when I was completely conversant with two separate CAD drawing applications, Vectorworks and Autocad – which was no mean feat given that they were designed for use on different operating systems. Depending on which office I was in, I could usually pick up where I left off to create or amend 2D and 3D layouts without too much downtime. I've heard it said that in a fraction of the time it took to learn a skill you can lose it if you don't use it and, for a lot of things in life, I'd agree. However, for some reason manual skills and the dexterity that goes with them seem to stick around for longer. Or at least that's what I found when I sat behind an old-school drawing board with parallel slide and set-square for the first time in a couple of decades.

The Rapid A3 Profil drawing board is an entry-level drawing kit consisting of a board with T-square on to which a rotating drafting square and set-square can be mounted. The sliding T-square can be locked at either end for the most accurate results with simple slide controls. While I know there are more sophisticated products out there I also know they come with an equally sophisticated price tag, making the Rapid A3 at round £45 an excellent alternative to a professional rig.

The board is made from a shock-proof plastic with corner tabs and full-length and width magnetic clamps to hold the paper in place. It takes just a couple of seconds to secure the media and away you go. Scales along the top and side make it easy to reference points on the page and there is a separate compass plotting scale at the bottom of the board for picking off radii easily. A couple of removable feet raise the board a few degrees off horizontal.

With most of the similarly priced



drawing boards mimicking the professional spec, with either wire or tooth-and-cog mechanisms, the Rapid is much simpler and, in my opinion, more robust as a result. The plastic doesn't scream quality but then neither does chip board and edge tape, but once you've come to terms with that there's really nothing to dislike. This kit came in a box that doubles as a permanent storage container, complete with handle, that will keep all your drawing equipment in one place. There's plenty of choice when it comes to where to buy one if you search online – just look for Rapid A3 drawing board. Some are clearly badged as Rotring – a well-known and respected brand of drafting equipment – others are not and there seems to be little or no difference in quality. Expect to pay around £55 for a Rotring and £45 for a non-branded kit. Ideal if you don't need a full-size drawing board or don't have room for a permanent fixture.

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Pole lathe bowl turning

Part 1

Fancied having a go at bowl turning on the pole lathe but still 'a bit green'?

Gareth Irwin has the answers

All forms of woodwork require a certain level of understanding of the different properties and characteristics of wood – species of tree and their different textures and densities, moisture content, speed of growth, position of growth, grain direction and the way different tools can be worked in various situations. Of all the types of woodwork I have tried, from green woodwork in the woods to cabinetmaking at the bench, I have found bowl turning on the pole lathe to be the most demanding of this understanding.

Historically, many types of woodturning lathe have been used, including water-powered and hand-powered flywheel, but the pole lathe is unique in that it does not continuously turn the work, but turns the work back and forth as the foot is depressed and released.

1 Bowls that are turned on the pole lathe will have a slightly grooved, but hopefully not rough, finish and because they are often turned from partially green timber, they will distort but not split as they dry and yet be full of character. ➤



1

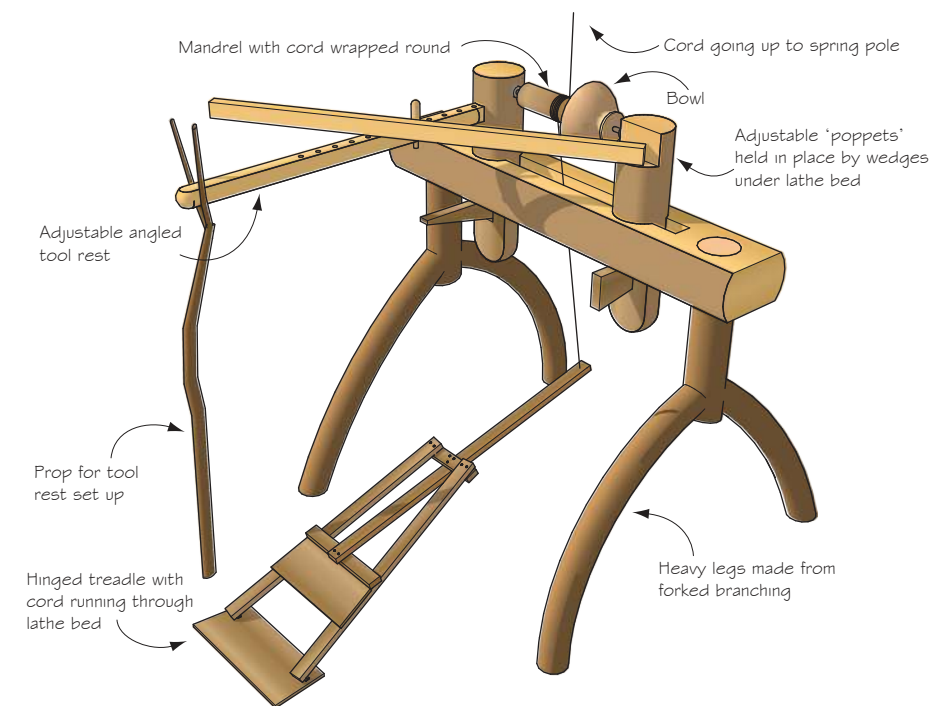


2

Timber

The blanks from which the bowls are turned are made from logs cleft in half and oriented in such a way that the grain runs through the bowl from side to side, which means the tools will cut across the fibres at opposite ends of the blank and along the fibres at the sides. The way the cutting edge of the tool meets the fibres also varies at the different parts of the bowl's shape.

2 Just about all species of native hardwood can be turned successfully, but some are better than others. Sycamore, alder, fruitwoods, beech, birch, elm and box have a huge variety in their densities, but all have quite short fibres and a 'carrot'-like quality to the grain, which means they cut cleanly in any direction and turn well. Ash and oak, on the other hand, have long 'stringy' fibres which, although strong and flexible, don't



allow them to cut so cleanly across the grain. Therefore they don't make such easy bowls.

Lathe

3 A pole lathe for turning three-dimensional shapes such as bowls and plates is principally the same as a lathe for spindle turning, e.g. chair legs. There are a head and tailstock with metal centres, a cord wrapped around the work, a treadle to push with the foot, a spring pole to return the motion and a toolrest. The differences in the lathe are that the whole thing needs to be beefed up to stop it vibrating or moving around as the blank, which may be 5kg or more, turns.

4 The toolrest needs to be able to angle away from the tailstock to allow the wider blank to turn but still allowing the tool some close support.

The foot treadle will need to hinge from further back to allow the turner's foot to be nearer the string, achieving greater leverage, although a shorter stroke. This means the end of the treadle will be under the lathe and the cord will run up through the bed rather than it being out the front as with spindle turning.

5 The final difference is that the blank will have a 'mandrel' fitted into it. This short, wooden cylinder allows the cord somewhere to wrap around when it, and the blank, are held between the lathe's metal centres. The width of the mandrel will determine the gearing of the turning. A narrow mandrel will allow the work to turn more times per stroke but will be harder on the leg. As a rough guide, the mandrel should be about $\frac{1}{5}$ to $\frac{1}{4}$ the width of the bowl.



3



4



5

Tools

6 The tools for pole lathe bowl turning do not look like the turning tools used by machine turners, although they work in the same way. Machine turners' tools look like elongated bench chisels with the cutting edges at the end, and the tool is offered to the work straight on. Pole lathe bowl turners' tools are also long-handled for leverage but the metal shafts are hooked at the end with the cutting edges on the side of this hook and are offered to the work more from the side.

These hook tools can be bought but I prefer to make my own from recycled old chisels or files. A piece of this high-carbon steel is welded to the end of a 16mm-diameter mild steel rod then the

tip is heated in a forge and hammered out to a thin, bevelled flat. The edge of the tip is then ground to form the cutting edge and, once reheated, curved round to form the hook. The mild steel shaft is then fitted to a long handle.

7 A multitude of different sized and shaped hooks can be made to serve many very particular needs, but the three main hooks needed are the outside bevel roughing-out hook, the inside bevel finishing hook and the curved coring hook. The roughing-out hook will remove waste quickly but might not leave the best surface. The finishing hook won't take a deep cut but will leave a refined finish and the curved coring hook will undercut the waste core near the bowl's completion.



7



8



9



10



6

Preparing the blank

The log from which a bowl blank can be obtained should be of a suitable species and not too green but not too old. If the wood is too fresh, the fibres are too soft and come apart easily. This will make the cut across the grain difficult to get clean because the fibres will want to flex away from the tool before they cut. It might also mean the fibres tear away as the cut becomes parallel with the grain. If the log is allowed to 'mellow' for a few months, the fibres will stiffen slightly and therefore stay rigid as the cut passes across them. If the wood becomes too dry, the fibres become brittle and may break before they are cut through. This will show itself as a 'pecking' in the end grain.

The log should be cut to the same length as its width and then be split in half. The inner surface that has been revealed can then be trimmed flat with an axe or saw.

8 Using a compass or sharp dividers, find the centre of this flat face then use it to mark the largest circle that will fit and another of 50mm diameter.

9 Using an axe or bandsaw and paying attention to grain direction, you can chop away the corners outside the larger marked circle.

10 Again with the axe, the outer surface of the blank needs to be shaped roughly into a dome. The bark surface is already the correct shape and the ends of the log need to be shaped similarly. It is easier to start chopping away at the corners, finishing at the end grain.

Next month we will mount the blank and turn a bowl. ■



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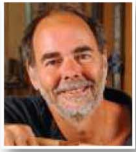
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Meet the contributors...

We put all of this month's professional and reader contributors here, so you know exactly who they are and what they do



Brendan Devitt-Spooner

Brendan has been involved with wood since school, first as a teacher of crafts in the '70/'80s and then as a furniture designer/maker, working from his workshop in Angmering, West Sussex.

He exhibits his work mainly in the south east but most work comes through his showroom at his workshop.



Louise Biggs

Having completed her City & Guilds, Louise trained for a further four years at the London College of Furniture. She joined a London firm working for the top antique dealers and interior designers in London before starting her own business designing and making bespoke furniture and restoring furniture.

Web: www.anthemion-furniture.co.uk



Neil Lawton

Neil is a woodworker / turner who specialises in the use of reclaimed and recycled materials in his projects and seasons native timbers for his turning work. He teaches from his home workshops in York and is on the Register of Professional Turners.

Web: workerinwood.co.uk



Michael T Collins

British-born Michael has been working with wood off and on for 40 years. He moved to New York in 1996 and over the years has made bespoke furniture, including clocks, inlay work, Adam fireplaces, bookcases and reproduction furniture.

Web: www.sawdustandwoodchips.com



Gareth Irwin

Gareth Irwin is a hand tool-only woodworker from Mid Wales who uses both green and seasoned timber to make everything from Welsh stick chairs to pole lathe-turned bowls to spoons.

Instagram: @Welshwoodturner



Simon Rodway

Simon has been an illustrator for our magazine since 'the dawn of time' itself, drawing on his experience in the field of architecture. He also runs LineMine, a website with articles and online courses on drawing software. A new course, SketchUp for Woodworkers, is proving really popular.

Web: www.linemine.com/courses



Duane Cartwright

Duane is a self-taught woodcarver based in Hartland, North Devon. He has been carving on and off for about 15 years. His interest in carving began while undertaking an apprenticeship in antique furniture restoration. His work can be found in the UK and as far away as Australia.

Web: www.duanescarving.blogspot.co.uk

Your face and details could appear here in our 'rogues' gallery' if you write an article for the magazine, and you could be rewarded for your efforts too.

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Ask the experts



ANTHONY BAILEY
Editor,
Woodworking
Crafts magazine

Another batch of awkward questions for the **Editor** to answer

BY ACCIDENT

Hi, I've had one or two minor injuries in my workshop – it seems to go with woodworking. I have a first aid kit but it never seems to have the sort of sensible dressings I need for a minor injury. Any suggestions about what should be kept in a workshop?

Rod Wilkins

Anthony replies: Please note my advice is unofficial and unqualified, just personal experience. All workshops and worksites and vehicles should have an appropriate first aid kit.

Let's just deal with a small domestic workshop situation. There are plenty of first aid kits available in different sizes. What you will find is that most hand work injuries are minor ones needing flexible plasters for fingers and thumb. Incidentally, knife or chisel cuts take longer to heal than ragged saw cuts. There are plaster types designed to pull wounds together which are very useful. Steri-Strip tape is excellent for holding wounds closed. If you ever find yourself needing large gauze bandages you probably need an ambulance too.

Most of these large bandages will be unused by the time they go out of date – just make sure the plasters are regularly restocked as they get more use.

Keep a bottle of fresh, clean water handy for washing wounds, along with some phials of eyewash, as eyes are vulnerable to ingress of wood dust and metal filings.

Always have a mobile phone with you and switched on – just in case. Ring 112 in an emergency (999 landline).

Finally, hindsight is wonderful – it shows you with great clarity where you went wrong. It is far better to plan out what you are doing, don't rush, use safety aids and exercise care, then hopefully you can avoid mistakes that lead to injury.



PHOTOGRAPHS BY GMC/ANTHONY BAILEY UNLESS OTHERWISE STATED

A good first aid kit should contain eye wash, instant cold compress, antiseptic wipes, sterile vinyl gloves, thermal blanket and plasters, as well as gauze dressings

PICKING A WINNER

You seem to have an eye for bargain furniture and then do it up nicely. I'm not confident at choosing the right things. I bought a nice little chair which I thought was vintage 1920s but it turned out to be quite recent when I looked carefully – there were staples instead of tacks and it was that sort of thing that gave it away.

Phil Wakely



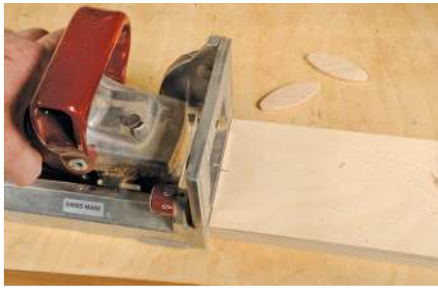
This over-sprayed label holds some useful 'almost hidden' information

Anthony replies: I think you have answered part of the problem Phil – checking carefully. I never pay a lot of money. I'm going to spend time putting it right so I don't want to pay much for damaged furniture. Despite that, I do have a good look to see if it is the real deal. Turning a piece over carefully can reveal things not visible from the top side. Modern fixings, evidence of a spray finish, cheap substitute materials etc. can all give the game away. A genuine antique is going to look like it has had a life – it should have a patina of age with various marks and colour you won't get on a modern piece. Late 19th, early 20th-century pieces often have labels which can tell you something about them. Look for tarnished pins or tacks, very worn, threadbare upholstery. Thin, worn French polish and a natural golden colour brown colour on wood all suggest age. Decoration, carved or otherwise, may help, although that can be copied on newer pieces so it isn't always a good guide. I've worked with antiques long enough to have a 'nose' for these things and the antennae don't usually let me down.

IN THE FRAME

‘I’m considering making up some doors using 18mm MDF for the frames and then fitting a 6mm MDF board in a rebate in the middle, just using biscuits to join the frame joints together. I’m hoping that will keep the weight down as they are quite wide and a strain on the hinges. Do you think they will be strong enough?’

Nev Smith



End joints work well with biscuits but may suffer under stress

Anthony replies: What do you mean by strong enough – the framing? So long as the panels are a good fit and glued in place the frames will stay together. If there wasn’t a panel in the middle it might not be nearly so reliable with just biscuits alone. The frames should hold the panels flat so long as the doors are level and square at glue-up time.

CATCHING CHIPPINGS

‘I use a router table sometimes and, despite having an extractor attached to the fence, a lot of dust and chippings fly out of the gap in the fence. Am I doing something wrong?’

Roger Millward

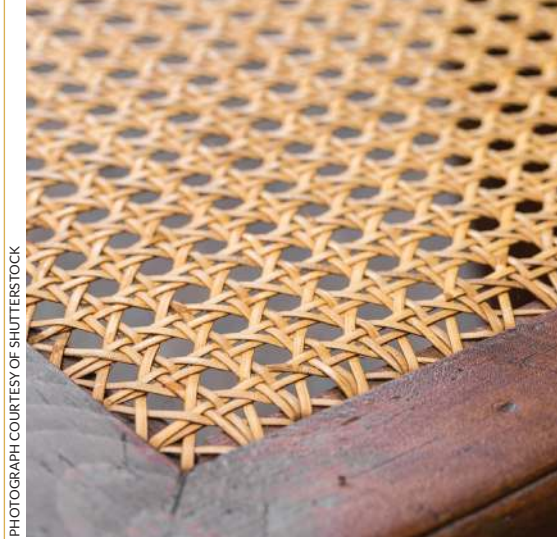
Anthony replies: If you think about it, chippings get ejected at some speed by the cutter. Some cutters do this more than others because they are bigger, but they can throw waste out faster than a vacuum extractor can pull it away. The two photos show a fence opening with the dust flying around and in the second photo a board clamped across the opening. What this does is to trap the dust and chippings, causing them to slow down enough for the extraction to pull them down the pipe. Closing off the front opening also increases the vacuum effect tremendously. You can also use the board as a hold-down at the same time so you get a double advantage.



A lot of dust and chippings get generated during table routing



Fitting a cover board increases extraction efficiency greatly



Cane work looks complicated, it needs skill and persistence to do it well

CANING IT

‘I have a chair with a cane seat, which is damaged and sagging. How difficult is it to re-cane? I wondered about having a go myself, as it seems to be hard to find someone who can do this particular work.’

Maggie Newmark

Anthony replies: Unfortunately cane seating may look good when it is in good condition but eventually it can sag or get broken through. It isn’t possible to do a repair unless it is just a few strands and the cane otherwise is in very good order. Old cane work is usually quite brittle and more damage occurs when it is disturbed.

Caning is labour intensive so not many people do it professionally as it is uneconomic. It also involves getting sore, wet hands handling all that cane. Sometimes you can find an evening class or private teacher doing cane work and you can use that as a way of getting the job done in a learning environment. There are a few suppliers who can provide complete chair-caning kits with instructions if you decide to go it alone. I have a chair to re-cane, so watch this space in case it makes its way into the magazine.



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N.B. If you do need help or advice you can email me: anthonyb@thegmcgroup.com or visit: www.woodworkersinstitute.com where there are lots of useful articles, either way the service is free!

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WOODWORKING JOINTS

Most woodworking involves joints and learning how to make them is an interesting adventure. So in this new series we look at all the different ways you can join wood together

Joining wood has got ever more complex – and simpler too. What do I mean by that? The fact is we have never had so many ways of connecting wood using both traditional and modern methods. Whether you want a fancy 'show' dovetail joint or quick knockdown fittings there is something for everyone. Most of us want the quick, easy route, but if you have a special project then it's well worth taking the time and trouble to create challenging but satisfying jointing and expand your woodworking skills. Where should we start? Perhaps at the very beginning...

Purpose

There are various reasons to join wood together – to make a structure, table, chair, box, shelving, shed, conservatory, boat. You name it, there are various reasons why you need to connect wood together. You can even extend the size of material if it is too small by adding another piece using the right sort of jointing method. Wood expands and contracts with the climate so a door needs a frame for strength, but might have panels that can move independently if they need to. So the first thing is to identify what the need really is. It is very easy to over-build something and make it too big and heavy or make it very light and vulnerable to damage. You need to get the balance right. ➤



The Glastonbury chair project from issue 47



A finger-jointed tea caddy with a protective foil lining



Some carefully chosen hand tools stored safely in a toolbox

Tools

You can't make anything without tools so the first thing is to choose the right ones. You don't need lots, but better quality tools will produce better results. Most importantly, they need to be sharp, so good sharpening technique is essential. You also need somewhere to make your projects and many people don't have a dedicated workshop or bench, but there are ways around this.

Skills

Learning how to make things, especially with jointwork, is often better done in a class, but you can also pick it up from articles in books and magazines such as this one. You can find video clips online but the advice isn't always as sound or well based as it should be – stick with us and we will help you learn and grow as a beginner woodworker.

Preparation

You can't make good joints unless the wood is properly prepared. Boards need to be decent, reliable quality and straight and square. A good timberyard should be able to help you select what you need, but be prepared to go through the stock and select the best-looking material. If you can buy it

The bench area in Chichester College workshop



Develop a good sharpening technique for precise joint making



Marked-up oak framing ready to be butt jointed

already sawn and planed to size apart from the length, then you don't need a workshop full of machines.

Accuracy

Making good joints does need a degree of accuracy but it is easy to go wrong. For example, most hardpoint handsaws have a 90° and 45° shape to the handle moulding so you can quickly mark

out cut lines. Try marking one way, reverse the saw the other way and you will find the lines aren't parallel and they never will be. Use proper squares for accurate work and a sharp pencil or knife. Get it right first time and your chances of success increase dramatically. This was covered in *WWC49 On Your Marks! – marking from a true face.*



A timberyard stock of prepared softwood sections



A high-quality hardpoint saw with a handle shape designed for marking out

THE MEANS

The primary tool for joint cutting and shaping is a saw. Here are the initial options you need to choose from, apart from the other hand tools you will require.

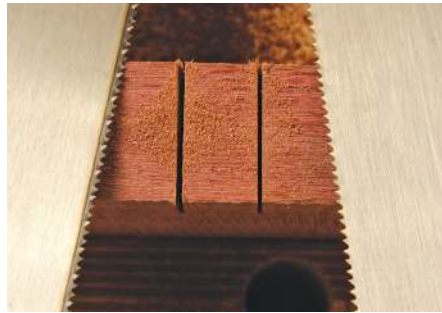
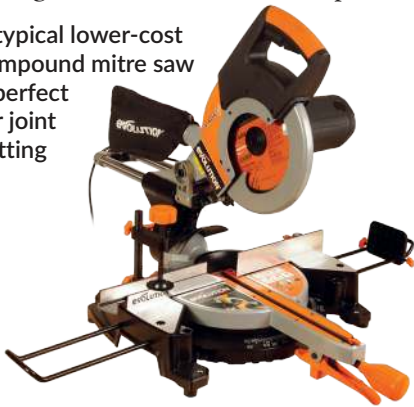
Hardpoint tenon saw

Not too accurate because of the way the teeth are cut and set (angled). OK for coarse work.

Good-quality tenon saw

These can cost proper money, upwards of £70, and they can't be used on material other than wood as it will damage the teeth. Treat with respect.

A typical lower-cost compound mitre saw – perfect for joint cutting



The hardpoint kerf is wide and uneven compared to the right-hand kerf

Compound mitre saw

There are plenty of these on the market, some cheaper than others and some very expensive, professional models. The more you pay, the more accurate they should be. They need to be set up correctly so they give true 90° cuts. Check the manual to do this. They are relatively compact but can be heavy and a bit awkward to move around. My own one is my 'go-to' machine every time.

Japanese mitre saw

For less money than most of these options you can buy a really clever, well-designed piece of kit with its own



A good-quality handsaw with brass back to stiffen the blade



This Japanese saw guide gives remarkably quick, accurate cuts

dedicated pull saw. You will marvel at how quickly and easily you can do standard 90° and 45° cuts in timber without even a proper workbench. Great on site too.

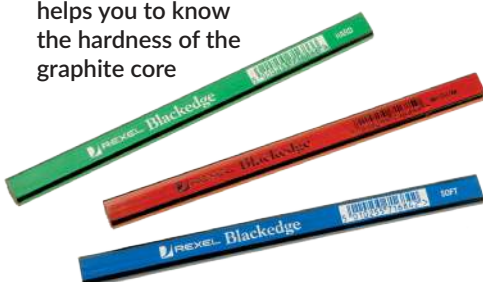
MAKING A START

Let's start with some very basic joint cutting practice.

Marking out

When you use already prepared timber don't expect the ends to be perfectly square or undamaged. The first thing is to mark your first cut slightly in from the end – in case of existing splits, possibly even further still. Your square needs to be reliably square. A rosewood and brass try square with a blued-steel blade may look nice but it may not be truly square and a check with another square if you sight the two together may show this. I avoid the problem altogether by using engineer's all-steel squares. Even the budget ones are made to a higher tolerance than a woodworker needs and thus will give you a true perpendicular line. You will

Colour coding helps you to know the hardness of the graphite core



Two try squares – which one is right? Maybe neither of them

notice the difference marking out a butt joint or any other joint where you need to mark around all faces of the wood. The engineer's square line will meet up where the try square line may not.

Use a carpenter's pencil sharpened to a chisel tip. This extends the life of the edge – an ordinary pencil will blunt quicker, giving a less reliable line. Traditionally carpenter's pencils came in three grades: green, hard for fine making out; red, medium for general marking out work without denting the wood; and blue, soft for initial mark



An engineer's square must be correct. They come in various sizes



A sharp marking knife is necessary for the best-quality work

up of defects or construction details etc. However, many carpenter's pencils no longer follow the colour code, but assume they are medium grade. When you come later on to fine joint work, a marking knife is the preferred option. ➤



Always mark all around the workpiece so you can see where to cut



Pull the saw backwards to graze the wood and start the kerf

Your line is marked, you are ready to cut so let's develop our tenon saw technique using a short test piece of wood.

Any woodworking operation demands that either the workpiece or the tool is held firmly while doing it. You need either a portable workbench or a bench hook. This simple device will allow you to hold the workpiece while sawing. Stand in line with the cut line and place the saw blade on the wood just to the waste side of the line. If necessary do hatch lines or squiggles to remind you which is waste.

It is natural to push the tenon saw forward over the far edge of the wood. This may cause the blade to catch and bounce, spoiling the start. Instead, rest your thumb against the blade safely above the tooth line for guidance.

Pull the saw back gently so it grazes the wood. Do this a couple of times so it creates a notch, or kerf as it is called. Now begin a rhythmic push-pull action, letting the weight of the saw carry it through the wood.

Sight slightly to the 'good', i.e. not the waste, side, so you can see whether the blade is following the pencil line and correct slightly both sideways and vertically if necessary. Continue to cut

with the blade at a down angle towards the front of the blade.

Check your progress and continue, then gradually tilt the blade back until it is level for the final cut through, with the wood fibres completely parted. Use your marking out square to check how square the cut end actually is. Don't be downhearted if it isn't very square – try another cut and another until you gain confidence in both using a tenon saw and getting an accurate result.

For a really precise result you can use a shooting board with a hand plane to finish the end, but we will cover that next time.

Also in the next issue we will look at choosing a toolkit and how to make and connect a butt joint securely. ■



Use your thumb as guidance but above the tooth line to avoid injury



Continue to cut while holding the waste piece to avoid breakage



Sight along the 'good' side to make sure you follow the pencil lines



Don't expect a perfect finish to start with – keep practising



A shooting board and plane will give a really smooth finish



Just one of the methods for securing a butt joint easily



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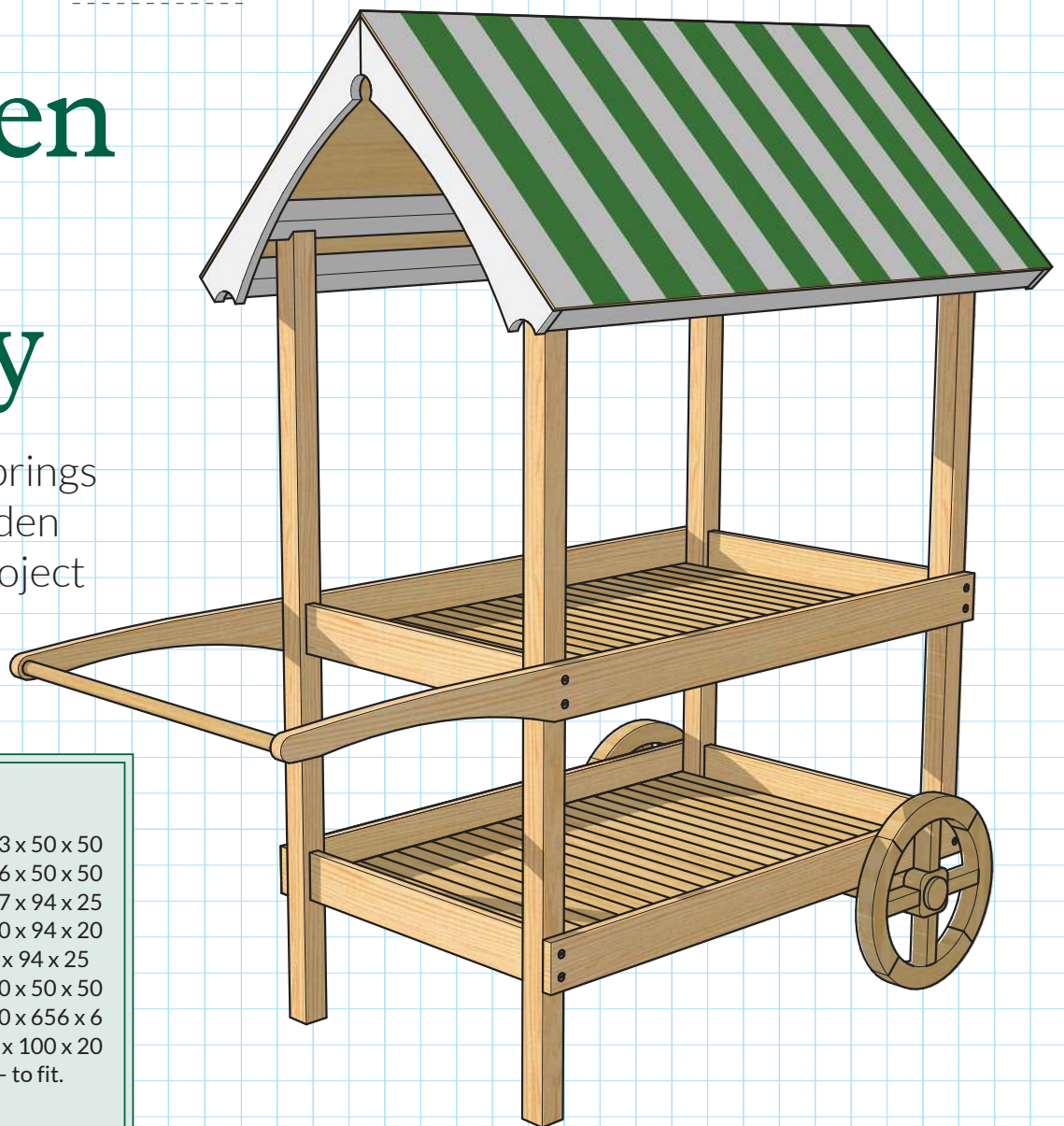
PLANS 4 YOU

Garden plant trolley

Simon Rodway brings gaiety to the garden with his latest project

Cutting list

Front posts	2 @ 1533 x 50 x 50
Back posts	2 @ 1286 x 50 x 50
Top side rails	2 @ 1747 x 94 x 25
Bottom side rails	2 @ 1170 x 94 x 20
Front/back rails	4 @ 655 x 94 x 25
Roof supports	5 @ 1310 x 50 x 50
Roof cover	2 @ 1350 x 656 x 6
Barge boards	4 @ 656 x 100 x 20
(Slats – which vary in width – to fit.)	
Wheel assembly to suit)	



Although the implication in the title of this project is that it should be used for more practical gardening purposes, in fact this trolley can lend itself to all sorts of outdoor uses. As well as the obvious function of storing and moving pots, plants and tools around, the addition of a colourful painted roof perhaps suggests a great device for helping with larger barbecues and outdoor meals. It is also meant to be something you can have fun building and using, with all sorts of options for including your own design ideas.

The actual construction could hardly be simpler and there are almost no joints at all. The end rails to the top

and bottom shelves are shown mortise and tenoned into the posts, but you could just secure these with screws in a similar way to the side rails. There are also grooves in these side rails to take the slats, but again these could simply be screwed down on to battens instead, and basically it is almost possible to make the whole thing with a saw and a screwdriver.

Before you start, a decision needs to be made on the back support. Here I have suggested wooden wheels, and a simpler version of these made from solid timber without spokes would look just as good and give your trolley a slightly medieval look. Obviously the diameter of your wheels will affect

the height of the bottom rail and the length of the back posts, so establish this before cutting the latter.

The upper side rails are much longer so that the ends can be shaped into handles which are joined to each other with a length of dowel. Here you will have to drill blind holes on the inner faces of each rail to take the dowel ends, so add a drill and flat bits to that tool list.

The vertical posts are shaped into a birdsmouth at the ends to take the middle supports for the roof, although I hesitate to call it this as it is really just a rigid awning. To keep the construction as simple as possible, the pitch is at 45°, which means you can



Once the middle lateral roof supports are fixed to the posts, the barge boards (again, a bit of a misnomer for such a simple thing) can be fixed and the rest of the lateral pieces added and screwed in place. The top is then covered in 6mm plywood, which will make it much more rigid. You may also need to add an intermediate lateral support between the posts and the ridge to keep the ply nice and flat. ■

For some useful information on making wheels see Michael T Collins' article in issue 45.





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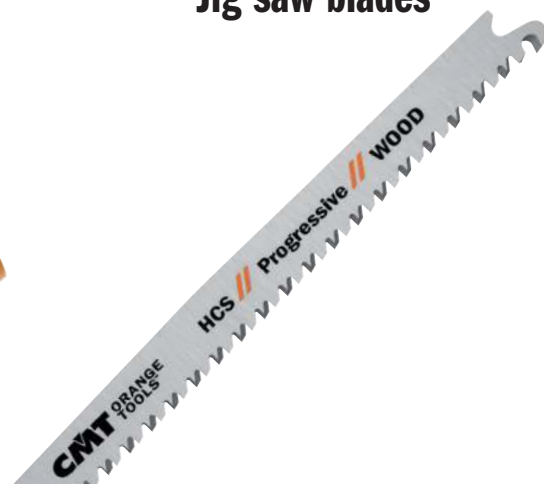
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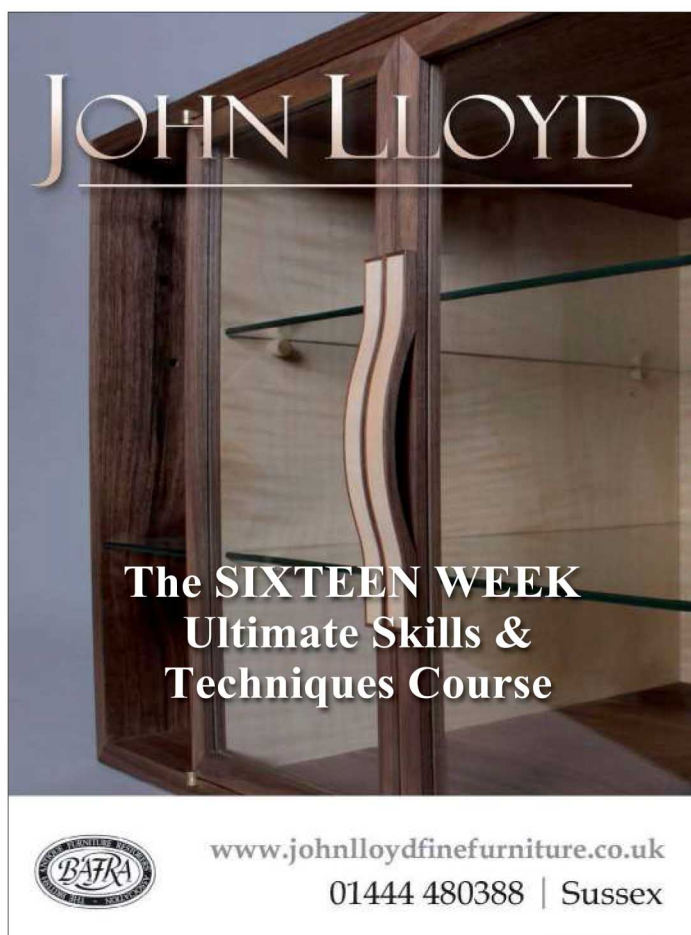
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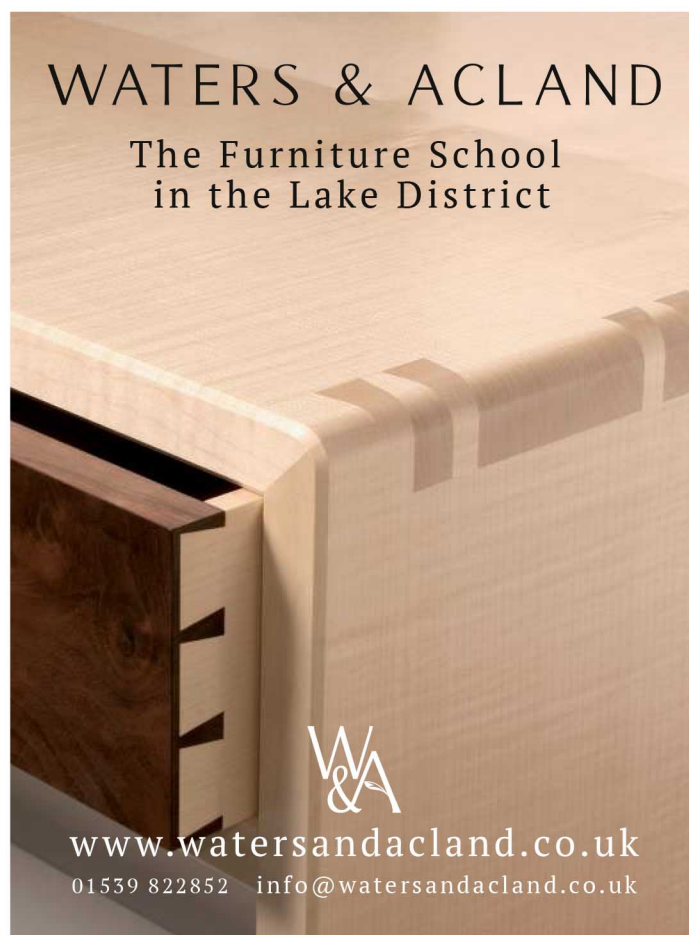
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Focus on...

Main image: An English double jettied building

Right: The Butchers' Guild Hall, Hildesheim, Germany

Jettying

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A distinctive feature on buildings that really stands out

A jetty is a structure that projects over water, while, on land, jettying is the building of a projecting upper floor or floors in a building, commonplace in medieval buildings but sometimes seen in more recent structures. It is the use of cantilevered joints or beams which allow the load of the upper storey to be spread across the top of the walls of the building underneath. The upper floor can therefore be larger as a result. It allows passageways and thoroughfares to pass beneath and gives incidental shelter to pedestrians. Jettied floors are also termed jetties. Jetties are normally an external feature but some medieval houses have internal jetties.

A horizontal beam called a jetty bressummer rests on the end of a row of jetty beams or joists which are supported by jetty plates. Jetty joists are jointed sideways into diagonal dragon beams using pegged mortise and tenons joints. The overhanging corner posts are often reinforced with curved jetty brackets.

Although there were a number of advantages to creating jetties, such as increasing internal space and showing wealth and status, with great popularity in the 16th century, they were banned in 1520 in Rouen, France, due to poor air circulation and the spread of plague. They were also banned in London in 1667 after the Great Fire because of the fire hazard they had created.

Examples may be found in a number of countries from France to Switzerland and Turkey to the United States. Nowadays, cantilevered floors are sometimes used in modern buildings but no longer referred to as jettying. ■



Combat dragon carving at the Priory of Saint-Arnoult, Beauvais, France



A structure based on a Spanish 'horreo' at Wilderness Woods, Sussex



The Glattfelden Bell House, Glattfelden, Switzerland

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