UPCYCLING, RECYCLING & RESTORATION SPECIAL

Issue 18 Autumn 2016

# Woodworking CRAFTS

HAND, POWER & GREEN WOODWORKING • TURNING • RESTORATION • DIY

## *Make a* 'shabby chic' wall cabinet

**PROJECT:**
'Wormy' maple side table

**FEATURE:**
*Woodturner Jason Townsend*

**TECHNIQUES**

- Create surface effects with paint finishes
- Garage door stile repair
- Ladderback chair restoration

PLANET

rotur™
specialist woodturning products

# Colt Plastics Fast Cut Drills

The Colt Plastics Fast Cut drill is one of the most unique drills on the market. Its 5-point cutting head enables the operation of drilling plastics cleanly and more efficiently with a very clean exit hole without the risk of shattering or splitting the work.

Manufactured of high grade HSS-M2 Tool Steel these drills have a parabolic flute design enabling fast chip clearance. No risk of chip burn or jamming due to the combination of the unique cutting head and parabolic flute design.

These drills are ideally suited for drilling Corian Kitchen work tops, Acrylic material, Perspex & Composites.

Available in 23 diameters Imperial and metric in various lengths from 93mm to 150mm long plus 8 metric sizes 250mm long.

PLANET

rotur™
specialist woodturning products

# Colt Maxi-Cut Forstner Cutter

The Colt Maxi-Cut Forstner cutter is the ultimate in cutting experience and is considered the top end of the forstner market. Made of high grade M2-HSS alloy Tool steel these cutters will operate effortlessly and cleanly in any timbers to drill holes up to 100mm in diameter and, using a rota-stop™ extension bar, up 300mm deep.

1. Guarantees the fastest cutting performance compared to any other forstner bit.
2. The centre point is self-cutting and offers no resistance as it cuts through the wood ahead of the main cutters.
3. Asymmetrical chip breakers that cut swarf into chips rather than swirls which are easily removed.
4. Manufactured from the finest raw material permitting the ultimate sharpness and maximum tool.
5. Available in metric and Imperial sizes.





# In the Autumn issue...




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

31

# *Welcome*

to the Autumn issue of *Woodworking Crafts*

## Painting over the cracks

Hello Everyone. We bring you the mid-autumn issue of *Woodworking Crafts*. This month, the theme is upcycling. The idea of taking old materials and remaking them in a new form is nothing new – if you'll excuse the pun. I have come across so many bits of old furniture and piles of boards that could be turned into something better, but I simply don't have enough space. It is such a pity that we are so wasteful and don't make best use of what we've got. Anyway, we show you how easy it is to refinish wood and create a new, or a new 'old', look for your furniture. One advantage is that in a world of rather impersonal, or perhaps more accurately, unipersonal gadgets and gizmos like smartphones and cars, you can at least personalise something to make it your own and unique. Better still, these activities don't rely on training, tools or a workshop, which many of us have to do without nowadays. DIY stores usually stock an ever-expanding range of effect paints and finishing materials. Maybe now is the time to experiment and see what you can do!

**Anthony Bailey,** Editor
Email: anthonyb@thegmcgroup.com

49

81

# hand tools and wood chisels specialist

Ashley Iles - Henry Taylor - Robert Sorby - Joseph Marples
Veritas - Clifton - Thomas Flinn - Morris - Ice Bear...

***All items in stock, ready for dispatch..***
*unless marked otherwise — *all prices inclusive of VAT*

Tool Nut .co.uk

CLIFTON SPOKESHAVES
600 FLAT & 650 ROUND

Plane & Spokeshave Blades / Parts

from only **£7.00**

Henry Taylor Adze

straight **£49.00**
gouge **£64.00**

Henry Taylor Chisel Set

for only **£120.00**

New

from only **£77.95**

SHARPENING

Natural Leather Chisel Rolls

from only **£17.50**

Henry Taylor 6-Piece Starters Carving Tool Set

for only **£79.99**

Veritas Plough Plane

from only **£113.00**

Veritas Apron Plane

for only **£69.95**

Veritas Hinge Mortice Plane

for only **£99.99**

Order online today at
**www.toolnut.co.uk**
**or call to order on 01424 224269**

saws

Veritas Router

for only **£99.95**

punches

Wooden Trestles

x1 **£44.00** each
x2 **£41.00** each
x3-9 **£39.95** each

OVER 90 DIFFERENT CARVING TOOLS

OVER 25 DIFFERENT CHISELS

**Order online today at www.toolnut.co.uk**

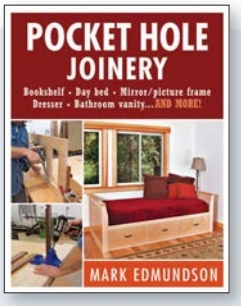
PHOTOGRAPH BY DAVID MARX PHOTOGRAPHY

ALL PHOTOS AND ILLUSTRATIONS © 2014 BY THE TAUNTON PRESS

**Wood**
- Black walnut (*Juglans nigra*)
- White oak plywood (*Quercus alba*)
- Alder (*Alnus* spp.)

# MODERN-STYLE BED

In this abridged extract from *Pocket Hole Joinery*, Mark Edmundson offers two methods with one result – to make a stylish bed




**Pocket Hole Joinery**
by Mark Edmundson, published by The Taunton Press in 2014
ISBN: 9781621136743
Price: £16.99
Web: www.thegmcgroup.com

Pocket screws are like clamps and glue combined. They pull a joint together and hold it tight. Dowels can align a joint perfectly with little to no movement in any direction. Dowel holes run parallel to pocket holes, thus they can fit onto narrow stock and won't sacrifice the strength of the wood.

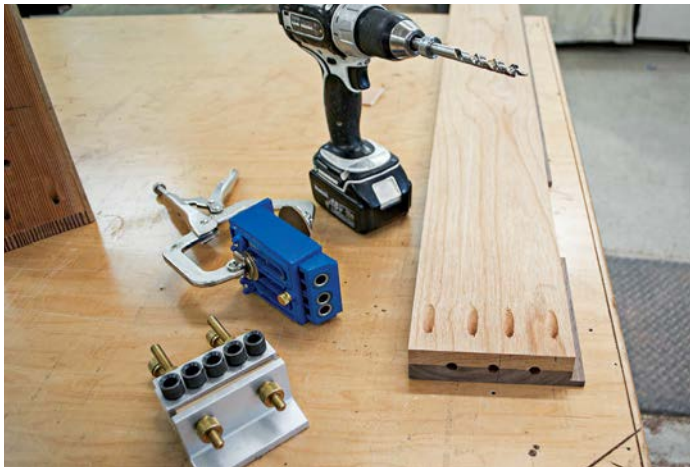
## DESIGN CONSIDERATIONS

The mattress height and bed location play a big role in our bed's dimensions. While the back of the headboard is completely hidden from view, the back of the footboard is not. I'm no less fond of plugged holes than I am of open holes, so I always try to keep them out of view.

To determine the height of the footboard, I measure our mattress and box spring at a combined height of 18in. The mattress has a pillow top that slopes down at the edges; the height at which the pillow top meets the mattress sides is 15¼in. This last measurement determines the highest desirable location of a pocket screw hole on the footboard. To allow a little more room, I have used three pocket holes ➤

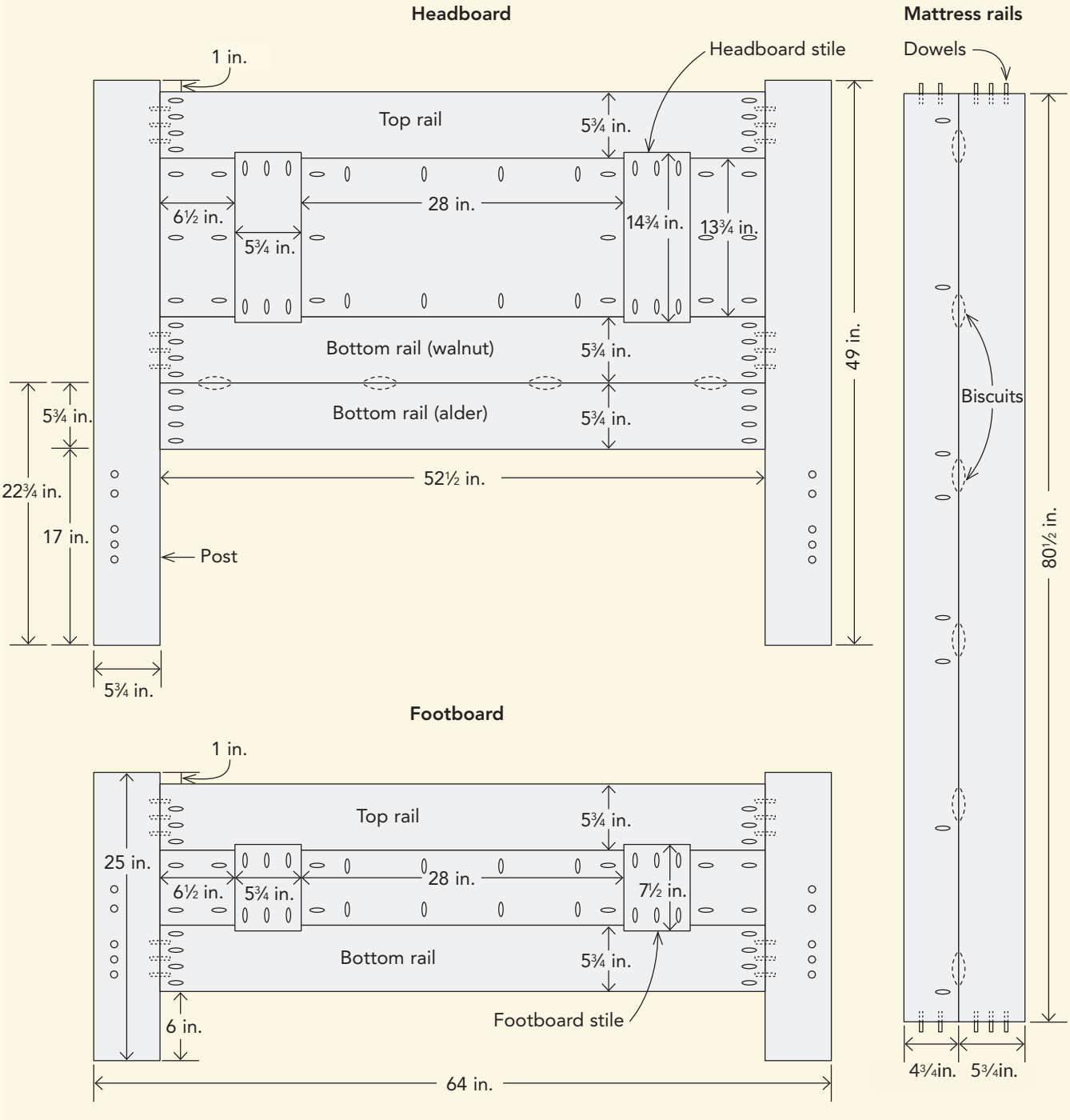
instead of four on the top footboard rail (*see drawing below*). The top pocket screw hole is 15in. above the mattress supports.

I am using 8/4 black walnut for the posts and rails, quartersawn white oak plywood for the panels, 4/4 black walnut for the mattress rails and 4/4 alder for the mattress supports. Clear black walnut is really expensive and I'm not particularly impressed with the lot of wood that I am choosing from. To stretch my dollar and the clear material, I have 'faced' some of the stock, meaning I have glued 4/4 black walnut to 4/4 alder to make boards that look like 8/4 black walnut.



ALL REMAINING PHOTOGRAPHS BY MARK EDMUNDSON

**Right: Dowels and pocket hole joinery work together to create strong, precise joints**




ILLUSTRATIONS BY MARIO FERRO. COPYRIGHT BY THE TAUNTON PRESS

## FACING THE STOCK

To face the stock, mill the boards longer and wider than needed. For the lower rails and stiles, boards 6in. wide with about 2in. of extra length will be oversize enough to yield 5¾-in.-wide stock. The extra length allows a ¼-in. or ⅜-in. dowel through either end to keep the stock aligned perfectly during glue-up. To index the mating pieces, clamp them together and drill for a dowel hole at each end. The dowel location is not critical, so there's no need to use a doweling jig here. Using a foam roller, coat one of the surfaces with a generous amount of wood glue. Sandwich the pieces together and push the dowels in at both ends. Clamp around the perimeter of the piece.

## MILLING THE STOCK TO DIMENSION

The posts, rails and stiles are all 5¾in. wide. Their thicknesses differ at each juncture to create a step. Between each post and rail there's a 6-in. step on the front and back. The short stiles protrude 3⁄16in. past the face of the rails in front to match the step of the post but are flush in back. Mill the stock for the headboard and footboard to dimension. Cut the posts and rails to length, but leave the short stiles long. Separate out the rails for the headboard and footboard to notch for the short stiles.

### Cutting notches

Cutting the notches in the rails can be done by lying each component down on the router table, with start and stop marks on the fence. After using a straight cutter, square the ends with a tenon saw and chisel.

### Stepping the rails

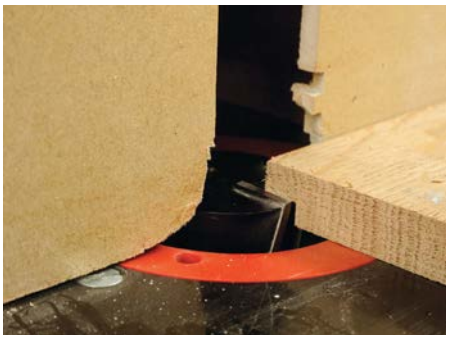
This can be done on the router table using either rebate cutter or a tenoning cutter in several passes to full width. Use the same procedure on the plywood panels. Do test cuts using offcuts, to ensure both halves of frame and panel fit together correctly.

When facing the wood for the stiles, drill for ¼-in. dowels through each end to help keep the material from slipping during glue-up. Apply several clamps around the perimeter for plenty of holding strength as the glue dries

## ADDING THE DOWELS

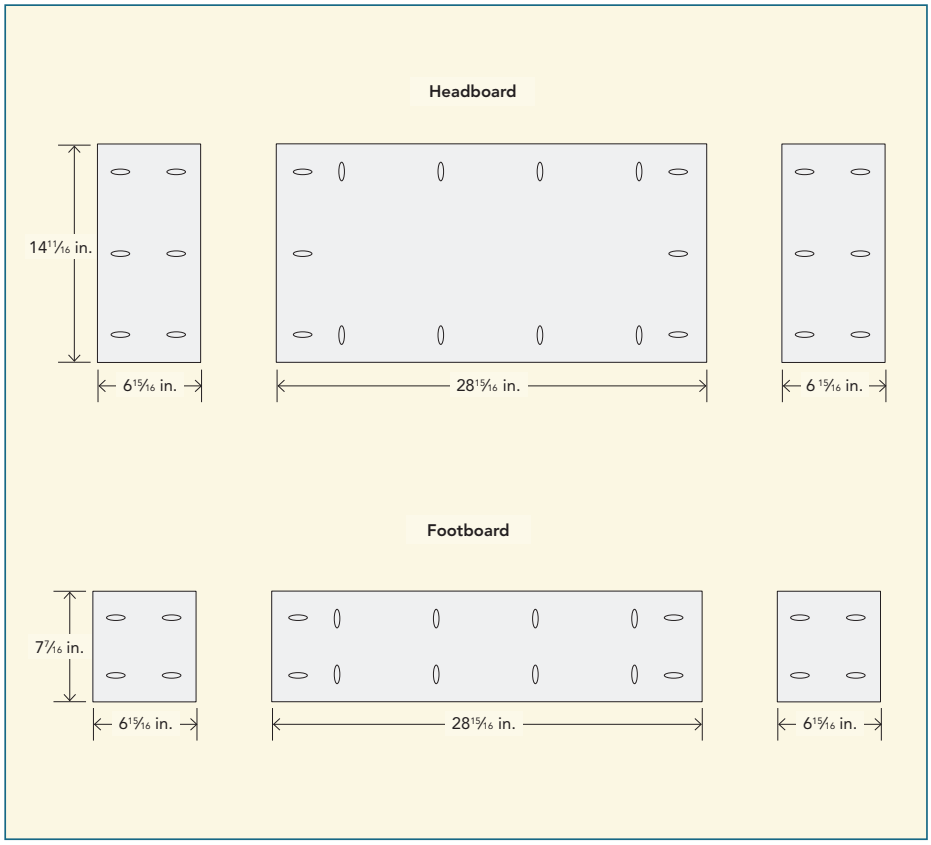
The next step is to dowel the posts and rails. This allows the headboard and footboard to be assembled in order to measure for the stile length. A Dowelmax jig uses spacers between the fence and the bushing jig to allow for offsets between parts. There are spacers included with the Dowelmax, but it's simple to cut your own spacers to give you a wider range of options. Centre the dowel holes roughly in the middle of the rail with a doweling jig spacer and then add a 3⁄16-in. clamping shim between the fence and spacer to allow the 3⁄16-in. step between the rail and the post. The top edge of the rail is 1in. below the top of the post. Set your doweling jig 1in. below the top edge of the rail and 2in. below the top of the post. Three dowel holes are plenty to locate the rail. ➤

Making the notches is very quick on a router table



The panels are rebated to sit in the bed frames

Use a try square to set the doweling jig position on the rail. After drilling the first hole in the end of the rail, insert the dowel pin to make sure the jig does not shift. To make sure that both posts are doweled identically, cut a 23¾-in. scrap and clamp it to the post, flushing up the bottom edge with the bottoms to guarantee matching settings




Joinery mock-ups with scrap play a vital role in pre-project planning and visual design. Mocking up the pocket hole locations helps to ensure that the holes won't collide

Dry-fit the headboard so you can measure the stile lengths and panel sizes. Then cut a scrap of wood to the stile measurement and test the fit

## DRY-FITTING THE HEADBOARD AND FOOTBOARD

Assemble the footboard first with dowels. Measure the length of the short stiles. Use a scrap of wood to test your measurement. Cut the stiles to length and reassemble the footboard face down to measure for the white oak panel sizes. Cut the panels to the measured size. Repeat this procedure with the headboard. Drill three pocket holes for 1¼-in. pocket screws on the back of the stiles. The rails for the headboard and the lower rail on the footboard get four pocket holes for 1¼-in. screws on the back side. The top rail on the footboard gets three holes; leave out the fourth top hole to ensure that it won't be visible.

For the narrow panels, two pocket holes on the footboard panels and three on the headboard panels are plenty. On the larger centre panel, drill pocket holes on all four sides, spaced evenly throughout.

## ASSEMBLING THE MATTRESS RAILS

Biscuits and pocket screws work together effectively when joining the two mattress support rails. There's no need to clamp the rails when driving the pocket screws because the biscuits will hold the boards in place.

The mattress rails are made up of two boards on each side. I drilled one hole before the first and second biscuit and one hole after the fifth and sixth biscuit. For the third and fourth centre biscuits, I drilled a pocket hole on each side of the biscuit. Before joining the pairs of boards, finish-sand the outside surfaces.

Now join the mattress rails with pocket screws. Use the right-angle jig to hold the lower rail upright. Slip in the biscuits and tap the rails together, making sure the ends are flush. After they are joined, cut the mattress rails at 80½in., being careful to check that you won't hit a pocket screw when cutting. With the doweling jig fence referencing

Cut the stiles to length and check their fit. Then measure the panel dimensions from the back side of the headboard. Use a portable pocket hole jig to drill the pocket holes in the rails. The stiles are short, so it's easier to use the benchtop jig

Use the benchtop jig to drill holes in the plywood panels

With the index pin set in the first pin of the doweling jig, drill for dowels in the third and fifth hole in the mattress rail

Use the portable jig to drill the pocket holes in the end of the mattress rails. Dowels and four pocket holes will ensure a strong fit between the rails and the headboard and footboard

When drilling the post for the dowels, use a 1-in. spacer in the doweling jig to align the mattress support rail location onto the post. Cut biscuits in the bottom headboard rail and the alder rail. Pocket holes, biscuits and dowels work together to ensure an accurate fit

the inside face of the rail, set the jig 1in. up from the bottom. Drill three ⅜-in. dowel holes, leaving a space in between them for pocket holes.

To reset the doweling jig on the upper 4¾-in. portion of the mattress rail, push the index pin through the first hole of the jig into the last hole drilled on the support rail. This will ensure that the doweling jig is moved up the same amount on all four ends of the rails. Three dowels in the lower rail and two dowels in the upper plus four pocket holes spaced around the dowel holes will do the job.

The inside of the mattress rail is 1¾in. from the outside edge of the bedpost. Reassemble the doweling jig to face-drill the post and use a 1-in. spacer between the jig and the fence. Set the doweling jig 7in. up from the bottom of the post and drill holes.

## A SECOND BOTTOM RAIL FOR THE HEADBOARD

On the headboard underneath the bottom rail, install an alder board with dark Danish oil stain applied. Adding the alder board ensures that there isn't a gap behind the mattress and it's cheaper than using walnut in a hard-to-see area. Biscuit the alder board and bottom rail, measuring at 5in. and 18in. from both ends. The face of the lower walnut rail and the face of the alder rail will be flush. Drill pocket holes to the side of each biscuit slot on the alder rail and four pocket holes on each end. With all the bed parts cut to length and drilled for dowels and pocket holes, you can now finish-sand all the parts and apply coats of oil.

## ASSEMBLING THE BED

Set the top rail into position, with the 3/16-in. shim in place. Attach the face clamp and drive pocket screws through the stile into the rail. Use the right-angle jig to hold the assembly upright as you drive pocket screws through the stiles into the rails.

Clamp the lower rail to the right-angle jig, taping a 3/16-in. shim just below the dado notch so that the backs of the stile and rail are flush. Locate one of the stiles and hold with the face clamp. Drive a pocket screw under the clamp. Move the clamp to the other side and repeat. Finish attaching the stile by driving the middle screw. Repeat with the other stile. Then place the top rail on top of the stiles. Use the shim and face clamp to hold the top rail in place while you drive a screw. Continue clamping and screwing until the rail is secured. Lay the rail assembly face down on a protective blanket, insert the dowels, and slide the post into place.

Use hand pressure to keep the first screw from pushing the joint apart then drive the remaining screws. Now it's time to install the white oak panels in the footboard. Begin with one of the side panels. Because the seam between the bedpost and the small panel is not hidden by a rabbet, screw into the stile next, then repeat on the opposite side. Finish off by screwing the centre panel into place. ➤

Slide the post into position on the rails, pushing the dowels into the holes. Using hand pressure against the post, drive the pocket screws

## Assembling the headboard

Assembling the headboard rails and stiles is almost the same as the footboard apart from having the additional lower alder rail to install. Installing the plywood panels on the headboard is the same as on the footboard.

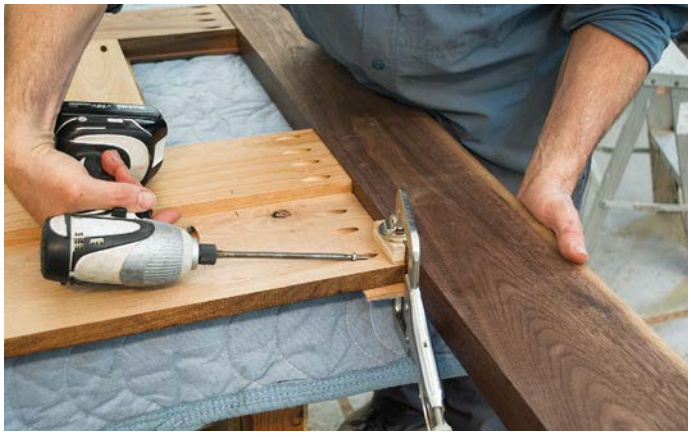
## Adding the mattress support strips

On the inside face of the mattress rails, flush with the bottom edge, is a ⅞-in. by ¾-in. alder strip. This strip supports the alder boards that hold up the box spring. Cut the narrow alder strip 80⅜in. long.

## Final assembly

Lean the headboard against the wall. With the dowels in the end of the mattress rail, slide it into place on the headboard. Set the opposite end on a scrap of wood and drive one pocket screw in the middle to hold it in place. Repeat with the other mattress rail. Place dowels in the ends of both rails and slide the footboard into place. Remove the scraps and drive all pocket screws into the posts. Place the mattress supports on the thin alder strips and the bed is done. ■

**Drive the pocket screws from the centre panel into the stiles and rails. When installing the white oak plywood panels, drive the pocket screws between the panel and post first to ensure a tight joint. Then screw the pocket screws from the panel into the stile**



**Slide the lower alder rail into place before attaching the second post and then attach the second post to the headboard assembly, starting at the top. Then drive pocket screws from the alder rail into the bottom headboard rail. Use shims and a face clamp to position the alder rail onto the posts; drive the pocket screws**

**Add the support strips to the inside of the mattress rails with countersunk pocket screws. A block of wood helps to support the mattress rail as you attach the other end to the headboard**

**Supporting the mattress rails with a pair of wood blocks makes it possible to assemble the footboard solo**

**The finished bed... and not a pocket hole visible!**

# LOVED IN THE INDUSTRY, CHOSEN BY PROFESSIONALS

minimax

## EVERYTHING YOU NEED TO DELIVER!

**S 45 n**
A small Band Saw with great capabilities that is perfect for either the joinery workshop, schools, furniture restoration or renovation

**SC 3 CLASS**
Robust, professional and a precise circular saw

**ME 25**
An innovative professional edgebander for everyday workshops

**FS 41 elite s**
Heavy duty, compact and created to meet the demands of workshop

**T 55 W elite s**
A Spindle Moulder with great versatility for many tasks

**ECO 300 D**
An efficient low cost dust extractor

scmgroup uk
Blenheim House, Camberley Road, Bulwell, Nottingham NG6 8UW
Tel: 0115 9770044 - scmgroupuk@scmgroup.com - www.scmgroup-uk.com

minimax

# BOOK OFFERS

This month, in our upcycling and restoration special, we have some great book offers for you!

## Refinishing Furniture Made Simple
**by Jeff Jewitt**

Old furniture, whether a treasured heirloom or consignment shop find, is often better made than anything that can be bought today. So, why let damaged finishes detract from a beautiful piece when you can repair or refinish it in a way that preserves the piece and makes it look as good as new? Author Jeff Jewitt, a professional refinisher with over 30 years' experience, shares his tricks, shortcuts and tools of the trade in *Refinishing Furniture Made Simple*, an easy-to-follow book/DVD set that is sure to fly off the shelves. Weekend refinishers and professional woodworkers will benefit from the insider tips on how to evaluate the condition of a piece to decide the best strategy for rejuvenating it, repair and revive finishes to enhance their beauty while preserving their patina and match an old finish for a seamless look.


OFFER PRICE £14 plus p&p

ISBN: 9781600853906
RRP £19.99
Quote code R0578

## Wood Pallet Projects
**by Chris Gleason**

Lumber prices are soaring and deforestation is a rising concern. Yet millions of pounds of perfectly usable wood are dumped in landfills every year. *Wood Pallet Projects* shows how anyone can upcycle salvaged pallet wood to create truly one-of-a-kind projects. Maverick craftsman Chris Gleason combines sound woodworking techniques with a hip designer's sensibility to unleash the limitless possibilities of the common skid. Inside you'll find 15 of his inspired projects for rescuing and repurposing pallets. Some of his pieces celebrate the rough, edgy character of the material, while others are crafted as fine furniture. He shows how to construct both indoor and outdoor furniture in a variety of styles, along with other useful items such as a birdhouse, a toolbox and even a ukulele. There's plenty of nitty gritty here on working with pallets, including where to find them, how to process them into usable lumber, fasteners, sanding and the best finishes (if any) to use. The author provides important advice on how to make sure that your pallets are safe and not sprayed with harmful chemicals. A colourful gallery of finished work provides further inspiration for green crafting.


OFFER PRICE £9.09 plus p&p

ISBN: 9781565235441
RRP £12.99
Quote code R0579

## Upholstery: A Complete Course (2nd revised edition)
**by David James**

In this second revised edition, David James provides an encyclopaedic guide to the techniques and materials involved in upholstery. The book covers everything from traditional handwork to the latest industrial techniques, giving a complete overview of the upholstery trade. Five step-by-step projects follow, to enable readers to put some of the techniques explained into practice. Almost 500 detailed line drawings created by the author illustrate every aspect covered in the text. The book also includes detailed advice on costing for materials for the budding professional. The restorer will find a wealth of material on historical styles and techniques. This new edition includes an updated bibliography and contacts section to ensure its relevance and UK and US upholstery terms have been added.


OFFER PRICE £14 plus p&p

ISBN: 9781784941253
RRP £19.99
Quote code R0580

To order please call 01273 488005 or go to www.thegmcgroup.com and quote the relevant code
Closing date: 1 December, 2016
Please note: p&p is £2.95 for the first item and £1.95 for each additional item


PHOTOGRAPHS BY GMC/ANTHONY BAILEY

*Recycled*

**Wood**
- Pine (*Pinus sylvestris*)

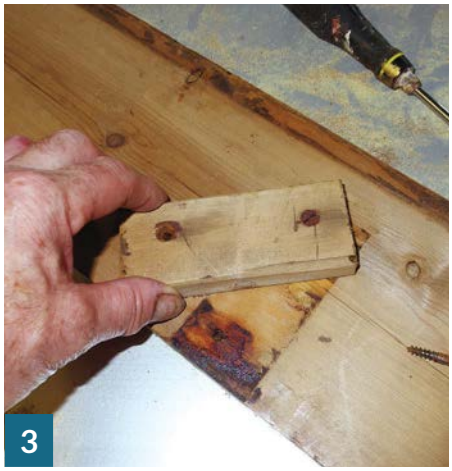
# Pine cupboard

From plain shabby to 'shabby chic' – that's the **Editor** alright...

I had the offer of some free-to-use pine tongue and groove bead board, in the form of a large, lumpy, indescribable piece of furniture. I love re-using wood and this was a perfect excuse. Date-wise, it was probably from about 35 years ago, when it would have been fashionable. Right now, it looked ugly; it was held together with old-fashioned cut nails, wire nails with narrow heads and plenty of old screws with narrow slotted heads. Once I started to cut it apart and de-nail it, the hidden surfaces looked quite 'bright', it was a slow operation as I wanted to avoid major damage. My best guess was that it had been made from old 'wainscotting', used to clad the walls of an old school or village hall, hence one face being relatively clean. ➥


1


2


3


4

1 This monstrosity wasn't going to give up in a hurry but I didn't want to tear the pine TGV (tongue, groove and vee) to pieces and render it unusable. It was essential to lever it apart carefully as it was held tight with rusted nails.

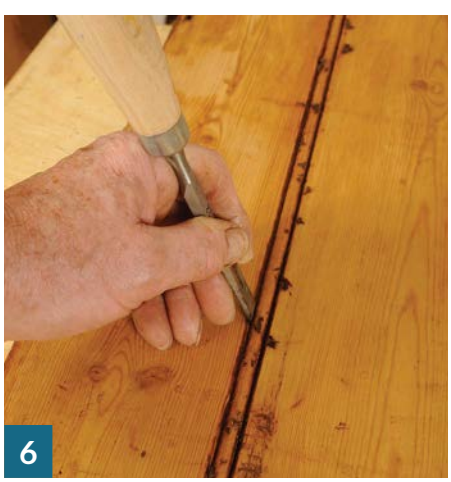
2 A couple of quick cuts helped separate the main carcass sections while avoiding blade-wrecking nails. After that, I managed to force the boards apart and then knock out all the nails.

3 Various straps had been screwed in place and were not always keen to come out. It proved easier to undo one screw first then rotate the strap to undo the other screw.


5

4 I started cutting paired boards to length as a plan developed in my mind. It was to be a wall cupboard whose width was determined by the width of the original drawers.

5 Having cut all the key components, of which there were quite a few, I then needed to de-wax the boards using a wax solvent cleaning agent. A lot of old wax and dirt came off by using medium wirewool to scrub the surfaces with solvent.


6


7

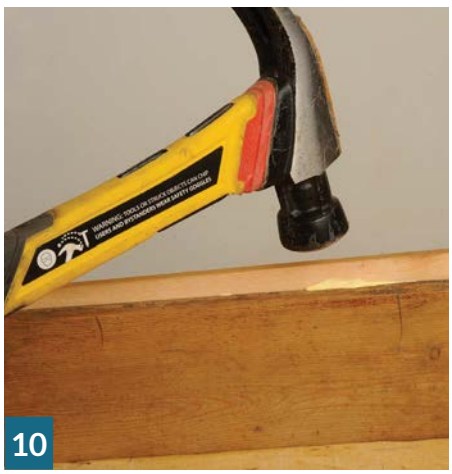
6 I dragged a chisel along all the gaps to remove yet more wax and dirt. It was worth it because I wanted a painted finish which had to stick properly, so a bare surface was essential.

7 Wirebrushing helped clean the last of the aged accretions that lurked in the bead profiles. The effort would be repaid by more reliable finishing later on.

## Basic carcass

8 Where the broken tongues existed, these were soon trimmed off with a Japanese pullsaw and the edge flatted with a hand plane.

9 Most boards could still fit together but those that had 'lost their tongue' needed slotting for a loose tongue instead. The rubber facing was removed from the jointer so I could do a plunge-and-pull cut.



10 The loose tongues had glue added and then tapped into the slots. Modern aliphatic resin glue was suitable as this wasn't an antique piece.

11 Where two blank edges met, I opted instead to use 'dry' biscuit jointing. This would allow free movement, although the pine was very dry and stable, unlikely to shrink further.


12 The carcass top had a batten glued on at the back and ends so the sides and back panel could fix to it. The lower boards would be screwed in the ends so there was no interference with the drawers caused by battens.

13 First the bottom board and then the centre boards were screwed through using twinfast screws. The heads wouldn't show after filling and painting. I used a steel rule to give an adequate gap spacing so the drawers would run easily.

14 The back panel consisted of boards fitted together and trimmed to width and length for a tight fit. Then they were all securely screwed in place, taking care to avoid breakout where they were run into the edges of the thin pine boards. ➥

15 At the front, I needed to add a centre dividing board between the two intended doors. This was made from two narrow TGV and bead boards, glued together so the beads would meet the door edges. It was screwed in place, top and bottom, by means of short bevel-ended battens.

## Glazed doors

16 I wanted to be able to see the contents on display, so a simple grooved frame would suffice. I did this with a plunge-and-pull cut with the jointer again; the 4mm slot would match the thickness of standard window glass exactly. The ends needed tongues to be machined on the router table.

17 The difficulty was that the boards weren't of even thickness, so some careful readjustment of the cutter height was necessary to get tight joints all round. The frames were assembled dry, ready for painting.


18 I wasn't convinced all waxiness had been removed, so I used STIX primer from General Finishes. This claims to cling well to anything, so I felt it would be a good basecoat.

19 Next, I chose what looked like a very lurid colour combination from the ECOS environmentally friendly paint range. I added a complete coat of Magenta, then a random coat of Ocean Drive, concentrating on the beading particularly.

20 Once each coat had dried in turn, I then did an all over coat of Dewberry. This might all seem rather weird but it was the end result that interested me, not how I got there!


21


22


23


24


25


26

21 Now for the rough stuff – 80 grit aluminium oxide on a delta-headed sander. The idea was to break through the paint layers in a rather random fashion so the colours underneath would appear as if worn away. Even going back to the bare pine on edges wasn't out of the question either.

## Adding the glass

22 I measured up for the glass to fit the already dry assembled frames and got two pieces cut by a glazier. Then the frame pieces were glued and assembled around the glass and checked for overall size and squareness. Pre-painting meant the surfaces were done so no scraping of paint off glass would be needed.

23 Once both doors were trimmed to fit their openings, the steel hinges then needed to be let into the doors only, so I placed a hinge midway across the 'leaf' underneath the height adjuster on my router, once the mortise cutter was resting on the door edge.

24 Both doors were clamped together in the vice so they could be done together and give a stable surface for the router to rest on. I machined up to the drawn lines and then chiselled the recesses neatly until each hinge fitted.

25 Each door was rested on the blade of a try square to give a gap underneath and a marking knife used to locate where to drill and screw each hinge in the carcass.

26 The carcass still looked very pink, which wasn't what I was after, so I daubed dark oak hardening wax on in sections at a time and immediately wiped off evenly.

27 The result is quite a complex surface effect, looking like an old, distressed finish, which was what I was after. Now it just needs to be put to good use and shown off! ■


27

# Machine Mart

NOW 65 SUPERSTORES NATIONWIDE

WHERE QUALITY COSTS LESS

## Clarke TABLE SAWS

FROM ONLY £69.98 EX.VAT £83.98 INC.VAT

LEG STAND KITS FOR CTS10D AND CTS11 ONLY £27.59 INC VAT

INCLUDES LEFT & RIGHT TABLE EXTENSION

CTS10D

| MODEL | MOTOR | BLADE | EXC.VAT | INC.VAT |
|---|---|---|---|---|
| CTS800B | 600W | 200mm | £69.98 | £83.98 |
| CTS11 | 1500W | 254mm | £139.98 | £167.98 |
| CTS10D | 1500W | 254mm | £159.98 | £191.98 |

## Clarke 4" BELT/ 6" DISC SANDER

- Dust extraction facility
- 4" x 36" belt tilts & locks 0-90°
- 225mm x 160mm table, tilts 0-90°
- 370W, 230V motor

CS4-6D

£84.99 EX.VAT £101.99 INC.VAT

## Clarke 6" BELT/ 9" DISC SANDER

- Includes stand
- 1 HP/ 230V/ 1ph motor

CS6-9C

£209.00 EX.VAT £250.80 INC.VAT

## Clarke TABLE SAW WITH EXTENSION TABLES (250mm)

CTS14

- Ideal for cross cutting, ripping, angle and mitre cutting
- Easy release/locking mechanism for table extensions
- 0-45° tilting blade
- Cutting depth: 72mm at 90° / 65mm at 45°

SHOWN WITH OPTIONAL LEG KIT CLK5 £19.98 EXC.VAT £23.98 INC.VAT

£119.98 EX.VAT £143.98 INC.VAT

## Clarke RANDOM ORBITAL SANDER

£29.98 EX.VAT £35.98 INC.VAT

- For sanding & polishing
- 125mm diameter sanding discs
- 4000-11000 opm

CROS1

INC 5 DISCS

## Clarke WOODWORKING VICES

STANLEY Record

FROM ONLY £13.49 EX.VAT £16.19 INC.VAT

WV7

| MODEL | MOUNTING | JAW (WIDTH/OPENING /DEPTH)mm | EXC.VAT | INC.VAT |
|---|---|---|---|---|
| Clarke CHT152 | Bolted | 150/152/61 | £13.49 | £16.19 |
| Stanley Multi Angle | Clamped | 72/60/40 | £16.99 | £20.39 |
| Record V75B | Clamped | 75/50/32 | £19.98 | £23.98 |
| Clarke WV7 | Bolted | 180/205/78 | £24.99 | £29.99 |

## airmaster TURBO AIR COMPRESSORS

FROM ONLY £79.98 EX.VAT £95.98 INC.VAT

8/250 • Superb range ideal for DIY, hobby & semi-professional use

HUGE RANGE OF AIR TOOLS IN STOCK

* V-Twin

| MODEL | MOTOR | CFM | TANK | EXC.VAT | INC.VAT | INC.VAT |
|---|---|---|---|---|---|---|
| 8/250 | 2HP | 7.5 | 24ltr | £79.98 | | £95.98 |
| 7/250 | 2 HP | 7 | 24ltr | £89.98 | | £107.98 |
| 11/250 | 2.5HP | 9.5 | 24ltr | £109.98 | £143.98 | £131.98 |
| 8/510 | 2HP | 7.5 | 50ltr | £119.98 | £155.98 | £143.98 |
| 11/510 | 2.5HP | 9.5 | 50ltr | £139.98 | £179.98 | £167.98 |
| 16/510* | 3 HP | 14.5 | 50ltr | £209.00 | £263.98 | £250.80 |
| 16/1010* | 3 HP | 14.5 | 100ltr | £259.98 | £323.98 | £311.98 |

## Clarke 1" BELT/ 5" DISC SANDER

- Includes 2 tables that tilt & lock
- Quality Induction 300w motor

£64.99 EX.VAT £77.99 INC.VAT

CBS1-5

## Clarke DUST EXTRACTOR/ CHIP COLLECTORS

FROM ONLY £129.98 EX.VAT £155.98 INC.VAT

METABO ALSO AVAILABLE

- Powerful 750W motor
- 56 litre bag capacity
- Flow rate of 850M3/h

| MODEL | MOTOR | FLOW RATE | BAG CAP. | EXC.VAT | INC.VAT |
|---|---|---|---|---|---|
| CDE35B | 750W | 450 M3/h | 56Ltrs | £129.98 | £155.98 |
| CDE7B | 750W | 850 M3/h | 114Ltrs | £149.98 | £179.98 |

## Clarke ELECTRIC POWER FILE

- Variable belt speed
- Tilting head

*Black & Decker CPF13

FROM ONLY £44.99 EX.VAT £53.99 INC.VAT

| MODEL | MOTOR | EXC.VAT | INC.VAT |
|---|---|---|---|
| CPF13 | 400W/230V | £44.99 | £53.99 |
| KA900E* | 350W/230V | £59.98 | £71.98 |

## Clarke CORDLESS DRILL/ DRIVERS

BOSCH Power Tools

Clarke CONTRACTOR

CON18Li

powered by Li-Ion

FROM ONLY £36.99 EX.VAT £44.39 INC.VAT

PSR18

| MODEL | VOLTS | BATTS | EXC. VAT | INC.VAT |
|---|---|---|---|---|
| CCD180 | 18V | 1 | £36.99 | £44.39 |
| CCD240 | 24V | 1 | £39.98 | £47.98 |
| Bosch PSR18 | 18V | 1 | £54.99 | £65.99 |
| CON18Ni | 18V | 2 x Ni-Cd | £59.98 | £71.98 |
| CON18Li | 18V | 2 x Li-Ion | £84.99 | £101.99 |

## Clarke ROTARY TOOL KIT

CRT40

£29.98 EX.VAT £35.98 INC.VAT

Kit includes:

- Height adjustable stand with clamp
- Rotary tool
- 1m flexible drive
- 40x accessories/consumables

## Clarke 4" BELT/ 8" DISC SANDER

- Includes two tables
- 550W 230V motor

£139.98 EX.VAT £167.98 INC.VAT

CS4-8

## Clarke DRILL BIT SHARPENER

CBS16

- Great for 3mm to 10mm HSS drill bits
- 70W motor
- Drill bit guide ensures sharpening at the correct angle
- Saves cost of new drills

PRICE CUT £19.98 EX.VAT £23.98 INC.VAT WAS £26.36 inc.VAT

VIDEO ON-LINE

## VAC KING WET & DRY VACUUM CLEANERS

FROM ONLY £47.99 EX.VAT £57.59 INC.VAT

* SS = Stainless Steel

- Compact, high performance wet & dry vacuum cleaners for use around the home, workshop, garage etc.

| MODEL | MOTOR | CAPACITY WET/DRY | EXC. VAT | INC. VAT |
|---|---|---|---|---|
| CVAC20P | 1250W | 16/12ltr | £47.99 | £57.59 |
| CVAC20SS* | 1400W | 16/12ltr | £59.98 | £71.98 |
| CVAC25SS* | 1400W | 19/17ltr | £64.99 | £77.99 |
| CVAC30SSR* | 1400W | 24/21ltr | £86.99 | £104.39 |

## Clarke STAPLE/ NAIL GUNS

- All models include nail/staple pack and tough moulded case

LITHIUM-ION

CONSN18LiB

PRICE CUT NOW FROM ONLY £18.99 EX.VAT £22.79 INC.VAT WAS £23.98 inc.VAT

NEW

SPARE NAILS / STAPLES IN STOCK

* was £23.98 inc.VAT
• was £35.98 inc.VAT

ELECTRIC AND CORDLESS MODELS IN STOCK

| MODEL | TYPE | STAPLE/NAIL GAUGE | EXC. VAT | INC. VAT |
|---|---|---|---|---|
| CESNG1* | Electric | 22/18 | £18.99 | £22.79 |
| CCT48 • | Cordless 4.8v Ni-MH | 22/18 | £24.99 | £29.99 |
| CESNG2 | Electric | 18/18 | £39.98 | £47.98 |
| CONSN18LiB | Cordless NEW | 18v Lithium-Ion 18/18 | £99.98 | £119.98 |

## Clarke STATIC PHASE CONVERTERS

PC60

- Run big 3 phase woodworking machines from 1 phase supply
- Variable output power to match HP of motor to be run

ROTARY PHASE CONVERTERS ALSO IN STOCK

FROM ONLY £209.00 EX.VAT £250.80 INC.VAT

CONVERT 230V 1PH TO 400V 3PH

| MODEL | MAX. MOTOR HP | FUSE | EXC.VAT | INC.VAT |
|---|---|---|---|---|
| PC20 | 2HP | 10Amps | £209.00 | £250.80 |
| PC40 | 3.5HP | 20Amps | £249.00 | £298.80 |
| PC60 | 5.5HP | 32Amps | £299.00 | £358.80 |

## Clarke DISC SANDER (305MM)

- Powerful, bench mounted disc sander
- 900W
- No load disc speed: 1490rpm
- 305mm Disc Dia. (1 x 60 grit sanding disc included)
- Dust extraction port

£119.98 EX.VAT £143.98 INC.VAT

CDS300B

## Clarke POWER PLANERS

BLACK & DECKER

FROM ONLY £23.99 EX.VAT £28.79 INC.VAT

- 82mm cutting width

CEP1

| MODEL | MOTOR | DEPTH OF CUT | EXC.VAT | INC.VAT |
|---|---|---|---|---|
| Clarke CEP1 | 650W | 2mm | £23.99 | £28.79 |
| Einhell RT-PL82 | 850W | 3mm | £49.98 | £59.98 |
| B&D KW750K - GB | 750W | 2mm | £57.99 | £69.59 |

## Clarke CLAMPS

FROM ONLY £3.99 EX.VAT £4.79 INC.VAT

HUGE CHOICE OF SASH, SPRING, SCREW, SPREADER AND G-CLAMPS

UP TO 1800mm CAPACITY

## Clarke QUALITY CAST IRON STOVES

£89.98 EX.VAT £107.98 INC.VAT

OVER 22 QUALITY STYLES ON DISPLAY

POT BELLY 11.8kW 6.9kW

BARREL 6kW

LARGE & XL MODELS IN STOCK

£209.00 EX.VAT £250.80 INC.VAT SAVE £60 inc.VAT

FLUES, COWLS & ACCESSORIES IN STOCK

PRICE CUT NOW ONLY £199.00 EX.VAT £238.80 INC.VAT WAS £298.80 inc.VAT

BUCKINGHAM

## Clarke HARDWOOD WORKBENCH

- Includes bench dogs and guide holes for variable work positioning
- 2 Heavy Duty Vices
- Large storage draw
- Sunken tool trough
- LxWxH 1520x620x855mm

CHB1500

£129.98 EX.VAT £155.98 INC.VAT

## Clarke CONTRACTOR BELT SANDERS

Clarke • Ideal for surface removal, sanding and finishing

Makita

ABRASIVE SANDING BELTS IN STOCK

BS1

FROM ONLY £29.98 EX.VAT £35.98 INC.VAT

| MODEL | MOTOR | M/MIN | EXC.VAT | INC.VAT |
|---|---|---|---|---|
| Clarke BS1 | 900W | 380 | £29.98 | £35.98 |
| Clarke CBS2 | 1200W | 480 | £69.98 | £83.98 |
| Makita 9911 | 650W | 75-270 | £94.99 | £113.99 |

## Clarke CIRCULAR SAWS

FROM ONLY £34.99 EX.VAT £41.99 INC.VAT

- Great range of DIY and professional saws
- Ideal for bevel cutting (0-45°)

CON185

*Includes laser guide

| MODEL | MOTOR | MAX CUT 90/45 (mm) | EXC.VAT | INC.VAT |
|---|---|---|---|---|
| CCS185B | 1200W | 65/44 | £34.99 | £41.99 |
| CON185*# | 1600W | 60/40 | £54.99 | £65.99 |
| CCS2 | 1300W | 60/45 | £59.98 | £71.98 |

# was £68.39 inc.VAT

## Clarke SHEET SANDERS

CON300

FROM ONLY £13.99 EX.VAT £16.79 INC.VAT

*110V in stock

| MODEL | SHEET SIZE | MOTOR | EXC.VAT | INC.VAT |
|---|---|---|---|---|
| COS200 | 190X90mm | 150W | £13.99 | £16.79 |
| CON300 | 230X115mm | 330W | £32.99 | £39.59 |
| Makita BO4555* | 112X102mm | 200W | £54.99 | £65.99 |

## Clarke PORTABLE THICKNESSER

- Max thickness cap. 125mm and 250mm wide
- Planing depths adjustable from 0-2.5mm
- Powerful 1250W motor
- 8000rpm no-load speed

£189.98 EX.VAT £227.98 INC.VAT

CPT250

## Clarke BOLTLESS SHELVING BENCHES

- Simple fast assembly in minutes using only a hammer

FROM ONLY £29.98 EX.VAT £35.98 INC.VAT

SAVE 10% WHEN YOU BUY ANY MIX OF 5 FROM THIS RANGE SAVE AT LEAST £17.99 INC.VAT

CHOICE OF 5 COLOURS RED, BLUE, BLACK, SILVER & GALVANISED STEEL

150 KG PER SHELF (evenly distributed) Strong 9mm fibreboard shelves

350 KG PER SHELF (evenly distributed) Strong 12 mm fibreboard shelves

ALSO EXTRA WIDE INDUSTRIAL UNITS AVAILABLE

| MODEL | DIMS WxDxH(mm) | EXC.VAT | INC.VAT |
|---|---|---|---|
| 150kg | 800x300x1500 | £29.98 | £35.98 |
| 350kg | 900x400x1800 | £49.98 | £59.98 |

## Clarke PLANERS & THICKNESSERS

CPT800

- Ideal for DIY & Hobby use
- Dual purpose, for both finishing & sizing of timber

FROM ONLY £169.98 EX.VAT £203.98 INC.VAT

| MODEL | PLANING WIDTH | MAX THICK. CAPACITY | EXC. VAT | INC. VAT |
|---|---|---|---|---|
| CPT600 | 6" | 120mm | £169.98 | £203.98 |
| CPT800 | 8" | 120mm | £199.98 | £239.98 |
| CPT1000 NEW | 10" | 120mm | £269.98 | £323.98 |

## Clarke OSCILLATING BOBBIN SANDER

Provides exceptional finishes for deep & wide work pieces, front edges & narrow inner curves

- Dust collection port
- Inc. 6 sanding sleeves /bobbins
- 330mm table height
- 16mm oscillating stroke

COBS1

ONLY £119.98 EX.VAT £143.98 INC.VAT

25218LH

## Clarke 10" (254MM) SLIDING COMPOUND MITRE SAW

- For fast, accurate cross, bevel & mitre cutting in most hard & soft woods
- 1800W motor
- Laser guide
- 78mm max. depth of cut

£129.98 EXC.VAT
£155.98 INC.VAT

CMS10S2

# GREAT NEW WEBSITE

NOW OVER 17,000 PRODUCTS ONLINE!

For hard-to-find, specialist items visit the Xtra section on machinemart.co.uk

# FREE 500 PAGE CATALOGUE

Over 1250 PRICE CUTS & NEW PRODUCTS


# GET YOUR FREE COPY NOW!

- IN-STORE
- ONLINE
- PHONE

0844 880 1265

## MITRE SAWS

FROM ONLY £56.99 EXC.VAT £68.39 INC.VAT

TC-SM 2534

- Quality Range of Mitre saws and blades in stock

| MODEL | BLADE DIA/ BORE (mm) | MAX CUT DEPTH/CROSS | EXC. VAT | INC. VAT |
|---|---|---|---|---|
| Einhell TH-MS 2112 | 210/30 | 55/120mm | £56.99 | £68.39 |
| Evolution Fury 3 | 210/25.4 | 60/220mm | £119.98 | £143.98 |
| Einhell TC-SM2534 | 250/30 | 75/340mm | £159.98 | £191.98 |
| Makita LS1040 | 260/30 | 95/130mm | £199.98 | £239.98 |

## DETAIL SANDERS

- Perfect for smooth and fine finishing along with hard to reach areas or curved surfaces

CDS-1V

FROM ONLY £17.99 EXC.VAT £21.59 INC.VAT

ALL MODELS INC. SANDING SHEETS

| MODEL | WATTS | EXC.VAT | INC.VAT |
|---|---|---|---|
| PS105 | 105W | £17.99 | £21.59 |
| RT-0S13 | 130W | £22.99 | £27.59 |
| CDS-1V | 280W | £24.99 | £29.99 |

## JIGSAWS

FROM ONLY £12.99 EXC.VAT £15.59 INC.VAT

*DIY #Professional

CJS380

| MODEL | POWER (W) | DEPTH OF CUT (WOOD/STEEL) | EXC. VAT | INC VAT |
|---|---|---|---|---|
| Clarke CJS380* | 420W | 55/6mm | £12.99 | £15.59 |
| Clarke CON750# | 750W | 80/10mm | £24.99 | £29.99 |
| Bosch PST700E* | 500W | 70/4mm | £44.99 | £53.99 |
| Einhell RT-JS 85 NEW | 750W | 85/5mm | £49.98 | £59.98 |

## BISCUIT JOINTER

- 11000rpm Operating Speed
- 860W Motor
- 14mm Cutting Depth
- Inc. dust bag and storage case

£49.98 EXC.VAT £59.98 INC.VAT

BT-BJ900

## Clarke MORTISING MACHINE

£149.98 EXC.VAT £179.98 INC.VAT

CBM1B

- Accurately creates deep square recesses
- Table size 150 x 340mm
- Max. chisel stroke 76mm
- Robust cast iron base & column ensures stability & accuracy
- 95mm depth of cut

CHISELS AVAILABLE FROM £8.39 INC VAT

"..fast and accurate with a good solid feel...Excellent value for money." See www.machinemart.co.uk

## Clarke MITRESAW STAND

CFMSS1

PRICE CUT NOW ONLY £59.98 EXC.VAT £71.98 INC.VAT WAS £77.99 inc.VAT

- Suitable for most sizes/makes of saw
- Inc. outriggers & rollers

NEW FOLDING MITRE SAW STAND IN STOCK – CONMW1 ONLY £119.98 INC VAT

## Clarke MULTI FUNCTION TOOL WITH ACCESSORY KIT

- Great for sawing, cutting, sanding, polishing, chiselling & much more
- 250W motor
- Variable speed

£36.99 EXC.VAT £44.39 INC.VAT

CMFT250

## Clarke 13" MINI WOOD LATHE

£134.99 EXC.VAT £161.99 INC.VAT

CWL325V

- Ideal for enthusiasts/ hobbyists with small workshops
- 325mm distance between centres
- 200mm max. turning capacity (dia)
- 0.2HP motor

## Clarke SCROLL SAWS

FROM ONLY £69.98 EXC.VAT £83.98 INC.VAT

CSS16V

- 50mm max cut thickness
- Air-blower removes dust from cutting area
- Table tilts 0-45°

| MODEL | MOTOR | SPEED RPM | EXC. VAT | INC. VAT |
|---|---|---|---|---|
| CSS400B | 85W | 1450 | £69.98 | £83.98 |
| CSS16V | 120W | 400-1700 | £79.98 | £95.98 |
| TH-SS405E | 1200W | 400-1600 | £79.98 | £95.98 |

## Clarke BENCH BANDSAWS

FROM ONLY £99.98 EXC.VAT £119.98 INC.VAT

TC-SB200

- Produce fast, precise mitre & longitudinal cuts
- Cuts in wood, plastic, etc.

| MODEL | MOTOR | THROAT SIZE | EXC.VAT | INC.VAT |
|---|---|---|---|---|
| TC-SB200 | 180W | 8" | £99.98 | £119.98 |
| CBS190 | 350W | 7.5" | £114.99 | £137.99 |

## Clarke DRILL PRESSES

- Range of precision bench & floor presses for enthusiast, engineering & industrial applications

FROM ONLY £59.98 EXC.VAT £71.98 INC.VAT

NEW RANGE

CDP152B

B = Bench mounted
F = Floor standing
V = Variable speed

| MODEL | MOTOR (W) SPEEDS | EXC. VAT | INC. VAT |
|---|---|---|---|
| CDP5EB | 350 / 5 | £59.98 | £71.98 |
| CDP102B | 350 / 5 | £69.98 | £83.98 |
| CDP152B | 450 / 12 | £119.98 | £143.98 |
| CDP202B | 450 / 16 | £159.98 | £191.98 |
| CDP10B | 370 / 12 | £169.98 | £203.98 |
| CDP352F | 550 / 16 | £199.98 | £239.98 |
| CDP350V | 550 / V | £219.00 | £262.80 |
| CDP502F | 1100 / 12 | £449.00 | £538.80 |

## Clarke ROUTER TABLE

CRT-1

Router not included

BEST SELLER

- Converts your router into a stationary router table
- Suitable for most routers (up to 155mm dia. Base plate)

£59.98 EX.VAT £71.98 INC.VAT

## Clarke 12" DOVETAIL JIG

- Simple, easy to set up & use for producing a variety of joints
- Cuts work pieces with a thickness of 8-32mm
- Includes a 1/2" comb template guide & holes for bench mounting

CDTJ12

£49.98 EXC.VAT £59.98 INC.VAT

## Clarke PROFESSIONAL BANDSAWS

Top Quality Bandsaws - ideal for professional workshop use. Strong steel body with solid cast iron table featuring induction motors

- Table tilts 45°
- Adjustable blade guide
- Supplied with stand, 4TPI wood cutting blade, rip fence, mitre guide, mitre gauge and push stick

MAGNIFIED MITRE GUIDE
QUICK RELEASE FENCE
DRIVE-BELT TENSIONING
SOLID GROUND CAST IRON TABLE

CBS300 £349.98 EXC.VAT £419.98 INC.VAT

CBS350 £449.00 EXC.VAT £538.80 INC.VAT

MODELS ALSO FEATURE:

MULTI-STEP DUST EXTRACTION OUTLET
REMOVABLE DUST TRAY
FLEXIBLE LED WORKLIGHT
BLADE TENSIONING CONTROL

| MODEL | THROAT DEPTH | MAX CUT 90° | MAX CUT 45° | EXC.VAT | INC.VAT |
|---|---|---|---|---|---|
| CBS300 | 305mm/12" | 165mm | 115mm | £349.98 | £419.98 |
| CBS350 | 340mm/14" | 225mm | 160mm | £449.00 | £538.80 |

## Clarke CONTRACTOR ROUTERS

BOSCH

- Powerful heavy duty machines ideal for trade and DIY use

CR2

CR2 INCLUDES 15 PIECE KIT WORTH OVER £20

FROM ONLY £39.98 EX.VAT £47.98 INC.VAT

CR1C

*DIY

| MODEL | MOTOR (W) | PLUNGE (mm) | EXC.VAT | INC.VAT |
|---|---|---|---|---|
| CR1C* | 1200 | 0-50 | £39.98 | £47.98 |
| Bosch POF1400ACE | 1400 | 0-55 | £79.98 | £95.98 |
| CR2 | 2100 | 0-60 | £109.98 | £131.98 |

## Clarke BENCH GRINDERS & STANDS

- Stands come complete with bolt mountings and feet anchor holes

STANDS IN STOCK FROM ONLY £37.98 EXC. VAT £47.98 INC. VAT

CBG6SB

FROM ONLY £29.98 EX.VAT £35.98 INC.VAT

6" & 8" AVAILABLE WITH LIGHT

CBG8W features 8" whetstone & 6"drystone.
# With sanding belt
‡ was £67.19 inc.VAT

CBG6RP

| MODEL | DUTY | WHEEL DIA. | EXC.VAT | INC.VAT |
|---|---|---|---|---|
| CBG6RP | DIY | 150mm | £29.98 | £35.98 |
| CBG6RZ | PRO | 150mm | £39.98 | £47.98 |
| CBG6RSC | HD | 150mm | £49.98 | £59.98 |
| CBG6SB# | PRO | 150mm | £49.98 | £59.98 |
| CBG6RWC | HD | 150mm | £54.99 | £65.99 |
| CBG8W (wet)‡ | HD | 150/200mm | £49.98 | £59.98 |

# VISIT YOUR LOCAL SUPERSTORE

OPEN MON-FRI 8.30-6.00, SAT 8.30-5.30, SUN 10.00-4.00

| | | | |
|---|---|---|---|
| **BARNSLEY** Pontefract Rd, Barnsley, S71 1EZ | 01226 732297 | **EXETER** 16 Trusham Rd. EX2 8QG | 01392 256 744 |
| **B'HAM GREAT BARR** 4 Birmingham Rd. | 0121 358 7977 | **GATESHEAD** 50 Lobley Hill Rd. NE8 4YJ | 0191 493 2520 |
| **B'HAM HAY MILLS** 1152 Coventry Rd, Hay Mills | 0121 7713433 | **GLASGOW** 280 Gt Western Rd. G4 9EJ | 0141 332 9231 |
| **BOLTON** 1 Thynne St. BL3 6BD | 01204 365799 | **GLOUCESTER** 221A Barton St. GL1 4HY | 01452 417 948 |
| **BRADFORD** 105-107 Manningham Lane. BD1 3BN | 01274 390962 | **GRIMSBY ELLIS WAY,** DN32 9BD | 01472 354435 |
| **BRIGHTON** 123 Lewes Rd, BN2 3QB | 01273 915999 | **HULL** 8-10 Holderness Rd. HU9 1EG | 01482 223161 |
| **BRISTOL** 1-3 Church Rd, Lawrence Hill. BS5 9JJ | 0117 935 1060 | **ILFORD** 746-748 Eastern Ave. IG2 7HU | 0208 518 4286 |
| **BURTON UPON TRENT** 12a Lichfield St. DE14 3QZ | 01283 564 708 | **IPSWICH** Unit 1 Ipswich Trade Centre, Commercial Road | 01473 221253 |
| **CAMBRIDGE** 181-183 Histon Road, Cambridge. CB4 3HL | 01223 322675 | **LEEDS** 227-229 Kirkstall Rd. LS4 2AS | 0113 231 0400 |
| **CARDIFF** 44-46 City Rd. CF24 3DN | 029 2046 5424 | **LEICESTER** 69 Melton Rd. LE4 6PN | 0116 261 0688 |
| **CARLISLE** 85 London Rd. CA1 2LG | 01228 591666 | **LINCOLN** Unit 5. The Pelham Centre. LN5 8HG | 01522 543 036 |
| **CHELTENHAM** 84 Fairview Road. GL52 2EH | 01242 514 402 | **LIVERPOOL** 80-88 London Rd. L3 5NF | 0151 709 4484 |
| **CHESTER** 43-45 St. James Street. CH1 3EY | 01244 311258 | **LONDON CATFORD** 289/291 Southend Lane SE6 3RS | 0208 695 5684 |
| **COLCHESTER** 4 North Station Rd. CO1 1RE | 01206 762831 | **LONDON** 6 Kendal Parade, Edmonton N18 | 020 8803 0861 |
| **COVENTRY** Bishop St. CV1 1HT | 024 7622 4227 | **LONDON** 503-507 Lea Bridge Rd. Leyton, E10 | 020 8558 8284 |
| **CROYDON** 423-427 Brighton Rd, Sth Croydon | 020 8763 0640 | **LONDON** 100 The Highway, Docklands | 020 7488 2129 |
| **DARLINGTON** 214 Northgate. DL1 1RB | 01325 380 841 | **LUTON** Unit 1, 326 Dunstable Rd, Luton LU4 8JS | 01582 728 063 |
| **DEAL (KENT)** 182-186 High St. CT14 6BQ | 01304 373 434 | **MAIDSTONE** 57 Upper Stone St. ME15 6HE | 01622 769 572 |
| **DERBY** Derwent St. DE1 2ED | 01332 290 931 | **MANCHESTER ALTRINCHAM** 71 Manchester Rd. Altrincham | 0161 9412 666 |
| **DONCASTER** Wheatley Hall Road | 01302 245 999 | **MANCHESTER CENTRAL** 209 Bury New Road M8 8DU | 0161 241 1851 |
| **DUNDEE** 24-26 Trades Lane. DD1 3ET | 01382 225 140 | **MANCHESTER OPENSHAW** Unit 5, Tower Mill, Ashton Old Rd | 0161 223 8376 |
| **EDINBURGH** 163-171 Piersfield Terrace | 0131 659 5919 | **MANSFIELD** 169 Chesterfield Rd. South | 01623 622160 |
| | | **MIDDLESBROUGH** Mandale Triangle, Thornaby | 01642 677881 |
| | | **NORWICH** 282a Heigham St. NR2 4LZ | 01603 766402 |
| | | **NOTTINGHAM** 211 Lower Parliament St. | 0115 956 1811 |
| | | **PETERBOROUGH** 417 Lincoln Rd. Millfield | 01733 311770 |
| | | **PLYMOUTH** 58-64 Embankment Rd. PL4 9HY | 01752 254050 |
| | | **POOLE** 137-139 Bournemouth Rd. Parkstone | 01202 717913 |
| | | **PORTSMOUTH** 277-283 Copnor Rd. Copnor | 023 9265 4777 |
| | | **PRESTON** 53 Blackpool Rd. PR2 6BU | 01772 703263 |
| | | **SHEFFIELD** 453 London Rd. Heeley. S2 4HJ | 0114 258 0831 |
| | | **SIDCUP** 13 Blackfen Parade, Blackfen Rd | 0208 3042069 |
| | | **SOUTHAMPTON** 516-518 Portswood Rd. | 023 8055 7788 |
| | | **SOUTHEND** 1139-1141 London Rd. Leigh on Sea | 01702 483 742 |
| | | **STOKE-ON-TRENT** 382-396 Waterloo Rd. Hanley | 01782 287321 |
| | | **SUNDERLAND** 13-15 Ryhope Rd. Grangetown | 0191 510 8773 |
| | | **SWANSEA** 7 Samlet Rd. Llansamlet. SA7 9AG | 01792 792969 |
| | | **SWINDON** 21 Victoria Rd. SN1 3AW | 01793 491717 |
| | | **TWICKENHAM** 83-85 Heath Rd.TW1 4AW | 020 8892 9117 |
| | | **WARRINGTON** Unit 3, Hawley's Trade Pk. | 01925 630 937 |
| | | **WIGAN** 2 Harrison Street, WN5 9AU | 01942 323 785 |
| | | **WOLVERHAMPTON** Parkfield Rd. Bilston | 01902 494186 |
| | | **WORCESTER** 48a Upper Tything. WR1 1JZ | 01905 723451 |

OPEN 7 DAYS

4 EASY WAYS TO BUY...

IN-STORE 65 SUPERSTORES

ONLINE www.machinemart.co.uk

MAIL ORDER 0115 956 5555

CLICK & COLLECT



Calls to the catalogue request number above (0844 880 1265) cost 7p per minute plus your telephone company's network access charge
For security reasons, calls may be monitored. All prices correct at time of going to press. We reserve the right to change products and prices at any time. All offers subject to availability, E&OE.

# READER GROUP TEST

Welcome to our **Reader Group Test** by members of our very own Woodworker's Institute Forum

## ANTEX PYRO MASTER

Antex describe the Pyro Master as 'an entry level dual temperature pyrography tool, ideal for simple designs on wood or leather'. The kit has 19 tips, a wooden keyring and a leather fridge magnet to get you started.

### Technical specifications

- Two heat settings, 15 and 30 watts
- 10 stamping/branding bits
- Nine drawing tips
- Safety stand

**Price:** £34.68
**Contact:** Antex Craft
**Web:** www.antexcraft.com

PHOTOGRAPH BY GMC/ANTHONY BAILEY

### Testers

David Gorman
Colin Graham
John Lorimer
Ian Wilson

PHOTOGRAPHS COURTESY OF JOHN LORIMER

**John Lorimer chose an Arts & Crafts style decoration**

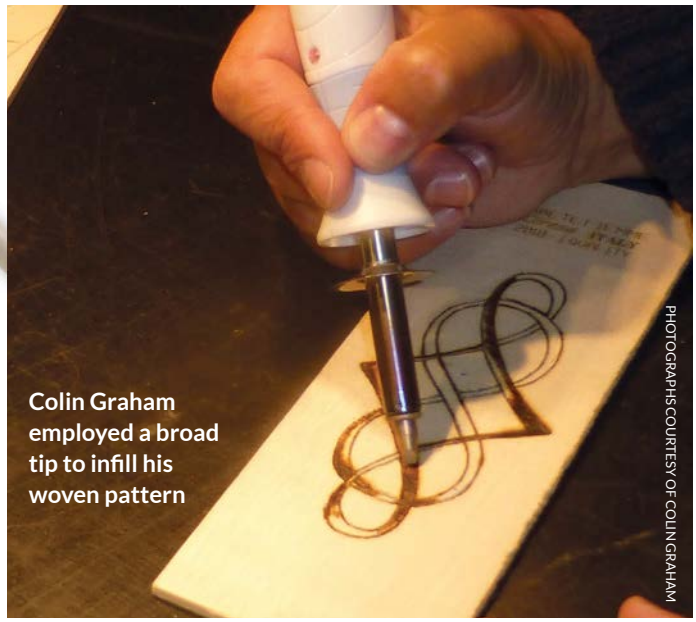
We asked the testers a range of questions, some of which were graded, others needed more articulated answers rather than just scoring. We found out about their experience using the product and if they had any problems using it.

### David Gorman:

I thought the variety of branding tips was good and there were enough flats and round tips to get started. On the whole, I thoroughly enjoyed using it, although the handle did get quite hot which meant the holding position was a little awkward at first. I think it's a great starter pack for the hobbyist or serious pyrographer and fantastic value for money; the various tips and the projects are brilliant.

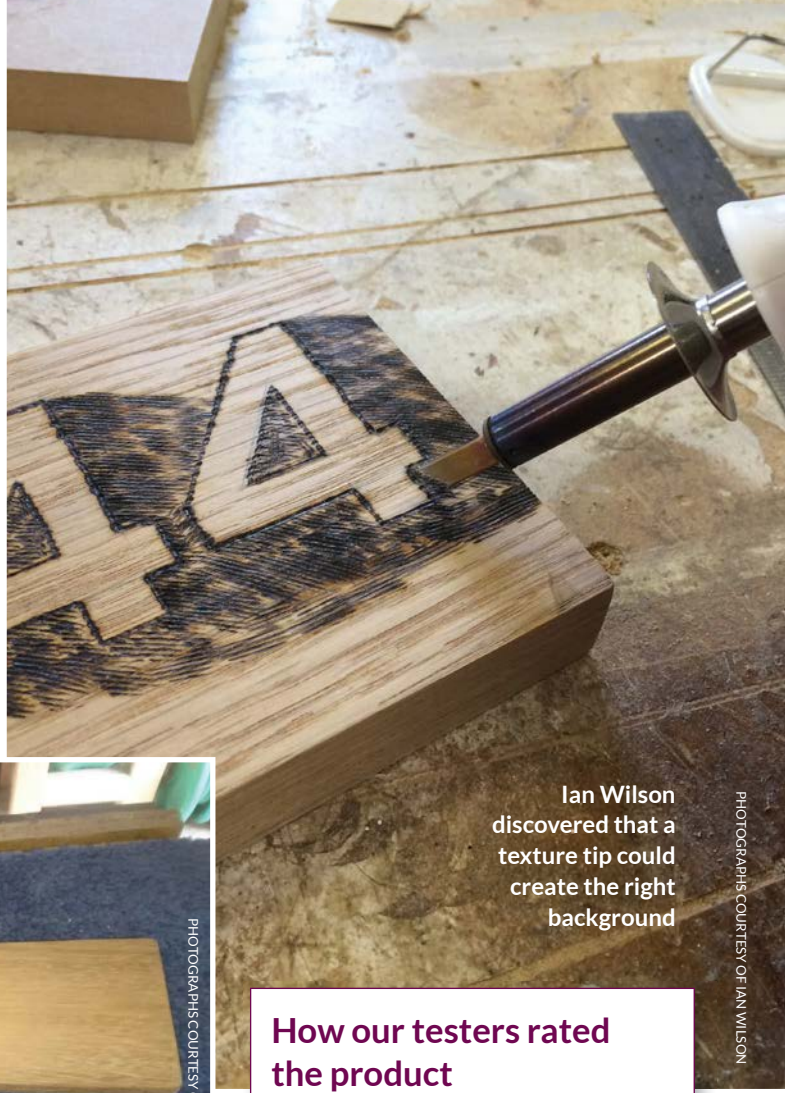
### Colin Graham:

From a novice point of view, I found the simplicity and completeness of the package very good. Having never used a pyrography tool before, I found the instructions easy to follow and had a very good experience with it; the only concern I had was that the circumference of the handle was a little big for my smallish hand. Having never used such a tool before, I had such an



Colin Graham employed a broad tip to infill his woven pattern

PHOTOGRAPHS COURTESY OF COLIN GRAHAM



Ian Wilson discovered that a texture tip could create the right background

PHOTOGRAPHS COURTESY OF IAN WILSON

David Gorman used a fine tip for a delicate leaf shape

PHOTOGRAPHS COURTESY OF DAVID GORMAN

enjoyable time with it that I would like to continue to use it and learn how to do it better.

## John Lorimer:

As I am a first time user of a dedicated pyrography tool, I have previously attempted to use soldering irons to produce designs, but due to the shape of the tip, have had limited success. The facility to use the alternative shaped tips and branding irons allows for much better control of the line quality and shading, than when using a fixed tip tool.

Multiple tips allow you to create different grades of shading and toning, allowing a much finer control. Thickness and definition of line can be altered to add far greater visual interest to design work. Holding the tool for a length of time, I noticed the handle becoming hot especially towards the bevel where my fingertips were located when moving and manipulating the tool. The stand does not appear to be sturdy enough and due to the lack of flex in the power cable, the tool was frequently twisted out of the metal holder and posed a safety risk at times. Yes, it is good value for money – allowing the user to create quite finely detailed work with skill and practice.

## Ian Wilson:

I'm a first time user but the instructions were really easy to follow. There were definitely plenty of tips to choose from and being able to change the heat control between tips was great. I found the overall comfort of the Pyro Master very good and having a long power lead definitely useful. I would have no problem in recommending this product. ■

## How our testers rated the product

| | |
|---|---|
| How would you rate the product performance? | 8.5/10 |
| How would you rate the product ease of use? | 8.5/10 |
| How would you rate the product overall? | 8.75/10 |

## Editor's comment:

It's interesting how many people, including our panel, have never tried pyrography before, and yet the basics are fun and easy to pick up.

The Pyro Master is the perfect way to kick off this aspect of woodworking. All our respondents have obviously enjoyed experimenting and want to take it further. If you do get the 'bug', then a more comprehensive tool would be better later on, but this model shows just how easy the art of burning really can be!

If you would like to be part of our panel of product testers, please go to our website www.woodworkersinsitute.com – and **SIGN UP NOW!**

# *Rotary* spoon stand

PHOTOGRAPHS BY LEE STOFFER

Lee Stoffer, our very own 'Mr Spoons', takes a bit of a funny turn when he comes in from the cold to use his powered lathe

## Wood

- Brown burr oak (*Quercus robur*) – one blank 220mm diameter by 45mm thick; another 130 x 35mm
- Laburnum (*Laburnum anagyroides*) – four blanks 40 x 180mm
- Rippled ash (*Fraxinus excelsior*) – one billet 250 x 60 x 60mm

## Tools and equipment

- Electric lathe
- Chuck
- Turning tools
- Scraper
- Abrasive
- Ball bearing
- Raw linseed oil
- Plane
- 12mm and 25mm auger bits and drill
- Masking tape
- 12mm spanner
- Soft-faced hammer
- Cyanoacrylate and hot melt glue
- PPE – dust mask

A bit of a break from the norm for me, but a good excuse to fire up the electric lathe for an interesting project for you to try. I adapted a French design for a *porte cuillère*, which would traditionally have hung above the dining table on a pulley, with a counterbalance weight to allow it to be pulled down to select spoons at meal times. I've designed this one to stand on the table, making a nice centrepiece which can be rotated to select your favourite spoon. Being a spoon carver, I've always got a good selection of wooden eating spoons to populate the stand and really enjoy using them. If carved spoons aren't your thing, you could adapt the design to hold cooking utensils or cutlery.

1 I've chosen to use brown burr oak, laburnum and rippled ash for this project, which complement each other well. I harvested and processed these some time ago so they are all well seasoned, hence the need for power turning. Greener timber could of course be turned on a pole lathe, but some of the smaller parts would present an interesting challenge.

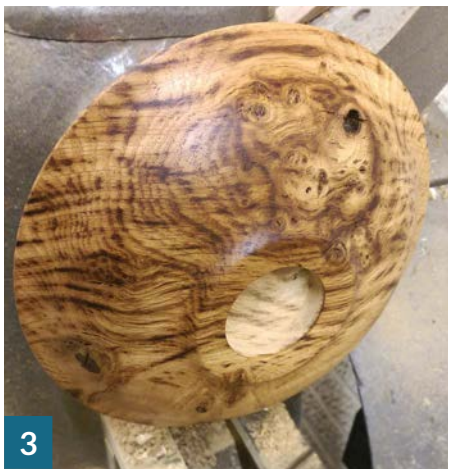
## Base

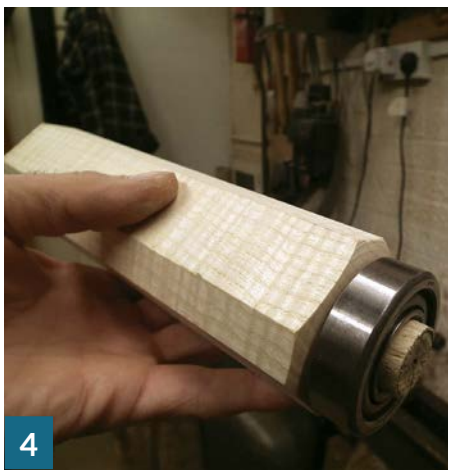
2 First up for turning is the base of brown oak. Starting with a blank around 220mm diameter by 45mm thick, rough turn a domed shape and cut a mortise to accept the ball bearing that will give a smooth rotary action.

3 Check the bearing fit then finish the base with a scraper and a light sanding. Apply a generous coat of raw linseed oil to bring out the colour of the grain. Wipe off any excess oil then burnish with a handful of shavings.

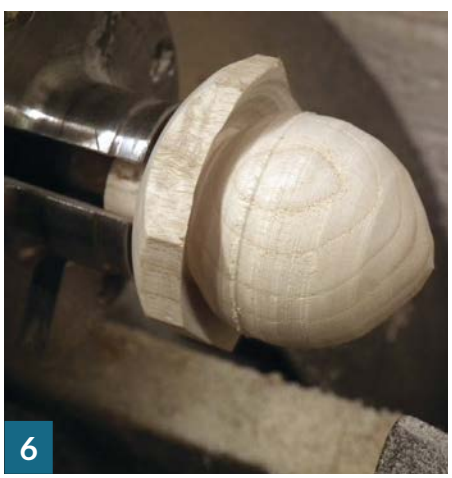

1


2


3


4


5

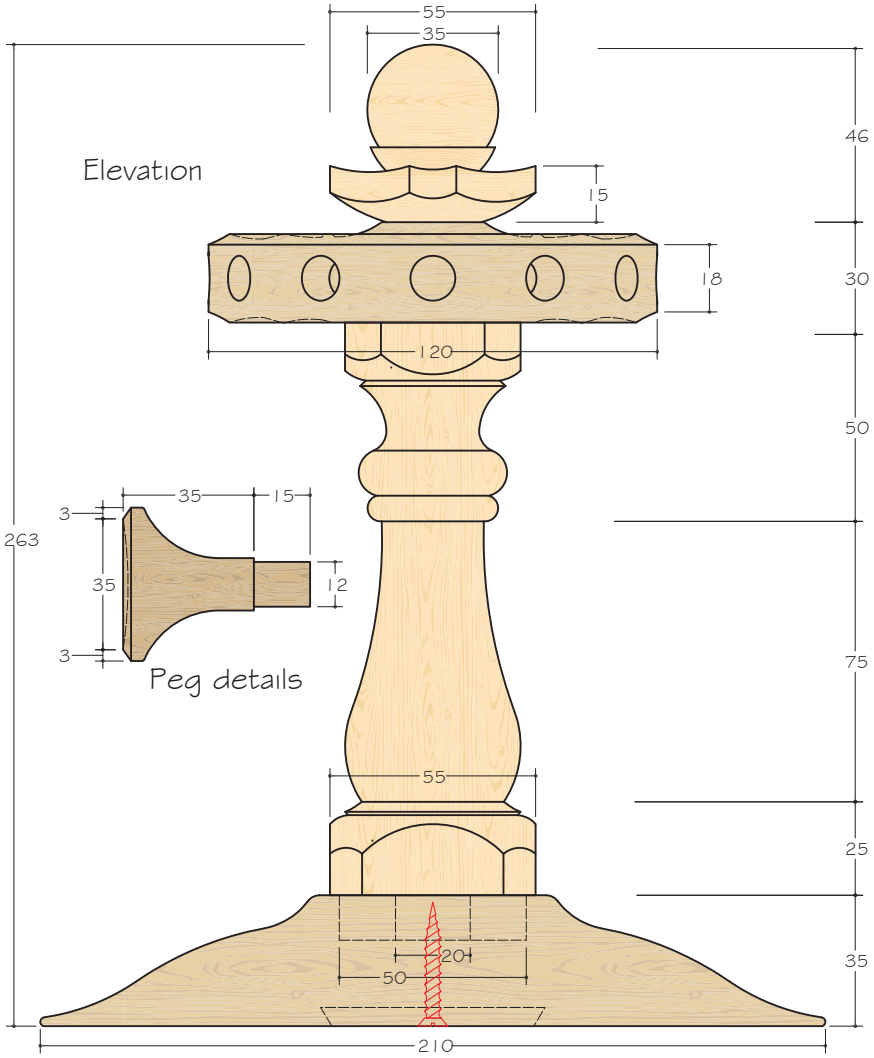

6

## Centre column and finial

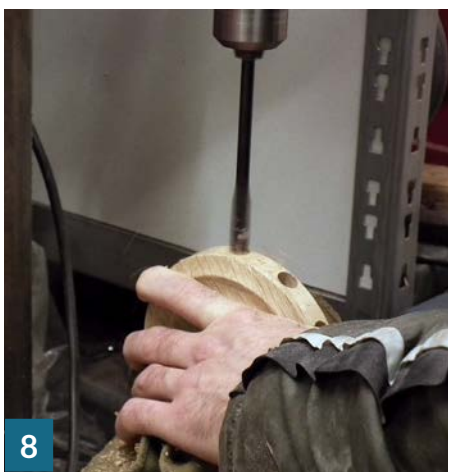
4 Prepare the ash blank for turning by planing to around 55mm square then remove the corners to produce an octagonal blank. Mount between centres and turn a tenon on each end: one should be 25mm and the other to fit tightly into the inner race of the bearing, any access length on the tenon can be trimmed after test fitting.

5 Turn the detail for the column, then re-cut the facets on the narrow end to maintain the octagonal detail. Column length (excluding tenons) is 150mm to accommodate eating spoons, but may be varied to suit other sizes. Turn a 25mm diameter section between the column and what will become the finial. Make it long enough to part off, leaving a 15mm long tenon on each piece. Sand and oil the column taking care not to oil the tenons.

6 After parting off the column, you should be left with a short blank for the finial, with a 25mm tenon on each end. Chuck mount the tenon and round off the back of the octagonal shape back to the opposite tenon. Invert the blank in the chuck then turn the ball detail, sand and oil. ➤










## Top hub

7 Now turn the top hub, from a 130 x 35mm blank of the brown burr oak. This is where the holding pegs will be mounted. Start by boring a 25mm hole through the blank that will accept the tenons from the column and finial; use this as the chuck mounting. Leave at least 18mm of flat area in the centre of the circumference to accommodate the mortises for the pegs and mark a centre line. Divide the circumference into 12 equal sections and mark the centre line on each of these sections to give drilling positions for the peg mortises. If your lathe has an indexing function, this will be easy. I lined up a reference point marked on the lathe, with the index marks on the back of a chuck by eye, using the toolrest set on centre to guide the pencil mark.

8 With the positions marked, 12mm holes can be drilled to accept the peg tenons. Hold the hub in a vice using a rag to prevent marking it with the jaws. Take care to ensure it is held vertically and that each hole is drilled in line with the centre of the hub.

## Pegs

9 The trickiest bit comes next: the turning of 12 matching pegs from laburnum to fit into the hub. The contrast between the heartwood and sapwood looks good, so try to include a little bit of both in each piece. Three pegs can be turned from blanks roughed out at around 40 x 180mm. Allow a length of 50mm for each peg plus spare for parting and holding. Make sure you wear a good dust mask when working with laburnum as it contains nasty toxins that could cause serious health issues.

10 Draw the profile onto some masking tape which has been applied to the toolrest. This acts as a guide to help maintain consistency.

11 First, tackle the tenons, making them long enough to part off and leaving at least 12mm length on each. Use a 12mm spanner as a quick check for sizing.

12 Next, cut the trumpet horn shape into the blanks, keeping

the end with the widest diameter at 35mm, with 5mm of thickness then tapering to leave a 1mm step down to the tenon.

13 It's prudent to turn a couple of extra pegs so the best matching set can be selected. After the initial shaping, mount each peg individually to cut a nice concave profile into the face and bevel the front edge. Sand and oil at this stage; the tenon being in the chuck helps keep the oil from contaminating it for gluing later.

## Final assembly

14 When the oil is finally dry, the completed parts will be ready for assembly.

15 Set the bearing first with light taps from a soft-faced hammer, then tap the column into place and add the hub, ready to receive the pegs.

16 Use a set screw through a hole in the base, which is drilled on the lathe to ensure centre alignment. This screw keeps the column in place and makes it possible to service the bearing if necessary.

17 Add a drop of thin cyanoacrylate (CA) glue to each peg before setting them into the hub.

18 Finally, glue the hub and finial in place. Hot melt adhesive works well as a gap filler if the fit isn't tight enough for the thin CA glue to secure the joint. Epoxy resin or PVA could be substituted if you prefer.

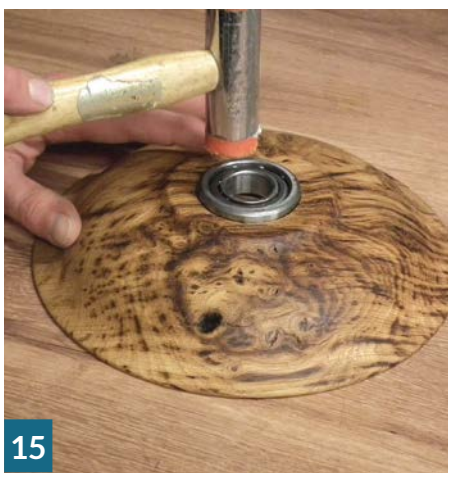
19 The finished article, pictured with a taller version utilising the same timber combination. This project provides plenty of elegant storage for your favourite spoons. ■


11


12


13


14


15


16

17


18


19

# Quality Tools to match our Service


Mouldings

Certified Hardwoods

Top quality hand tools


Toishi-Ohishi Japanese Waterstones

Drilling Tools made to the highest standard

COLT PROFESSIONAL TOOLS

G&S Specialist Timber

TOOLS AND MACHINERY

www.toolsandtimber.co.uk

you can order online now

Flexcut CARVING TOOLS

pfeil


*WE ARE EASY TO FIND:*
*1 1/2 miles from the M6, J40.*
*Take the A66 towards Keswick, turn left at first roundabout, follow the Brown Signs to The Alpaca Centre.*

*Open 8am to 5pm daily.*
*10am to 5pm Saturday.*
*Closed Sunday.*

**G&S SPECIALIST TIMBER**

The Alpaca Centre, Snuff Mill Lane, Stainton, Penrith, Cumbria CA11 0ES.
Tel: 01768 891445. Fax: 01768 891443. email: info@toolsandtimber.co.uk



INTERNATIONAL BOATBUILDING TRAINING COLLEGE

LOWESTOFT EST 1975

Boatbuilding - Joinery - Restoration

International Boatbuilding Training College
Sea Lake Road, Oulton Broad, Lowestoft, Suffolk. NR32 3LQ
info@ibtc.co.uk | www.ibtc.co.uk | 01502-569663



# Dowelmax

**Tables, chairs, stools, kitchens, bedrooms, desks, bookcases, sideboards, beds, benches, doors, windows, steps, cabinets,**
***make them all and more with the***
**Dowelmax Doweling Jig**

Dowelmax Doweling Jig -
No need for biscuit jointers, tenoners, morticers, screws, loose tenons etc,
***make joints faster, more accurately and stronger with***
**Dowelmax**
The ultimate doweling jig for woodworkers!

***See us on YouTube and visit:***

**www.dowelmax.co.uk**
*for more info, video and ordering.*

**Dowelmax**
Tel: **01352 781168** or **07773 718758**

# FORSA SERIES

## FORSA 3.0 • 4.0 • 4.1 • 8.0 • 9.0

Scheppach Forsa Series professional panel sizing saws are distinctively German from head to toe. German technology - German innovation - German quality - and five models to choose from offering between 1.6m and 3.2m length of cutting stroke. All Forsa Series come complete with patented integral motorised cast iron pre-scoring unit whilst still retaining a 107mm depth of cut for ripping solid timbers plus micro rip fence setting to within 1/10mm. (Additional rear support table and clamp supplied as standard with Forsa 8.0 & 9.0 P3 models only).


Forsa 9.0
3.2m Professional Panel Sizing Saw

Forsa 3.0
1.6m Panel Sizing Saw

Forsa 4.0 & 4.1
1.6m & 2.1m Panel Sizing Saws

Forsa 8.0
2.6m Panel Sizing Saw

| Model | Product Group Series | Specification Includes (as per quoted price) | Machine HP / Scorer HP / Volts | Depth of cut & length of stroke | Price Exc VAT - Plus Carriage POA | Price Inc VAT - Plus Carriage POA |
|---|---|---|---|---|---|---|
| Forsa 3.0 - P2 | Professional | Inc Professional STC + TWE + TLE + Scorer | 5.2 / 1.0 / 415v | 87 mm x 1.6 m | £2,600.00 | £3,120.00 |
| Forsa 4.0 - P2 | Professional | Inc Professional STC + TWE + TLE + Scorer | 6.5 / 1.0 / 415v | 107 mm x 1.6 m | £3,000.00 | £3,600.00 |
| Forsa 4.1 - P2 | Professional | Inc Professional STC + TWE + TLE + Scorer | 6.5 / 1.0 / 415v | 107 mm x 2.1 m | £3,500.00 | £4,200.00 |
| Forsa 8.0 - P3 | Professional | As Illustrated above | 6.5 / 1.0 / 415v | 107 mm x 2.6 m | £4,650.00 | £5,580.00 |
| Forsa 9.0 - P3 | Professional | As Illustrated above | 6.5 / 1.0 / 415v | 107 mm x 3.2 m | £4,895.00 | £5,874.00 |

STC = Sliding Table Carriage. TWE = Table Width Extension. TLE = Table Length Extension. P3 models inc extra support table & clamp.

Ring us to order or visit us online to find out more information and explore our full range of machines.

NMA AGENCIES LTD
01484 400-488
Email: sales@nmauk.com
www.nmatools.co.uk
Unit 1, Brookfoot Business Park
Yorkshire, HD6 2SD.

FREE New 2016-2017 comprehensive catalogue available on request.

# *Be prepared* for WINTER!

PHOTOGRAPHS BY GMC/ANTHONY BAILEY

It won't be long before we feel the deep chill of winter, so it's best to be ready for it!

Bad weather can occur at any time of the year and it takes different forms – high winds, heavy rainfall and sub-zero temperatures being the most obvious conditions. In Norway, it is a legal civil contingency requirement that homeowners have an alternative form of energy available. In practice, this means a woodburning stove. In the UK, such stoves have become a major growth area as energy prices soar and we feel the need to have a degree of independence from a weakening energy chain as well as the pleasure of a glowing fire radiating its heat throughout the home. Here is some useful advice for getting the best from owning a woodburning stove.

## OUTDOORS

- Buy or collect wood for burning well before you need it. A woodburning stove, unlike an open fire, is not fussy about what sort of wood you use because of its efficiency. Look around for the best 'quality for price' from a reputable supplier. Word of mouth is useful here. If you use a stove regularly, you will need far more wood than you might imagine!

- I'm lucky; I never ever have to buy wood, which makes running costs negligible. As a woodworker, I often acquire chunks of waste wood. I also belong to a volunteer footpath group which sometimes gives us access to felled trees already cut to log length. There is both satisfaction and recompense in this activity for helping the community.

- Split your logs on a thick, flat slice of log, resting firmly on solid ground. A piece of a mature tree is ideal; surfaces prepared with a chainsaw give smooth faces top and bottom on which to work. Don't have your block too high – this might seem to protect your back, but you do need the extra swing distance for the axe or maul to do its work. Logs need to be split correctly, so they can dry ready for burning. The bark provides protection to the the trunk while the tree is growing, but this slows drying considerably, hence the need for splitting logs while still 'green'.

**Proper safetywear, a sizeable splitting axe and a good working stance are essential when preparing logs**

**Left to right:** Small axe for splitting and chopping; (*behind*) froe and club for separating larger sections; splitting axe with spread head profile; (*on ground*) log grenade for parting using a maul or sledgehammer; maul (note hook tip for separating partly-split logs); heavy sledgehammer for driving in wedges; wedges, used as a pair, one to split and the second to increase a split and release the first wedge

**An alternative for some splitting tasks is to use a 'log grenade', bungee and sledgehammer**

**Well stacked, stable log storage, with plenty of air gaps and a drop-down tarpaulin**

- Make sure the logs will fit your wood stove lengthwise. You need convenient sizes for burning. The diameter can be dealt with using a splitting axe or maul, or a heavy hammer and wedges. The choice depends on how big the task is. Use a froe to reduce the logs further in size. The bigger each piece is, the slower it will burn, but too big and it won't fit in your firebox.

- A car tyre or bungees can be used to hold a log together while splitting it into pieces. Once the log starts to split, it can be reduced still further with a froe and club.

- You will need kindling to get a fire started. Don't buy this; instead, use slim pieces of dry waste wood from the workshop and dry twigs. You can also take thin log sections and split them with a hatchet or hand axe. To avoid hand injury, hold the section upright with another slim piece and bring the axe down smartly.

- Split logs and kindling must sit on a dry surface. Pallets are good as they allow airflow underneath. Stack your logs between uprights of some sort to get a high, stable pile. The stack needs airflow all around, with a weighted rain cover or roof and drop-down tarpaulin to cover the front.

- Logs must lose most of their moisture before you burn them or you will be simply boiling water in the form of sap, which wastes energy and can cause flue corrosion. A moisture level of 10–15% is acceptable. A cheap moisture meter can help you keep a check on drying, but you should expect the process to take some months.

## Further reading

More information can be found in these past articles from *Woodworking Crafts*:

- Issue 7, November 2015 – Wood storage shed – part one
- Issue 8, December 2015 – Wood storage shed – part two
- Issue 9, January 2016 – Chopping wood
- Issue 11, March 2016 – Make a froe handle and club

## INDOORS

**Scrunched-up newspaper and kindling built in a pyramid to start combustion**

- When you have the woodburner going, you will need to keep some logs and kindling nearby for convenience and to allow final drying in the atmosphere of the house.

- On your woodburner, replace cracked firebricks, door glass and door rope (if it is frayed). You should only use a woodburner with a proper flue lining. This will get coated in tarry, not sooty, deposits, so get the chimney flue swept regularly.

- To light a woodburner, use scrunched-up newspaper to line the grate and then pile kindling in a pyramid shape, before applying a lit match in several places. Leave the door slightly ajar for five minutes and keep the vents open. Leaving the door open creates a 'Venturi effect', which causes air to speed up and helps conflagration. Close the door and leave for a few more minutes, then add some small log sections carefully. Close the upper and lower vents midway as the fire settles. After a while, you can add a larger log section and start to adjust the vents as necessary. Once the fire is burning well, do not close the vents completely as this restricts airflow too much.

- A wood fire needs to be on a bed of ash and this takes times to build up. When the fire is out and the stove is cold, press the ash into a firm bed all over the grate. After a number of burning sessions, the ash will rise too high, so scrape some off the top, place it in an ash can and dispose of it.

- Woodburners provide electromagnetic heat like the sun. The heat radiates, creating a buffer that spreads around, unlike dull radiators. With care, you can cook or boil on your woodburner, and you can string lines of laundry safely away from the stove for drying. Just take care, have a set of fire tools and armoured leather gloves at the ready, and keep a fireguard in front. Sit back and enjoy the heat; it's worth all the effort! ■


# SHEFFIELD MADE TOOL FAIR @ THE KELHAM ISLAND INDUSTRIAL MUSEUM

**11AM - 4PM**
**SUNDAY 11TH SEPTEMBER 2016**

## A showcase of Sheffield's finest tools.

Come and visit the Kelham Island Museum which shows how the steel industry shaped our city from past to present. See how our history has enabled us to continue manufacturing high quality tools.
An opportunity to meet the manufacturers and see their tools.

Tool event coincides with a heritage weekend and free behind the scenes tours of the Hawley Tool Collection (please visit **www.simt.co.uk** and **www.hawleytoolcollection.com** for more info on how to book).

Museum entry £6
(concession £5, £2 for the tool event only)

Robert Sorby
Turners Retreat — THE WOODWORKERS SOURCE
PAX — ESTABLISHED 1776
ERNEST WRIGHT & SON LTD
JOSEPH MARPLES LTD. Est. 1840 SHEFFIELD
Garlick — MADE IN SHEFFIELD ESTABLISHED 1858
E.T. ROBERTS & LEE
CLIFTON
FOOTPRINT

# Wood finishes

## *for upcycled and recycled projects*

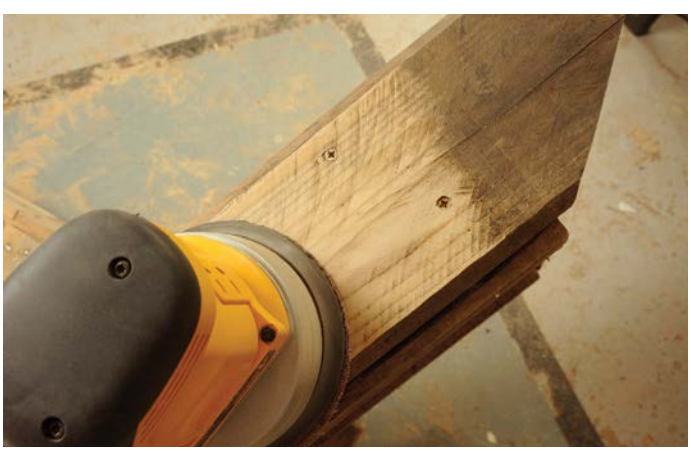
Something old, something new, something borrowed, something blue...

PHOTOGRAPHS BY GMC/ANTHONY BAILEY, UNLESS OTHERWISE STATED

The notion of saving and reusing things goes back to the dawn of time, but more recently human beings have become much more wasteful and created (if that's the right word) the 'throwaway culture' because we have too much of everything. The funny thing is, we often hark back to an earlier time, to the things we really value. This urge for the vintage or antique, the collectable and desirable, can only partly be met by what we find or are given, possibly as keepsakes or heirloom items.

We can bolster these ambitions of a comforting past, by creating our own 'history' by the upcycling and recycling of things, but it is the finishing touches that make anything look 'right' or 'real'. Here are some examples of how different finishes can create loveliness from sometimes lacklustre, unfashionable worn-out objects.

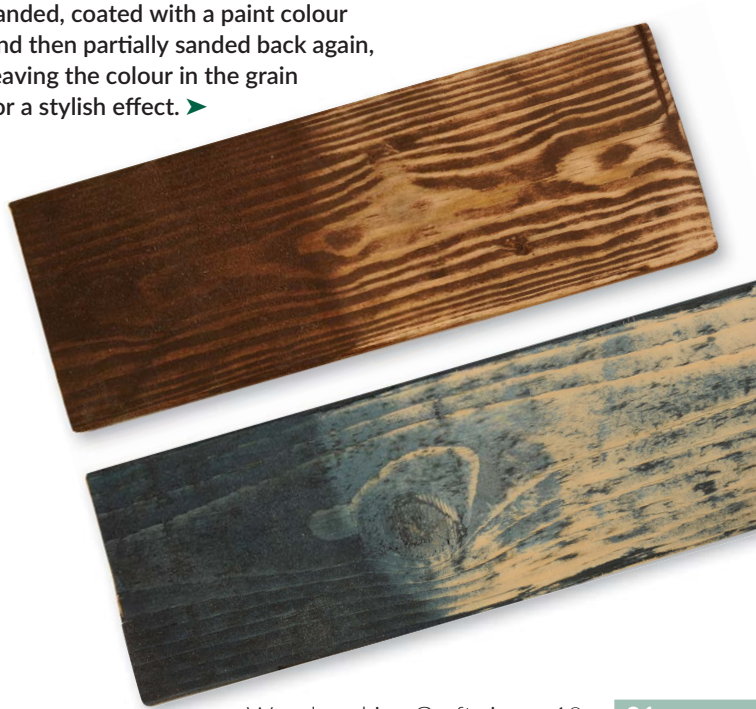
## ABRASIVE 'RENEWAL'

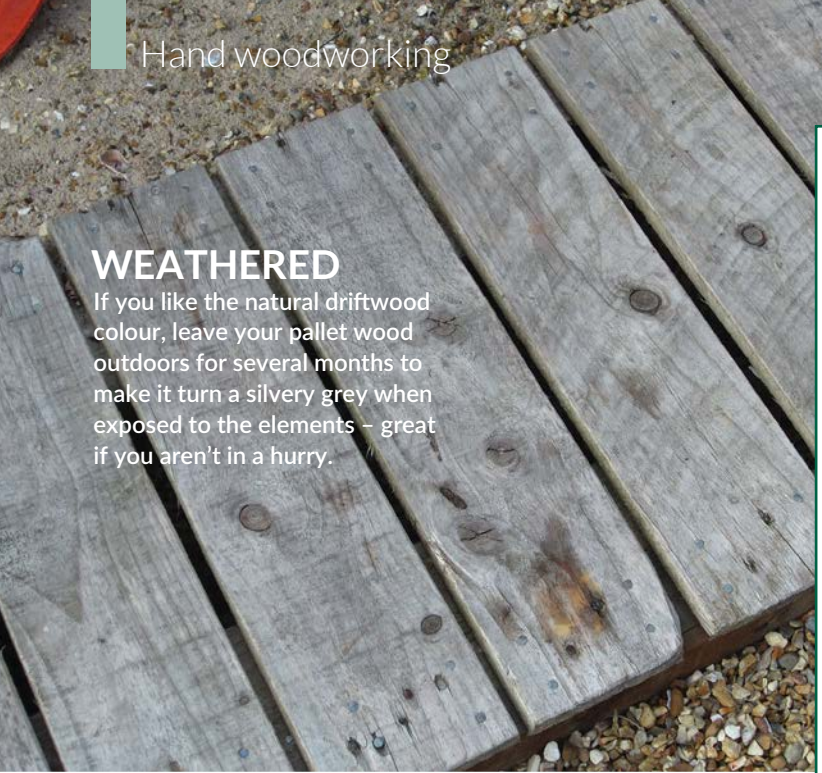


Often just working over a surface can give it new life and a new appearance. Dirty, dusty pallet wood, used to create all kinds of upcycled projects, can be made to look clean and fresh just by using coarse abrasive fitted on a sander. This can give a nice effect on its own or it may benefit from a clear coat of varnish to improve the colour and protect the surface. Always use a good quality dust mask and goggles when doing this work.

## COLOUR SANDED BACK

This shows the very same pallet wood sanded, coated with a paint colour and then partially sanded back again, leaving the colour in the grain for a stylish effect. ➤





## WEATHERED

If you like the natural driftwood colour, leave your pallet wood outdoors for several months to make it turn a silvery grey when exposed to the elements – great if you aren't in a hurry.

## DYES

Wood dye is supposed to penetrate enough to give a colour layer while still allowing the wood grain to be visible. Spirit dye penetrates better than water-based dye and doesn't raise the grain, but isn't as lightfast.


Water-based wood dyes do raise the grain once the wood is wet and needs flattening with finishing paper abrasive between coats, before applying a finish coat.

## CLEAR FINISHES

Oil, wax oil, French polish and lacquers are generally reserved for good quality cabinetwork and joinery, not upcycled or recycled projects. However, if you have a nicely finished surface then it deserves the best treatment.

PHOTOGRAPH BY LUCY BAILEY

It's much more likely that you will want to use a sealer coat between paint layers or a final top coat to finish a job off. For this, you can't beat quick drying, non-yellowing aqueous (water-based) varnish. It comes in matte, satin or gloss, is easy to apply and clean up afterwards and isn't expensive.

## PIGMENTS

Whereas dyes are soluble in the correct medium (spirit or water depending on type), pigments won't dissolve. They are good for adding to other materials like wax or woodfillers and obscure the wood more than dye does.

## GRAIN FILLERS

Liming, the application of wax with white pigment added, is a traditional method of emphasising the grain in wood for effect. Oak (*Quercus robur*) is the most obvious candidate for this because it has such open grain pores, but there are other timbers such as ash (*Fraxinus excelsior*), that can be used too.

If white doesn't suit the job, then you can add a dye or a pigment to colour it to the right degree. Rub it into the wood on mutton cloth until the pores are full and then rub off the surplus completely.

As a complete contrast, you can spray aerosol paint on the wood to get a dark glossy finish. In this case black has been used and then a gilt cream rubbed into the pores for a striking effect. You can buy different shades of gold or silver creams.

Various and quite subtle colour shades are possible, as you can see from this sample board.

## PAINT EFFECTS

The most dramatic differences can be created using standard or specialist paint finishes. Here, a strong colour is being overpainted with a cream paint, adding a sealer coat of aqueous varnish in between.

Rubbing back with abrasive by hand creates a deliberate worn effect that is more pleasing than just plain colour alone. Both of these colours are from the Milk Paint range by General Finishes.

## PAINT TECHNIQUE

An even more extreme example, from the dreaded 'black ash era'. Now completely out of fashion, this type of finish does present quite a challenge.

The finished job couldn't look more different and here's how it was done...

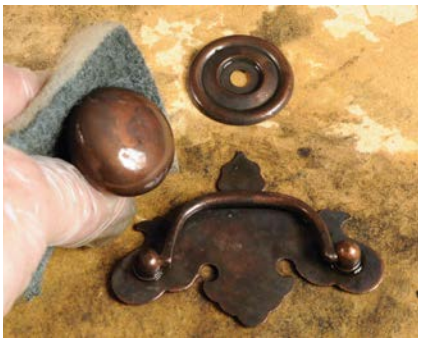
First, sanding back with an orbital sander and then applying a coat of varnish gives the initial finishing option – a 'tiger' effect.

The next possibility is to break the very harsh straight lines by applying glued-on mouldings, easily obtained from a DIY store. Compare the photos above to see how this can change the 'look'.

In this case, the client provided a vase from which to create a colour sample board for them to choose a wood finish from. That way, they could be sure the pair of units they were decorating would fit in with their room décor.


After applying paint and the sealing coat, a dark gel stain was wiped on and then heavily rubbed out using a piece of abrasive web, rather like a household scourer. Only a limited amount of the brown stain was left behind.

## HARDWARE



Furniture wouldn't be complete without hardware – knobs, hinges, etc. Brass can be cleaned and then darkened with a patinating fluid.

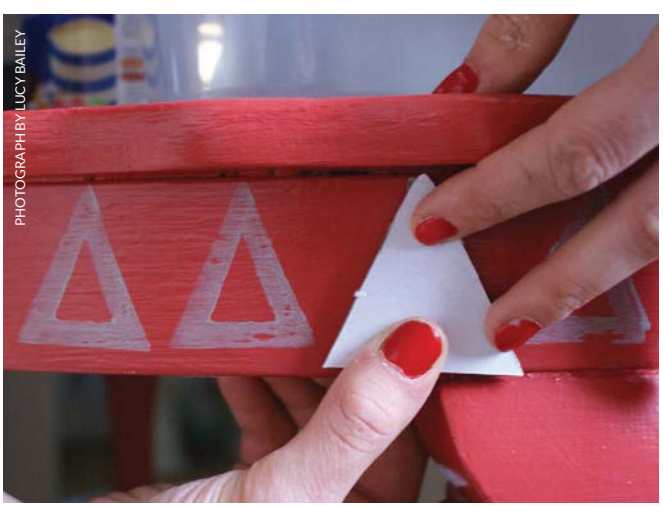
It is then rubbed back with fine wirewool for an 'authentic' aged look, so it blends nicely.

By contrast, you can buy all manner of ceramic, glass and wood handles or knobs. These crystal knobs reflect rainbow colours for a striking effect.

## MAKEOVER EXAMPLES

Surely this has got to be a really desperate example of a table only fit for a bonfire...

... and yet, after a complete re-gluing, sanding and staining, it's almost unrecognisable!



PHOTOGRAPH BY LUCY BAILEY

You can either buy or make stencils to paint through, or make lino cuts. Adding shapes or letters by stencilling breaks up plain surfaces and adds an individual 'signature' to the appearance of a piece of furniture.

There are times when the genuinely old can be mixed with new. These old pine doors were cleaned; the top is a very worn scaffold board re-jointed with 'breadboard ends' and the carcass is painted using a Rust-Oleum chalk effect paint.

So you see, all of the possibilities for finishing your upcycled and recycled wood projects are out there... ■

With your Router and a little

# WoodRat Magic

you can do it all...

Stopped grooves and other router table work housings and all kinds of tenons, all kinds of mortises to fit them, drilled holes, box joints in batches, bridle joints and halving joints, through dovetails: and half or full blind, mitred dovetails inlaid dovetails, knuckle joints, keyed joints, and mitred splined joints, and then...
there is the WoodRat Pathfinder™

**see it in action at woodrat.com**



Call us
**01296 481220**

osmo

Learn more
**osmouk.com**


**WOOD WAX FINISH:** Highest quality colour and protection

✓ MICROPOROUS | ✓ NATURAL | ✓ OIL-WAX BASED | ✓ DURABLE | ✓ HIGH COVERAGE



Turner Tool Box

DAVID MARTIN

THE GUILD OF MASTER CRAFTSMEN

# Creative Welsh Woodturning Ltd

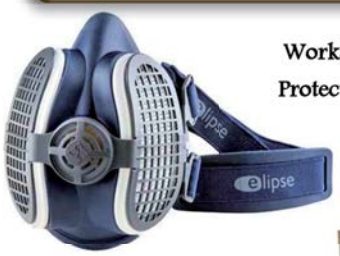
Turners Tool Box

WOODTURNING – WOODWORKING – WOODCARVING
TOOLS & ACCESSORIES

Log On To

www.turnerstoolbox.com


NOVA Comet II VS Midi Lathe & G3
Reversible Chuck – PACKAGE DEAL




New
Workshop Safety
Protection against
Dust

Glues



Next day delivery service (UK)
&
We deliver worldwide


For more information or to place your order visit www.turnerstoolbox.com Order online Open 24hrs
All at the click of a button and delivered straight to your door. Or place your order over the telephone.
T. 01873 831 589 – M. 07931 405 131 – E. info@turnerstoolbox.com

Insight

David's finished drawer within the brown oak media unit

# David's drawer

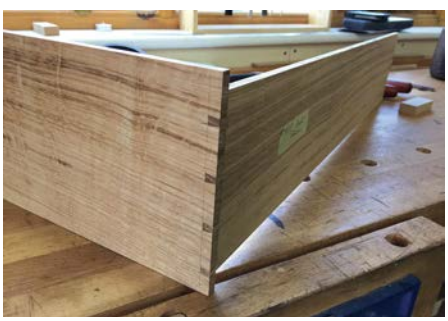
## Peter Sefton helps 'long course' student David Partington learn the art of drawer making

One of the first skills we teach our long course students is the art of dovetail cutting; it's such a fundamental skill that brings together accurate marking out, sawing to the line and precision chisel work. Making your first perfect dovetail joint is very satisfying. As the course has progressed, the students have learnt the art of drawer making and fitting. David Partington has incorporated a couple of drawers into his brown oak media unit.

A perfect piston-fit drawer is always considered a sign of quality making, but this relies just as much on the carcass as it does the drawer itself. David's carcass has been made square and true. The next stage is timber selection for the drawer.

### Choice of timber

David has chosen some great brown oak for the drawer fronts, to match the cabinet and some highly figured quartersawn white oak for the drawer sides. The timber is left to settle and acclimatise to our dry workshop before the oak is 'deeped' (sawn through its width) to produce thin drawer sides.



The drawer's back corner has through dovetails

### Preparing the wood

In theory, deeping quartersawn boards should be straightforward, but timber doesn't read the same theory books that we do! An alternative option is to plane down thick boards to their finished thickness. This seems wasteful but does ensure that you will always finish at the correct thickness while removing any defects. Best practice is to remove equal amounts from both sides over two or three machining sessions, leaving adequate time between sessions to allow the timber to move.

The option chosen here, however, is to deep the 27mm thick boards on the bandsaw to produce two book-matched drawer sides which then require planing to thickness. We usually 'face side' and skim thickness the boards prior to cutting in half. This ensures you are bandsawing from a flat and straight board rather than following a bent and twisted plank. The outer surface is exposed to fresh air which reduces the timber's shock when cut in half. Releasing stresses and seeing daylight for the first time can make the boards 'cup'. These boards have cupped more than expected, so we need a backup plan!

PHOTOGRAPHS BY PETER SEFTON

Cupped boards after deeping

Boards cut in half, edged and back in cramp gluing up

### Wood

- Brown oak (*Quercus robur*)
- White oak (*Quercus alba*)

### A perfect solution

We have cut the boards in half widthways, edge planed them and glued them back together. This effectively reduces the cupping by half. After surface planing and thicknessing again, we end up with perfectly flat boards that you would never know had caused us problems.

Timber likes to throw curve balls on occasions; the name of the game is adapting your plan to overcome them. ■


### Peter Sefton

Peter Sefton is a well-known furniture maker who runs courses in fine woodworking, teaching and mentoring students at the Peter Sefton Furniture School. He also owns Wood Workers Workshop and he is a Liveryman of the Worshipful Company of Furniture Makers.

Web:
www.peterseftonfurnitureschool.com

# KITTED OUT

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

## Bosch wireless charging

The prize-winning wireless charging system from Bosch has a new addition in the 10.8V class: a compact yet powerful GBA 10.8V 2.5Ah OW-B professional battery. Enjoy the benefits of inductive charging in the 10.8V class for the first time. Tools using these batteries are charged whenever they are in contact with the wireless charging station, ensuring that they are ready for use at all times.

The charging stations themselves are more robust than conventional chargers; since they no longer have any contact points, they are durable against water, dust and dirt. The range also features mobile solutions such as the Wireless Charging L-Boxx Bay which charges on the way to the job site.

**Contact:** Bosch
**Tel:** 03447 360 109
**Web:** www.bosch-professional.com


From £61

## MINI TEST

# Trend seven piece flat bit set

This is part of Trend's vast Snappy range, encompassing drill and driver bits. It comes as a set of useful sizes – 10, 12, 16, 20, 22, 25 and 32mm. They can fit directly into a drill chuck or via a Snappy hex adaptor. The case holds the bits with elastic and it has a hook-and-loop cover closure, fitting on to a belt, including Trend's own toolbelt.

### Verdict

These bits are not revolutionary (pun unintended) but are nonetheless a decent set of workman-like flat bits for creating access to pipes, wires, etc. The long nose points mean you can't really create 'blind' holes. The case, with its belt loop feature, is actually a very useful way of carrying and storing them when working on site.

£23.34

**Visit:** www.trend-uk.com

## Blåkläder workwear

This Swedish company has increased its focus on construction workwear, with a new range in the craftsman series of trousers. These are now available in a range of shorts, and in a smart new black version. The hardwearing trousers are lightweight, but still offer some great features, like triple-stitched seams, reinforced nail pockets, high breathability and Cordura on the knees and back pockets. Blåkläder look closely at how their clothes are worn in the real world so they can engineer them to suit the job in hand. They offer a lifetime seam guarantee.

From £55

**Contact:** Blåkläder
**Tel:** 0800 028 8234
**Web:** www.blaklader.com

## Charnwood heavy duty router table

The rigid steel floor stand provides a comfortable working height for handling large panels. The table top is hinged to this and can be raised up using lifting handles, making the router more accessible for adjustments. The table aperture is 100mm diameter with 60mm and 30mm insert rings. There are two fence-mounted feather boards and a front feather board for secure clamping of the workpiece. There is a table-mounted scale for setting the fence and a 68mm extraction outlet.

A centralising jig allows you to set your router accurately into the middle of the aperture. The newly-designed universal router clamps are ideal for removing and refitting the router without losing the settings, saving time and effort. A set of four outfeed fence shims allowing up to a 4.5mm step in 0.5mm increments can be added, providing support to the workpiece. The cast metal mitre fence runs in a T-slot and is particularly accurate. The guide swings from 90° to 30° each way, with locater stops at 45° and a further stop at 90° for accurate end grain work.


From £299

**Technical specifications**

- Table size 680 x 510mm
- Table height 860mm

**Contact:** Charnwood
**Tel:** 01530 516 926
**Web:** www.charnwood.net

## FAMAG carbide tipped woodworking drill bits and countersinks

The FAMAG 1593 series is a new carbide-tipped woodworking drill bit, specifically for drilling hardwood. The 'Type N' spirals are ground with a very steep slope. Twin flutes, without a back guide, provide minimal friction in the bore and considerably reduce heat generation in the drill bit and the release of resins from the timber. The steep helix ensures that hardwood chips are ejected quickly from the drill bit, preventing debris build up and eliminating a second potential source of friction.

The 1593 TCT wood drill bit is available in sizes from 3.0–12.0mm and can be ordered in sets or individually.

The VARIO-Countersink 2202 is the perfect partner for 1593 TCT drills. You can mount variable twist drills of 3–8mm diameter. The tool consists of two half shells which are fastened by means of two clamping screws on the drill. These high performance carbide-tipped tools can be purchased together, in a beautiful wooden boxed set.

## MINI TEST

From £54.94

# Kirjes Orbicut

This rotary shaping tool comes in two sizes and fits into drill chucks and flexible drives. The larger version in particular looks a bit scary, but in fact both versions are limited to the 0.1 blade projection only, as the cutter body prevents deeper cuts. For shaping things like spoons, bowls, etc., they have plenty of potential uses. The cutters are made from HSS (high speed steel) and therefore last a long time. They allow the creation of awkward shapes that scorps and the like would be required for normally. Suitable for green or dry wood.

### Verdict

Care is needed loading these cutters into a chuck; they should be tightened without your fingers in the way of the blades! The rate of attack on a block of hard, dry timber was slower than I expected and I needed to select the high drill speed to get a quicker result. It needs to cut on the 'down side', i.e. rotating into the material. It is quicker than using the equivalent hand tool and perversely, safer too. Not cheap but once bought, this equipment should last for a long time.

**Prices:**

- Small 20mm diameter / 6mm shank / 2 x HSS blades £54.94
- Large 40mm diameter / 11 shank / 2 x HSS blades £74.95

**Visit:** www.classichandtools.com


From €16.55 plus p+p

**Contact:** FAMAG
**Tel:** +49 2191 92840
**Web:** www.famag.com

# NEWS & EVENTS

All the latest events and news from the world of woodworking...

## Trend provide Help to Heroes

Trend Routing Technology has donated over £700 to a wood workshop, funded and kitted out by donations from woodworkers all over the world, at the Help for Heroes northern Recovery Centre.

Wounded, injured and sick servicemen, women and veterans are being supported at Phoenix House in Catterick, have benefited from participating in weekly woodcraft sessions. The new workshop has a wide range of machinery, tools and wood. Woodworking crafts can be practised as therapy, to learn new skills, gain qualifications or even as the first steps into a new career, as part of Help for Heroes Career Recovery pathway.

Driven by Warrant Officer and Phoenix House volunteer, Chris Morgan, who heads the Woodwork Volunteers, the workshop was ready for use within 18 months of the start of fundraising. Luke Hulley, Trend's Head of Marketing, presented Chris with a cheque, raised from collections at recent woodworking shows. Luke commented:


PHOTOGRAPH COURTESY OF TREND ROUTING TECHNOLOGY

Luke Hulley gives Help for Heroes donations to Chris Morgan

"After meeting Chris Morgan last year in Harrogate, we were keen to support the charity and Trend gave away rugby balls in return for small donations. I am delighted that so many of my colleagues and Trend customers donated to such a worthy cause."

Chris Morgan added: "Learning new skills is a key part of this support. The woodshed and all the tools in it enable us to expand the range of skills for visitors to Phoenix House Recovery Centre. Some arrive in a poor state, but leave feeling better, which benefits both them and their families at home too."

**Contact:** Help For Heroes
**Web:** www.helpforheroes.org.uk

## Demonstrations from a minimalist woodworker

Vic Tesolin from the Canadian tool company Veritas, will be giving demonstrations this November.

As author of *The Minimalist Woodworker*, published by Spring House Press, Vic says: "You don't need to have all the tools, hundreds of square feet of space or thousands of dollars worth of gear. What you need is the desire to make something with your own two hands."

PHOTOGRAPH COURTESY OF AXMINSTER TOOLS & MACHINERY

Catch Vic's demonstrations at the following venues:

- 12–13 November: Axminster Cardiff store, Valegate Retail Park, Cardiff
- 18–20 November: North of England Woodworking & Power Tool Show, Harrogate

**Contact:** Axminster Tools & Machinery
**Web:** www.axminster.co.uk

## Transparent wood can trap light

Researchers at the KTH Royal Institute of Technology in Sweden are developing optically transparent wood that can be mass-produced and used in buildings in place of glass. The wood is a type of veneer developed using a nanoscale process where lignin is removed and a polymer is introduced.

Lars Berglund, a professor at Wallenberg Wood Science Center at KTH, said: "By using this modification approach, we can preserve the attractive features of wood, such as low density and high strength, making wood a much more advanced building material."


PHOTOGRAPH COURTESY OF KTH

**Contact:** Wallenberg Wood Science Center
**Web:** www.wwsc.se

# Revolution in apprenticeships

The National Association of Shopfitters (NAS), in collaboration with the British Woodworking Federation (BWF), has launched a new Centre of Excellence (CoE) network of colleges and training providers, ensuring the survival of quality apprenticeship training for the joinery and wood machine industry. This initiative comes in the wake of the government's decision to implement an apprenticeship levy and the industry's call for quality skills training.

A Memorandum of Understanding was signed by four Centres from across the UK: Building Crafts College (Stratford, London), Didac Limited (Bristol), Leeds College of Building (Leeds) and Neath Port Talbot College (South Wales). Centres have agreed to be audited by the NAS/BWF.

Robert Hudson, Director of NAS, explained: "The CoE concept gives the industry the opportunity to access high quality and flexible apprenticeship training that includes bench joinery and wood machining. These Centres were selected as part of the pilot as they have actively engaged with us and employers to ensure they offer the skills employers want and need." Each apprentice will be on a nationally recognised apprenticeship framework/standard and will have the option of adding extra modules needed for their training to meet employer needs.


PHOTOGRAPH COURTESY OF BWF/NAS

Dave Campbell (BWF Training Director), Cliff Thrumble (BWF President) and Bob Devine (Head of Curriculum Leeds College of Building)

**Contact:** National Association of Shopfitters
**Web:** www.shopfitters.org

## FAIRS AND FESTIVALS

### • Into the Trees

Discover the amazing world of trees, woods and forests in the amazing natural location of the Ashdown Forest. Open your eyes to the ways in which we can play, work, learn and explore among leaves, branches and trunks.
**When:** 3–4 September, 2016
**Where:** Pippingford Park, East Sussex
**Web:** www.into-the-trees.co.uk

### • Fangfest Festival of Practical Arts

A celebration of traditional crafts, with rocking horse carving, pole lathe demonstrations, basket making, archery, wool spinning, pottery demonstrations, children's craft activities and much more.
**When:** 3–4 September, 2016
**Where:** Fangfoss, near York
**Web:** www.facebook.com/Fangfest

### • Weald of Kent Craft and Design Show

Handcrafted pieces for the home and garden, as well as workshops, cookery demonstrations and children's activities. Have a go at pencil making, woodturning, paper making and pyrography, all with guidance from the experts.
**When:** 9–11 September, 2016
**Where:** Penshurst Place, near Tonbridge
**Web:** www.ichfevents.co.uk

### • Bentley Woodfair

Discover woodlands, forestry, timber, trees woodcrafts and much more... With two fields of stands, exhibits and displays, plus an amazing woodland full of demonstrations and activities. The Woodfair supports local rural businesses and crafts while educating and entertaining families.
**When:** 23–25 September, 2016
**Where:** Bentley Wildfowl & Motor Museum, near Lewes
**Web:** www.bentley.org.uk/woodfair

## Other events

### • Surrey Hills Wood Fair

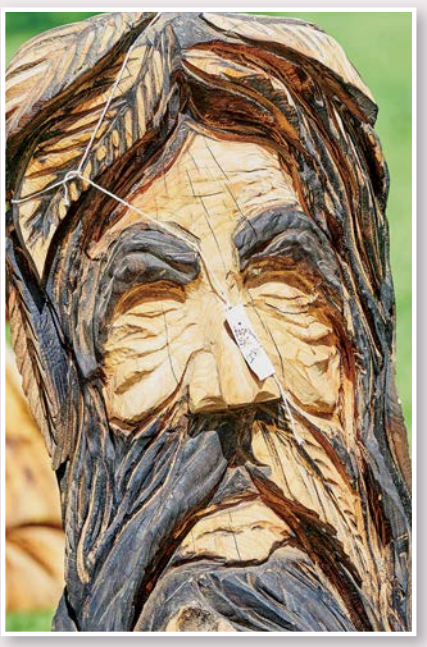
**When:** 1–2 October, 2016
**Where:** Birtley House Estate, Bramley
**Web:** www.surreyhills.org/events/the-surrey-hills-wood-fair

### • Autumn Countryside Show

**When:** 8–9 October, 2016
**Where:** Weald & Downland Open Air Museum, near Chichester
**Web:** www.wealddown.co.uk/events/autumn-countryside-show

### • Tweed Valley Forest Festival

**When:** 21–30 October, 2016
**Where:** Tweed Valley Forest Park, Peebles
**Web:** www.forest-festival.com



PHOTOGRAPH COURTESY OF ICHF EVENTS

Weald of Kent Craft and Design Show

### • Handmade Edinburgh: The Contemporary Crafts & Design Fair

**When:** 28–30 October, 2016
**Where:** The Hub, Edinburgh
**Web:** www.handmadeinbritain.co.uk

### • Woodland Craft Show

**When:** 29–30 October, 2016
**Where:** Lancing College, West Sussex
**Web:** www.woodlandcrafts.co.uk/craft-shows-lancing-college

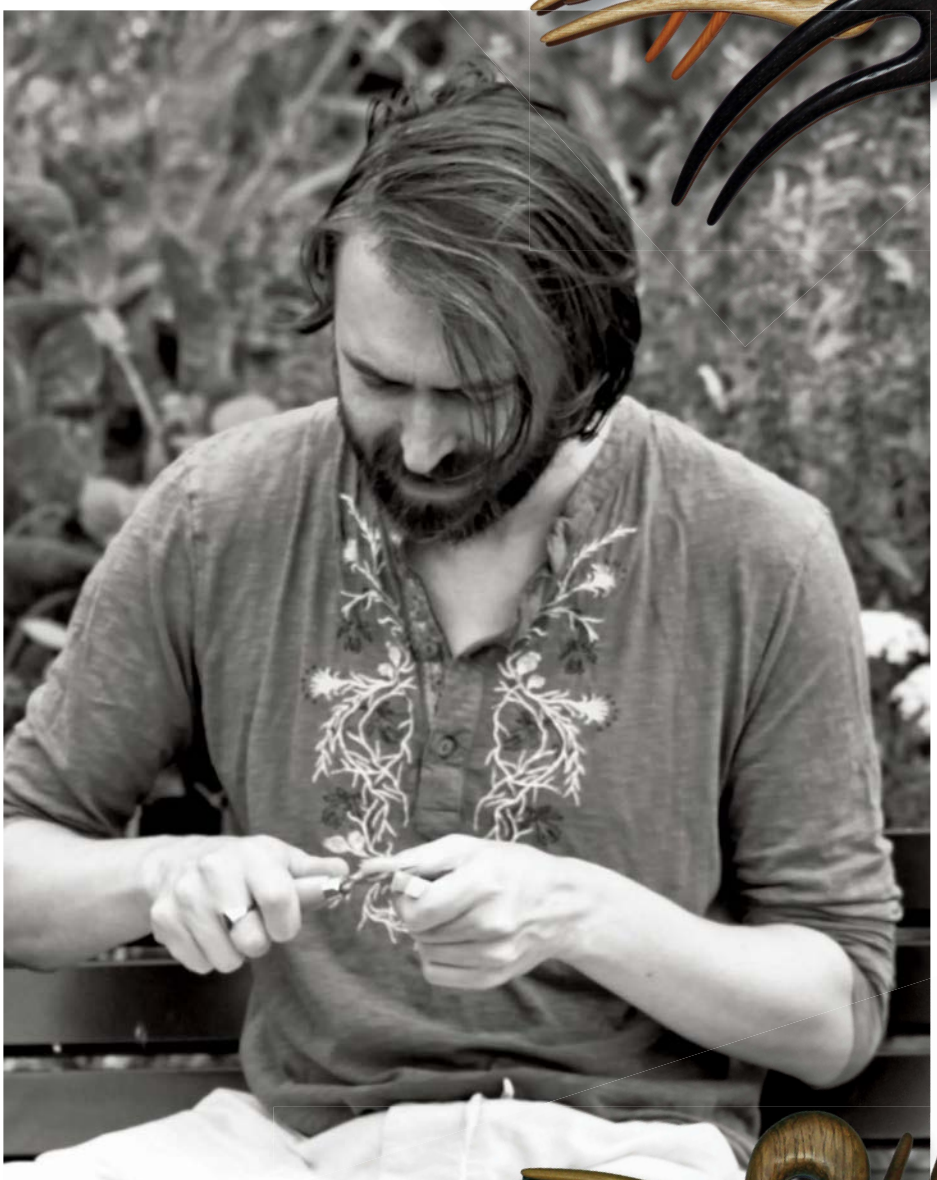
# Jason Townsend *in profile*

## We meet self-taught woodcarver Jason Townsend

Having studied computer science at university, the question of how Jason Townsend got into woodcarving springs to mind. Having been carving for five years now, Jason was always fascinated by wood and woodcarving. However, while at school Jason and his fellow students weren't allowed access to real wood, only using MDF in their design and technology classes, so Jason had no experience in working with tools and how to use them properly. Even now, Jason explains: "Learning what tools to use and how to use them is a journey that will take me a while yet."

It was because of his girlfriend that Jason first looked into the craft of woodcarving; as he tells us, she often likes to wear her hair up, using hair sticks to hold her hair in place rather than clips and bands. This provided Jason's initial inspiration, with the idea of making a hair stick for his girlfriend, rather than having to buy Far-Eastern imports in Camden Market.

Not long after making his first hair sticks, Jason was invited to a friend's wedding. As a wedding gift to the couple, Jason took inspiration from some Welsh lovespoons he had seen near the time. Jason had now taken his first steps in woodcarving, but he tells us that his early attempts were 'crude'. After carving a few pieces and a few mishaps, he quickly found himself bitten by the woodcarving bug.



PHOTOGRAPHS BY JASON TOWNSEND, UNLESS OTHERWISE STATED

Below: One of Jason's lovespoon designs – a wedding gift to his sister and her husband

Jason's many varied hair fork carvings


'Plasticine' pendant in plum. 1st place in Jewellery category, International Woodcarving Congress 2014

'Triskelion' pendant in steamed pear. 1st place in Jewellery category, International Woodcarving Congress 2016

## Favourite carvings

"As an art-form, woodcarving can be quite daunting when you look at some of the incredible work done by the many talented woodcarvers out there," he tells us. Most of Jason's carvings are simple and a great many of them are hair sticks and hair forks, which he sells online and at craft fairs. Humble about his talent, Jason tells us it still surprises and delights him every time someone buys one of his items.

One of his favourite carvings thus far is a wavy hair stick, which he designed a few years ago. The design proved to be very popular and Jason has now carved the same design in at least 20 different types of wood. When looking at transferring his work to a larger scale, Jason explains: "I struggle when it comes to scaling up my carving, so I find it very challenging to make larger items, such as lovespoons." However, Jason was very happy with a lovespoon he carved for his sister's wedding last year. It was approximately 430mm long and "had quite a contemporary feel about it," as Jason describes it. To personalise the piece, he included in the design the first initial of his sister's name and her husband's name, a pair of martini glasses – "because they like drinking cocktails," he tells us – and a pair of palm trees, to represent their ceremony, which took place in Aruba. Jason also decided to include a pair of, what he had intended to be, swans. "Unfortunately, at some point when designing the spoon they got a little mixed up with doves, so their necks seemed too long to be doves and too short to be swans," he explains. Nevertheless, he was pleased with the result and felt the piece of silver birch *(Betula pendula)* he used to make the spoon looked great.

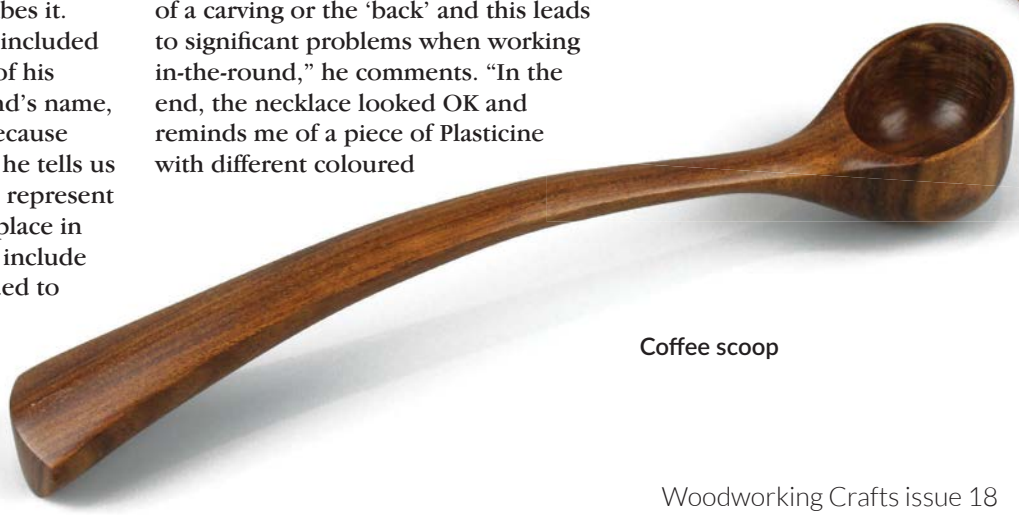
## Awards

"My carvings are so small and simple – for the most part – that I'm not sure they are particularly suitable for competitions," he tells us. He did, however, win a blue ribbon in the 2014 International Woodcarvers' Congress in the 'Jewellery' category. Jason's winning piece was a necklace he had carved from a piece of plum (*Prunus* spp.) wood "that had some wonderful purple figuration in it." On paper, Jason thought his design looked quite interesting and had intended the necklace to look like a piece of crumpled and twisted metal. As with many of his projects, he found the translation of 2D design into 3D work rather difficult. "I often forget to think about the 'sides' of a carving or the 'back' and this leads to significant problems when working in-the-round," he comments. "In the end, the necklace looked OK and reminds me of a piece of Plasticine with different coloured streaks running through it." As Jason learns to tackle larger and more complex projects, he hopes to enter more competitions.

## Work ethos

Jason feels the design of a piece is the most important consideration when starting a project. He tells us: "I like my woodcarvings to have a contemporary feel to them and I try to avoid using other people's designs. There are so ➤

Colossal squid hair fork



Coffee scoop

PHOTOGRAPH BY MARC FEATHERLEY

Above: 'Holly Oak' pendant in Holly. 1st place in Jewellery category, International Woodcarving Congress 2015.

Left: Jason in his workshop

many people who are much more talented at woodcarving than me, so I try to make my carvings a little different so that I might be in with a chance of standing out from the crowd."

Jason tells us he has come unstuck several times by not thinking the design through carefully enough before starting a project. Working out how the design will work in 3D is still a challenge for Jason.

A perfect example would be the palm trees on his sister's wedding spoon, which looked good on paper – the fronds were drawn at angles so that you could see they were palm trees. On the actual carving, though, he soon realised that the fronds ought to be carved quite differently when in 3D. Having already used a scrollsaw to cut out the design, he had to cope with this mistake as best he could, but he points out that a bit more thought about the design "would have created a much better carving."

Jason is self-taught and is still learning all the time, subsequently his approach to carving is constantly evolving. He is fascinated by wood and trees and loves to try carving different types of wood. He admits that early on he didn't think too carefully about the properties of wood before trying to use it in a project, but this led to him spending a lot of time on carvings that did not turn out as planned, because of his choice of timber.

One piece of his work that Jason is pleased with is a 430mm lovespoon he carved from mahogany (*Khaya ivorensis*), that depicts the Guildhall in Thaxted, Essex. However, this wood – possibly sapele *(Entandrophragma cylindricum)* – couldn't hold the detail that he wanted to carve into it, so the result was therefore disappointing.

Pentagram hair fork in bog oak

He also tried carving a few lovespoons from a plank of elm *(Ulmus procera)*. While the plank looked nice, Jason soon found that elm was not ideally suited to the carvings he was trying to do, as the grain of the elm and some punky areas from spalting meant that he couldn't get the detail he wanted or a nice finish, telling us: "They looked crude." Jason now makes sure to pay careful attention to the wood he chooses for a project, because each project is a significant investment in time.

## Inspiration

"I admire the work of so many woodcarvers. The carvings that people are able to produce are a constant source of wonder and amazement to me," Jason tells us. Being a member of the British Woodcarvers Association has opened his eyes to the many possibilities out there, but also to the "staggering array of talent" that people have. Jason is a great fan of Dave Western's lovespoons, saying: "I really like his contemporary approach to the subject. If I could carve lovespoons half as well as that, I would be very happy!" Jason has found Dave Western's books on the subject to be quite inspirational.

Since school, Jason has been a big fan of Analytic Cubism from the early part of the 20th century, by the likes of Georges Braque and Pablo Picasso. He also mentions liking Andrew Thomas' carvings and is a particular fan of a

series of cubist musical instrument carvings Andrew made. In another area of carving, Jason tells us: "I really admire carvings that are incredibly intricate or are on a very small scale, so I like a lot of Netsuke pieces."

## Distinct carving

"I'm not sure that I have yet developed a distinctive approach to my carving," Jason wonders. Always experimenting with new design elements or techniques and trying to increase his woodcarving vocabulary, Jason tells us that he is still very much at the stage of 'finding' his technique and style in woodcarving. There are some distinctive elements to his carvings, though: "I use a lot of different woods and am always experimenting with different kinds. I also like to sand my carvings; I like to be able to see the details of the grain and I feel that an item is incomplete until it has been sanded." Having said that, he hates the process of sanding, saying: "It takes me forever and can bore me to tears." Although, as Jason points out, if he's carving an item to go in someone's hair, he can't really get away with not doing it. Jason tends to mainly use knives in his carving, but that is most probably due to the small scale of most of his work rather than a preference. He tells us that he can't really work on small items like hair forks in-the-round with anything other than knives.

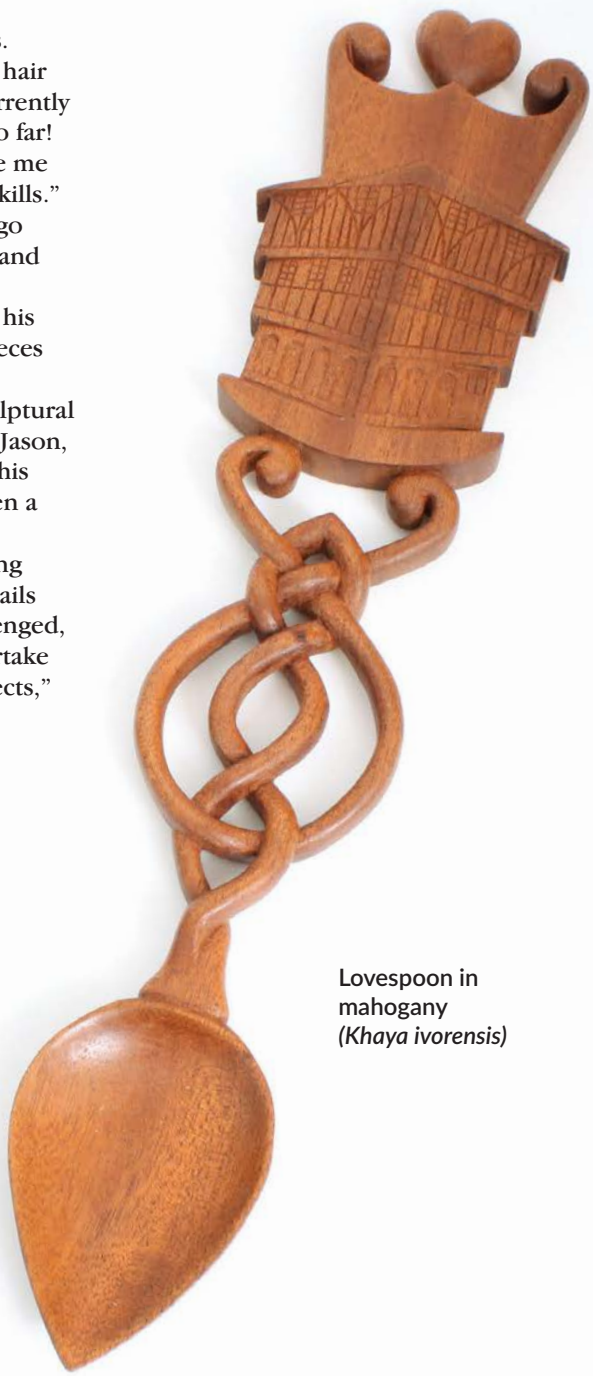
## The future

Jason tells us he has many carvings waiting for him to sand down and many more carvings in progress. He works on a steady stream of hair sticks and hair forks and has currently finished nearly 500 hair sticks so far! "Repetitive items," he says, "give me a chance to refine some of my skills."

Other projects he has on the go include a variety of lovespoons and art spoons at various stages of completion. Jason is also trying his hand at a series of sculptural pieces using London plane *(Platanus hybrida)* and burr elm. The sculptural pieces are quite a challenge for Jason, because he has had to scale up his carvings, but it has certainly been a learning curve for him.

Jason would like to try tackling larger carvings, with greater details in the future: "I like to be challenged, so I am always looking to undertake more and more ambitious projects," he explains. ■

Hair sticks in a variety of different woods



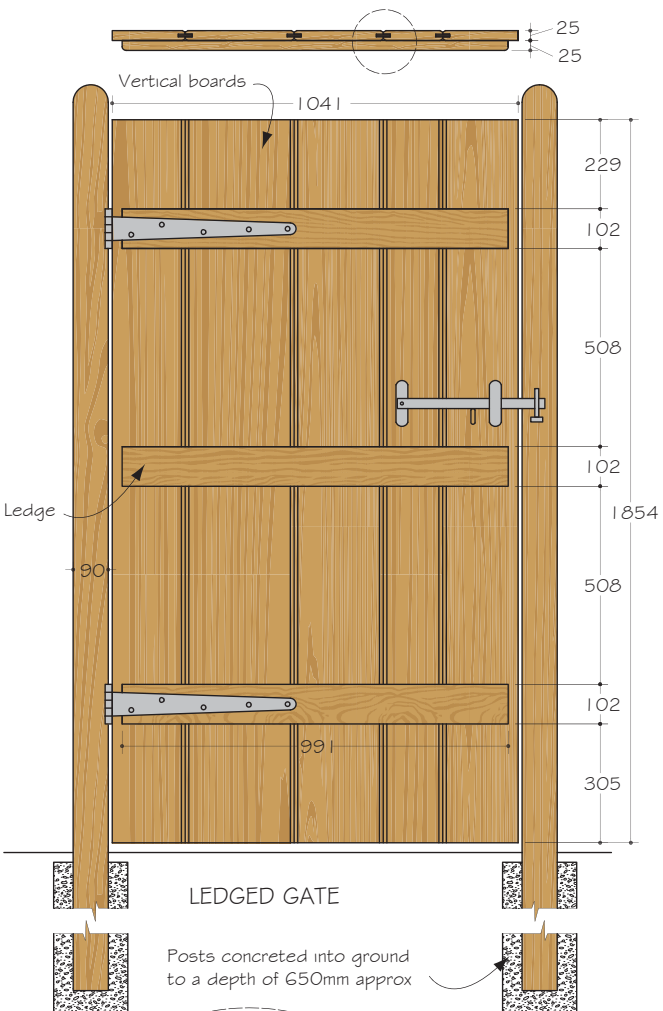
Lovespoon in mahogany *(Khaya ivorensis)*

Keepsake boxes

# WOODWORKING GEOMETRY

## Simon Rodway takes a look at gates

For as long as people have been building walls to protect and define where they live, it is likely that gates have been a part of that process. Although the earliest examples have long since vanished, there are many surviving gates in castles and fortifications from the medieval period onwards. As well as having a defensive purpose, gates have also served as symbolic boundaries, as in the lychgate seen at entrances to churchyards. The construction of wooden gates presents a range of technical problems due to the constant exposure to the weather, and the longevity of a gate depends on a combination of good detailing and jointing techniques and the selection of suitable timber, ideally hardwood or a softwood like western red cedar.

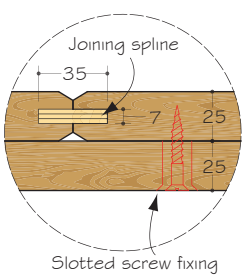



LEDGED GATE

Posts concreted into ground to a depth of 650mm approx

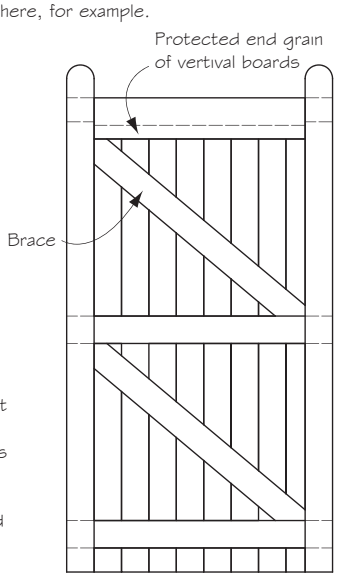
### TYPES & CONSTRUCTION OF GATES

Contemporary domestic gates can really be divided into two basic types; solid or boarded gates, which may be framed as well, and open, framed gates with a variety of muntins and shaped rails. The gate shown on the left has a minimum of structure, essentially just a series of vertical boards joined using splines or loose tongues and braced across the back using a series of horizontal boards or ledges which are screwed into the back of the gate. Gates are obviously subject to much greater variations in humidity and temperature than internal joinery, and timber movement is a major factor in designing a gate able to withstand weathering. Slotted screw fixings would be needed in the ledges shown here, for example.

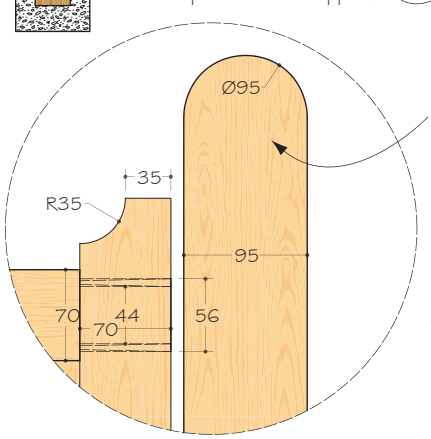



BRACED GATE DETAIL

The boarded gate shown right has the addition of diagonal braces as well as framing. This gate has the advantage of a rebated head or top rail with the vertical boarding stopped into the bottom of the rail, providing some protection for the end grain of the boarding from the elements



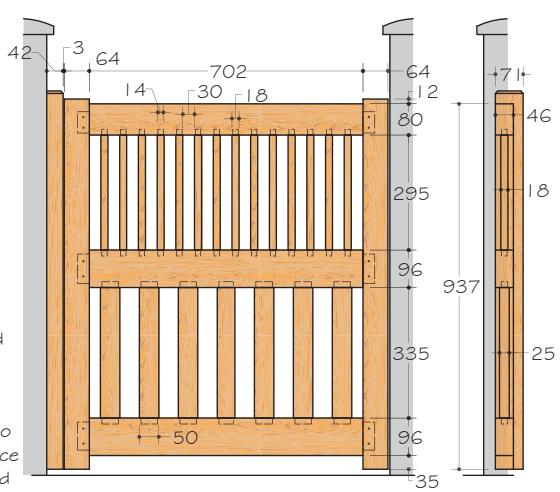

FRAMED, LEDGED & BRACED GATE




DETAIL SHOWING THROUGH WEDGED MORTICE AND TENON JOINT

Decorative features on gates often have a functional origin; rounding or angles to the tops of post and stiles and chamfers on the tops of rails all help to shed water and prevent rotting of timbers.

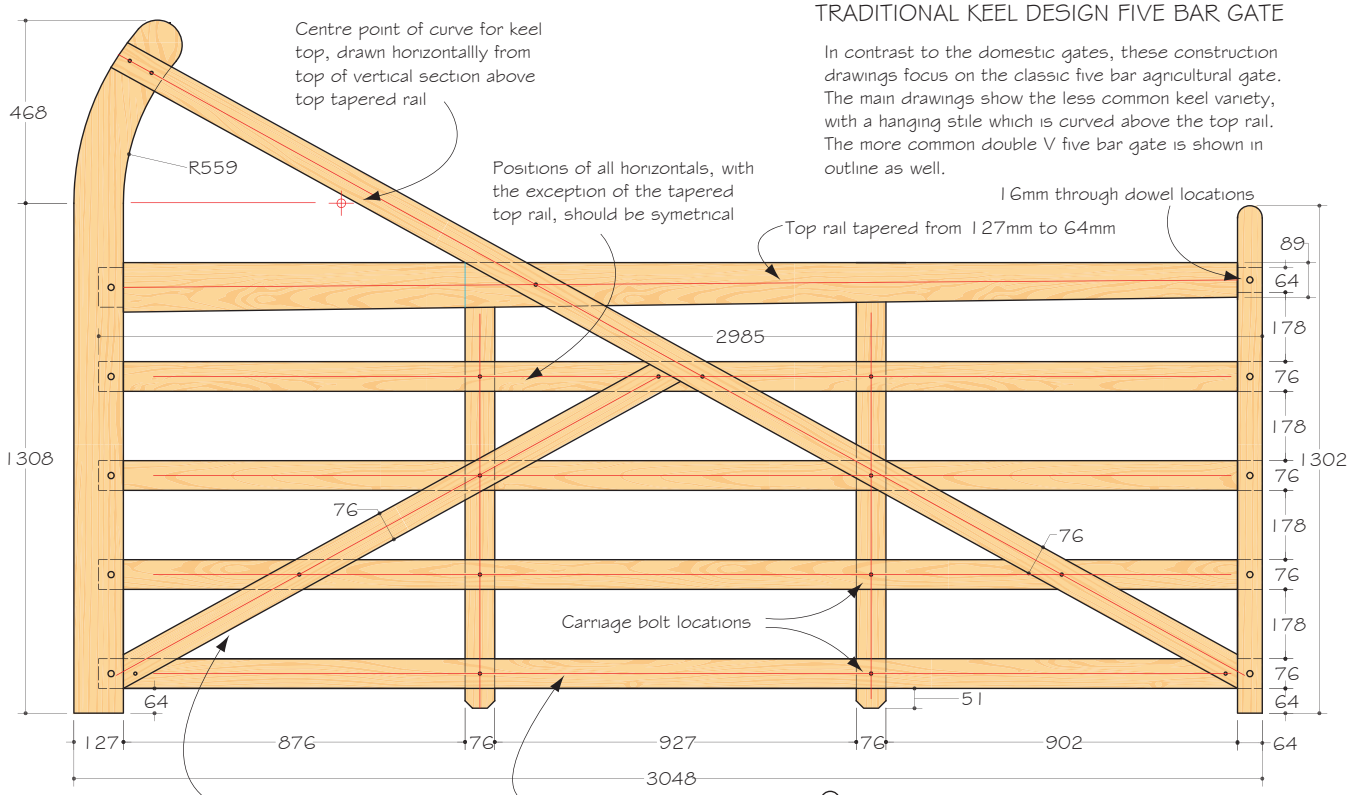
Where possible, metal fixings should be kept to a minimum due in part to differences in expansion/contraction in hot weather; dowels are often used although some gate makers even see these as a potential weakness which may fail in time due to shrinkage of the dowel, opening the face of the gate to water ingress. Through wedged mortice and tenons overcome this problem and are probably the best gate joint for this reason.

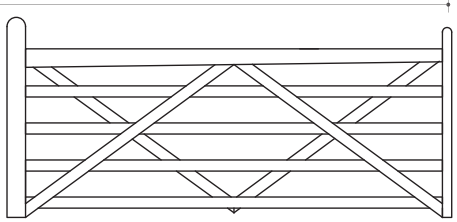



SIMPLE FRAMED GATE WITH THROUGH DOWEL JOINTS

## TRADITIONAL KEEL DESIGN FIVE BAR GATE

In contrast to the domestic gates, these construction drawings focus on the classic five bar agricultural gate. The main drawings show the less common keel variety, with a hanging stile which is curved above the top rail. The more common double V five bar gate is shown in outline as well.



### "DOUBLE V" FIVE BAR GATE

More common than the keel gate, with mirrored diagonal bracing on opposite sides of the central rails

# TOMACO

THE TOOL MARKETING COMPANY

## DISTRIBUTORS OF QUALITY PRODUCTS

SHARP EDGE

Chisel and plane iron sharpener - take anywhere and sharpen in seconds.

narex®

Quality range of woodworking hand tools made in Europe.

COLT® PROFESSIONAL TOOLS

A quality range of professional Drill bits and accessories from Germany.

TOMAHAWK TOOLS

A quality range of professional tools and accessories.

VETO PRO PAC® TOOL BAGS THAT WORK

Range of the toughest tool bags with a 5 year downtime warranty.

CMT ORANGE TOOLS™

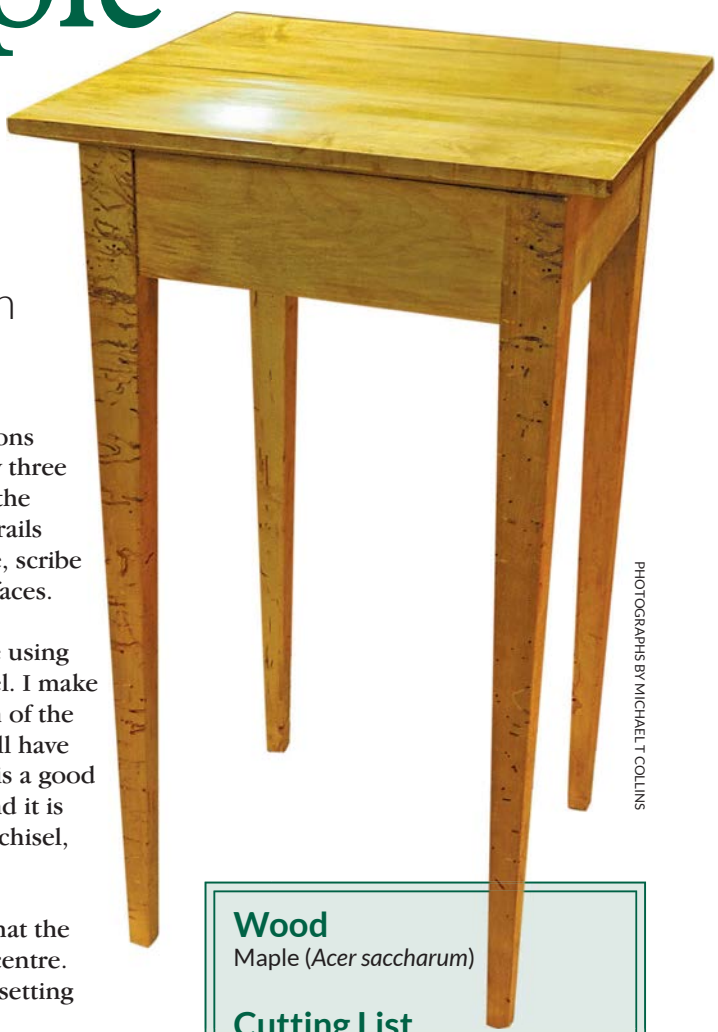
Quality cutting tool range which includes Router cutters, Spindle Moulding, saw blades, holesaws and many more from Italy.

FOR YOUR NEAREST STOCKIST VISIT

**www.tomaco.co.uk**

# Wormy maple side table

Something's really bugging **Michael T Collins**. He's treating us to a worm-eaten side table project – very tasty...



PHOTOGRAPHS BY MICHAEL T COLLINS

As a woodworker and very avid 'upcycler', I am always loath to see wood go to waste. So, when a friend said they had some 'wormy' maple they couldn't use, I just had to have it. Instantly, I knew that I wanted to make something with it that would show off the worm holes, creating a beautifully organic effect in the piece.

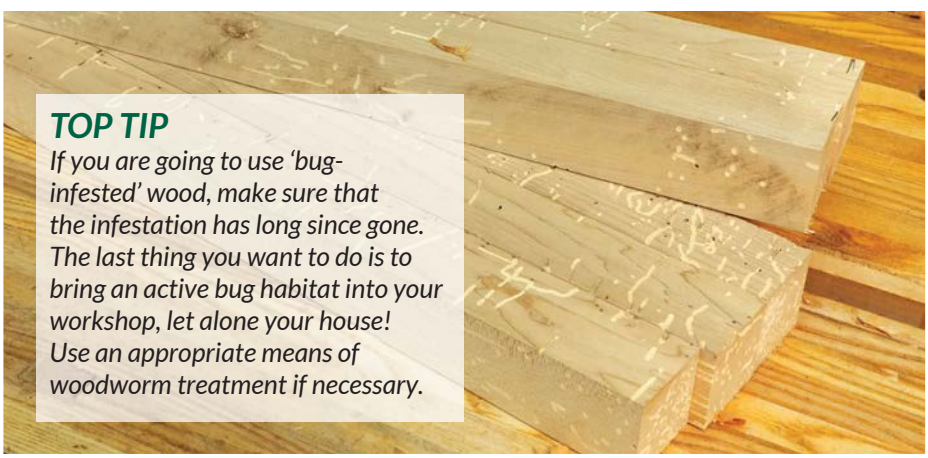
## Tenons

Prepare all parts to final dimension. Legs can be left 25mm longer; this extra wood, called 'horns', located at the mortise end of the legs, will prevent 'blow out' when chopping the mortises.

1 Start by marking the tenon's depth, based on the mortise depth you want. My rule is that tenons should be approximately three quarters of the width of the mortise stock. Gang the rails and with a marking knife, scribe the shoulder line on all faces.

2 Set the mortise gauge using the width of the chisel. I make my tenons half the width of the stock, so 19mm stock will have a 9mm mortise. I find this a good size for most mortises and it is the width of my mortise chisel, not by coincidence!

3 Adjust the gauge so that the mortise is in the rail centre. Mark the tenons, before setting the rails aside. ➤



### *TOP TIP*

*If you are going to use 'bug-infested' wood, make sure that the infestation has long since gone. The last thing you want to do is to bring an active bug habitat into your workshop, let alone your house! Use an appropriate means of woodworm treatment if necessary.*

## Wood

Maple (*Acer saccharum*)

## Cutting List

- Legs – 4 @ 45 x 45 x 760mm (including 25mm waste)
- Rails – 4 @ 360 x 100 x 19mm (including tenons)
- Top – 3 @ 154 x 460 x 25mm

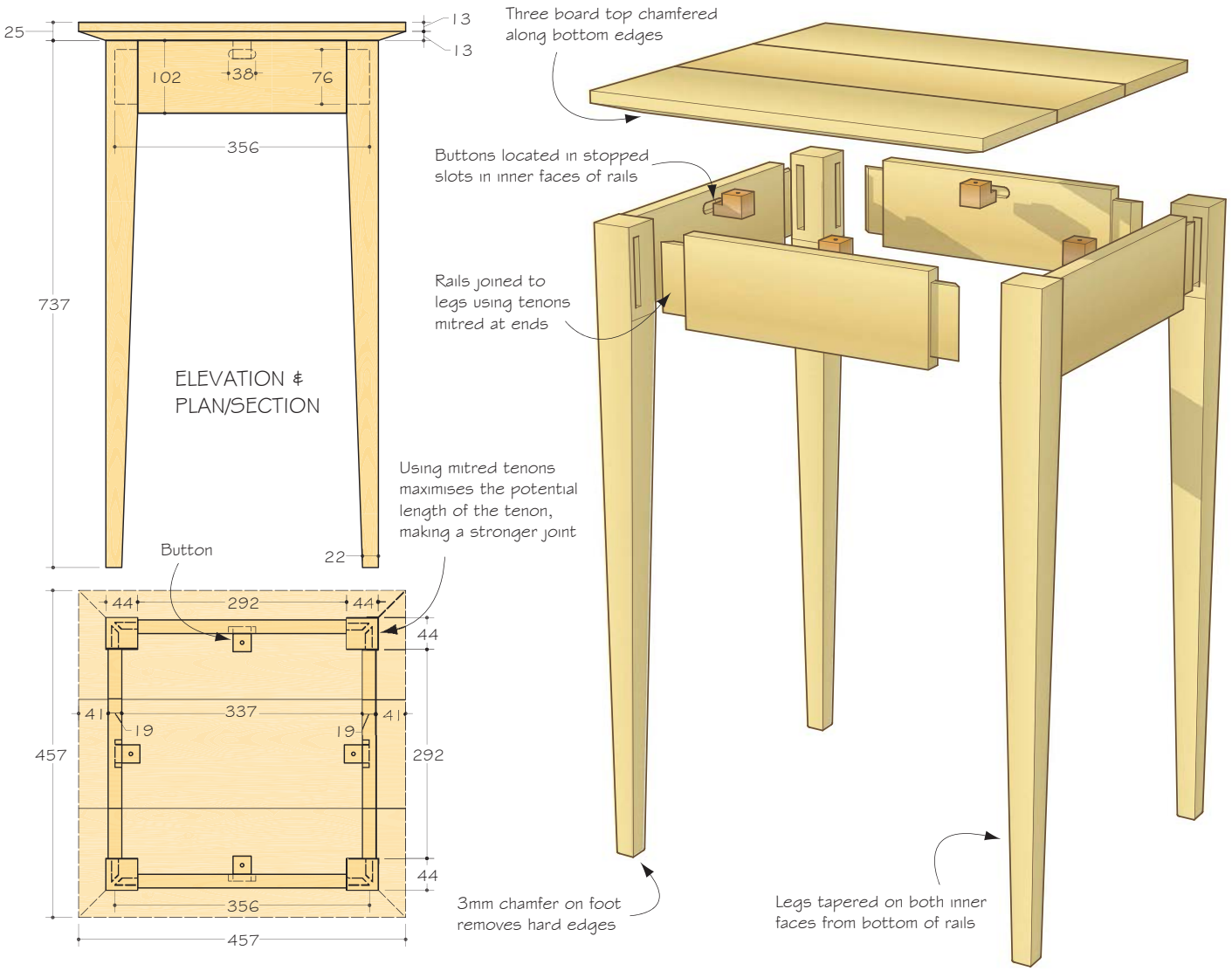
## Tools

- Rip and tenon saw
- 10mm mortise chisel
- Jack, jointer and block planes
- Brace and 9mm twist bit
- 19mm bevel edge chisel
- Marking knife and mortise gauge
- Try square


1


2


3




## Chopping the mortises

4 Arrange the legs to give the best look and distinguish them with a cabinetmaker's mark, keeping the apex points to the front. Using this method ensures you always have legs in the correct orientation for marking out and assembly.

5 Mark the face and edge side and gang the parts together. Lay out the mortise location using the rail width, a try square and pencil. The actual mortises are going to be centred and 25mm shorter than this dimension.

6 It's a good idea to identify the general location of mortises with pencil, prior to marking. It is so easy to chop the mortises, only to find that one is in the wrong face. How do I know this, you might ask? Well, from personal experience of course!

7 Scribe the mortises carefully so you have two clear lines to work to, in the case of each mortise.




8 Place the wood over a leg of your bench so that the forces are concentrated in the chop rather than absorbed by the bench. Chopping a mortise is a matter of placing the chisel with the bevel facing the mortise and about 1.5mm from the end (this will protect wood from being damaged while removing the waste). Now 'march' the chisel towards the other end of the mortise. With each successive blow, the chisel will go deeper into the mortise. Continue to within 1.5mm of the end, then 'about face' and repeat the process back to the start, clearing out the chopped wood as you go. Only remove wood that has been chopped; never try and pry out un-chopped material as you are likely to split the wood and, at worst, bend or even snap the chisel. Lastly, true up the ends of the mortise by chopping vertically down the end mark. If two mortises are going to intersect, only chop the mortise down to the level of the intersecting mortise. This way you will have support at the bottom when chopping the intersecting mortise. You can draw a line or add a bit of tape on the chisel as a depth gauge.


8

### TOP TIP

*Mortises and tenons should be gauged from the face side – by doing this, any errors in the wood's thickness will be orientated to the back and not affect the joint. This table will have a 3mm reveal between the legs and rails on all sides. Using the same mortise gauge setting that you used to mark the tenons, add an additional 3mm between the fence and the position of the first spur.*


9


10

## Shaping the legs

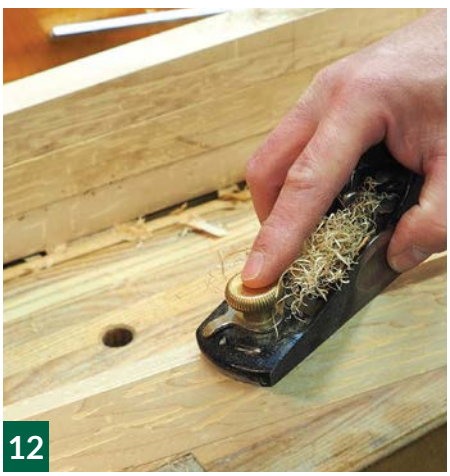
I have long admired the elegantly tapered legs of George Hepplewhite furniture, so I wanted to incorporate tapered legs into this project. It was with a certain amount of trepidation that I embarked on tapering these legs, wondering if there was enough substance with all that wormy wood! Luckily in this case, the wood still maintained a lot of integrity.

9 The legs should taper to half their original thickness, so from 45mm to 22mm. The tapers are on the two inner mortise faces of the legs and start at the bottom of the rail position. Mark these for the same reason we did the mortises, because it's easy to taper the wrong face.

10 Using a pencil, mark the upper extent of the taper and then add the final dimensions on the bottom of the leg. Connect these locations with a diagonal line. Now remove the bulk of the waste with a rip saw. Add a small wedge to the top of the rip to lessen the friction on the saw.

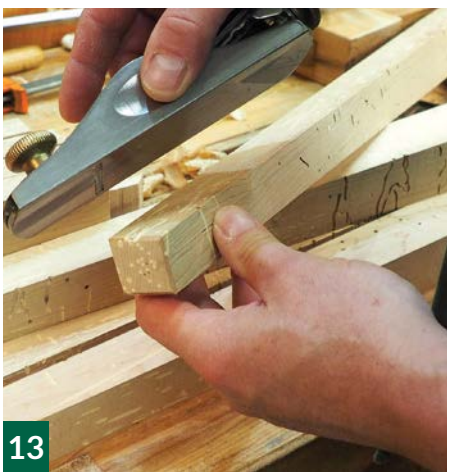
11 Plane down to the line with a jack plane and finish using a jointer plane. Be careful not to encroach beyond the upper marks as it will ruin the mating surface between the rail and the leg.

11


12

12 Once the legs have been tapered, 'ease' all the edges with a block plane.

13 Add a 3mm chamfer to the bottom of each leg. This looks better, prevents breakout and avoids catching or scraping floorcoverings. ➤


13

## Cutting the tenons

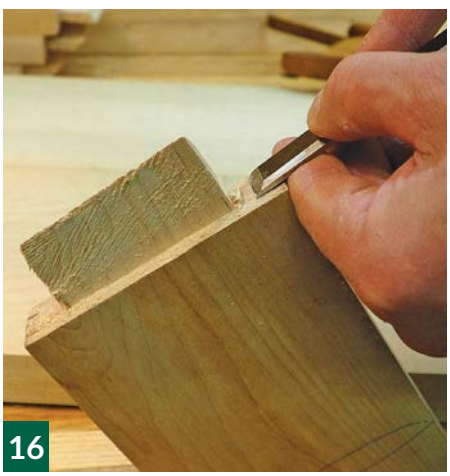
14 Cut a 'V' groove on the waste side and then pare out a notch using a chisel. This will give your saw a place to run and produces a very clean shoulder. Saw down to the shoulder marks. This technique was first shown on the Shaker shelf project in *Woodworking Crafts* issue 16.


14

15 Place the rail in the vice at 45° and mark a small 'V' notch on the waste sides of the mortise line. Saw down to the ends of the scribe marks you can see. Do not try and saw to the shoulder in one pass as this is prone to error. Rotate the wood in the vice and again saw at 45° using the saw kerf as a guide. The small triangle of wood at the bottom of the kerf can be removed with a few saw cuts.


15

16 Finally, use a chisel to clean up the shoulders. Test fit as you go and label each joint.

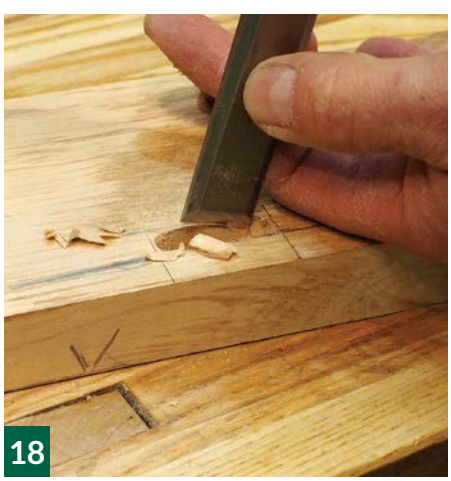

16

17 These tenons are going to intersect inside the leg and need a 45° bevel on the ends. I have cut them shorter to allow a small gap between the mitres, enabling seasonal movement inside the leg. Dry fit the legs and rails, checking for squareness.


17

## Attaching top to base

18 These boards are likely to move with the seasons by approximately 3mm for every 300mm. Because of this seasonal movement, the last thing we want to do is rigidly screw the top to the base. Instead, you will make some L-shaped buttons to be inserted into pockets, that allow the top to float. Using a 9mm twist bit, create a 32mm pocket in the centre of each rail, 12mm from the top, and chop out the waste.

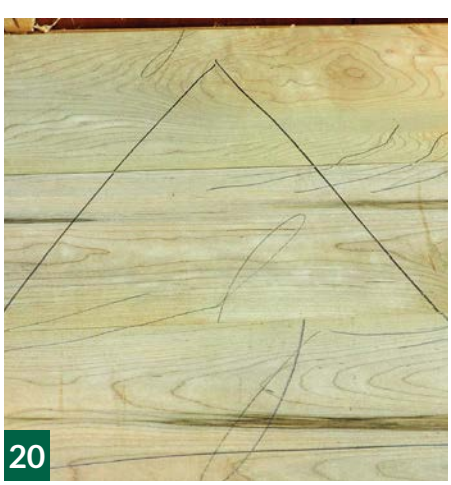

18

19 Then, using some left over hardwood (I used cherry) cut a 11 x 12mm rebate on the edge of a board. Then drill a countersunk hole and cut into buttons 25mm wide.


19

## The top

20 I did not want to use wormy wood for the top, but instead chose some of the maple that was spalted (with partial rot), which gave some very nice patterning. While the glue is setting on the base, select three pieces of wood that have similar grain structure and arrange them to produce a pleasing look.


20


21

21 Plane mating pieces together; this way the joint is pretty much guaranteed to fit. This technique was explained in detail in my project on making a table top in *Woodworking Crafts* issue 2.

22 A rubbed glue joint and some clamping pressure is all that is needed to keep these boards together. Wipe away any excess glue. Once dried, any squeeze-out can be removed with a card scraper. Use eye protection when doing this; dried glue is sharp!

23 The top needs to be cut to a 'hair' over 460 x 460mm, so that it can be planed to the final size. Add a chamfer on the underside so that the edge is 12mm and it is as wide as the 38mm overhang. This will give a pleasing edge and gives the illusion that the top is thinner than it really is.

24 With the plane held at an angle to the grain direction, plane the end grain first. Any tear-out will be cleaned up when the long grain is chamfered. Make sure that the chamfers meet at the corners. Always start by working on the underside of a table. This way you finish with the visible surface uppermost and it is less likely to get damaged by placing it down on something.

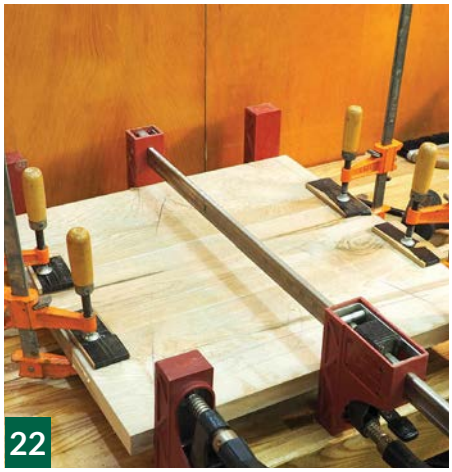
25 Use a smoothing plane to finish the top surface, with the blade set to produce reasonably fine shavings. Lightly ease the upper edge with one pass of 220 grit.

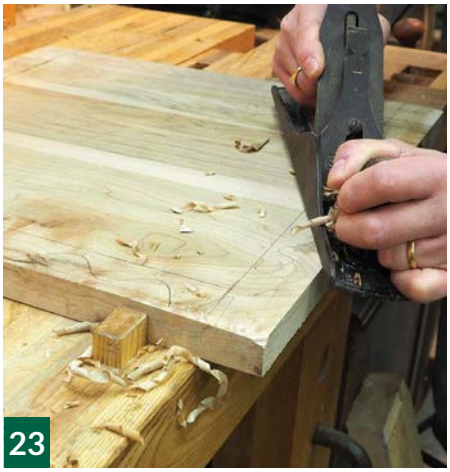
## Attaching the top

Before attaching the top, sand all the parts with 180 and 220 grit. Then give the table two coats of amber de-waxed shellac, sanding lightly with 320 grit between coats and allow one hour to dry. In this case, it really brought out the crazy wormy pattern as it soaked deeper into the worm trails. It's a good idea to finish the top and base separately so that the shellac does not glue the parts together. Shellac dries very fast so feather the edges in with a polishing rubber as you work.

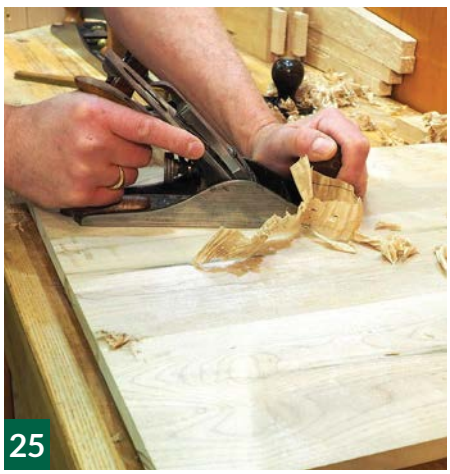
### Supplies

De-waxed shellac is available from:
www.shellacfinishes.com


22


23


24


25


26


27

26 Once dry, the buttons can be screwed into place. Because the rebate on the buttons is 1.5mm less than the distance from the underside of the table to the pockets, the top will be cinched tight against the top of the rails but will still allow movement.

27 Finally, give the top three more coats of shellac using a rubber (a wad of cotton), lightly sanding between coats. The result of your labours is an organic effect from reclaimed wormy wood! ■


### 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, Adams fireplaces, book cases and reproduction furniture.
Web:
www.sawdustandwoodchips.com
Twitter: @sawdustandwood


PHOTOGRAPH COURTESY OF WIKIMEDIA COMMONS

# Fire safety and hazard awareness in the workshop

**Amber Bailey** asks furniture maker and on-call fireman Michael Brett some burning questions and gets some very safe answers

Michael dressed up, ready to save the day!

## Designer/maker/fireman

A former Design and Craft student at Grantham College, Lincolnshire, Michael continued his Furniture Design and Making studies at Buckinghamshire New University. Michael Brett Furniture was established five years ago in High Wycombe. Running a thriving workshop specialising in bespoke furniture, retail installations and commercial furniture, Michael also finds time to work as an on-call firefighter for the High Wycombe branch of Buckinghamshire Fire and Rescue Service. Who better to turn to for fire safety advice in the workshop than a 'woodworking fireman'?

## Ever ready

The role of an on-call firefighter is to provide cover for the on-station staff while they themselves are out on a job. They also assist with the backfilling of station appliances (such as fire engines) when staffing levels are insufficient. High Wycombe Fire and Rescue Service is home to 60 full time firefighters and 10 Retained Duty System firefighters.

## Checking for risks

The biggest danger areas in the workshop are machines that cause friction or faulty electrics. The spray shop is always a risk; chemicals need to be stored in a safe location out of direct sunlight. Compressed air tanks need emptying after use and bleeding and checking for corrosion regularly. Michael checks theirs every six months, along with a service.

## Safe materials storage

They try to avoid stocking timber and flammable liquids at Michael Brett Furniture. If they have to store timber, it is stacked on a rack to avoid trip hazards. Easy access for two people to handle lengths of timber off the rack is essential. Safe manual handling

PHOTOGRAPH BY GMC/ANTHONY BAILEY

Fine steel wirewool is inflammable; the filamentous glow is extremely hot and difficult to extinguish unless dunked in a water tank. Rags covered in oils or solvent-based finishes must be laid out to dry or dunked in water

PHOTOGRAPH BY MICHAEL BRETT

Michael, busy in the workshop

PHOTOGRAPHS BY MICHAEL BRETT

Michael Brett Furniture produces a diverse range of high quality projects for both private and commercial clients

is incredibly important. Flammable liquids are stored in a dry cupboard, with labels to confirm the contents.

## Essential safety equipment

A well-stocked first aid kit, telephone and fire extinguishers are essential in any work environment. Dust extraction equipment reduces the likelihood of trip hazards and avoids material such as sawdust being left on surfaces that may create a risk of fire. Push sticks should be present on every machine; hands should never be anywhere near a blade. All tools and machinery should be well maintained, lubricated and cutters kept sharp. If you experience difficulties, check the sharpness of cutters and the correct setup.

## Personal protective equipment (PPE)

Michael provides his staff with basic PPE: ear defenders, dust and hazardous particles mask, eye protection and steel toe boots. The most important thing about a workshop environment is to understand how to operate machinery. Always isolate the machine before setup. As an employer, Michael is responsible for giving detailed safety advice on every piece of equipment. Members of staff can only use the equipment independently once they have passed a three-month probation period and assessment.

## Keeping records

Most woodworkers will be familiar with COSHH (Control of Substances Hazardous to Health). In addition, if members of the public are entering your workspace, by law you need an incident logbook, health and safety policy and evacuation procedures. Remember, your workshop can never be safe enough. Staff members have a responsibility to report any incident, hazard, risk or accident.

## Furniture fires

Parker Knoll in High Wycombe infamously suffered a fire in the 1970s that destroyed its factory. More recently, Stewart Linford Ltd's workshop suffered a fire in 2011. Bucks Fire and Rescue Service responded with force to this latter incident and quickly controlled it. Thermal imaging cameras and a PPV (fan to extract smoke) were used. Some of the recent workshop-based fires in the area appear to be linked to the structural integrity of the building or were gas cylinder related.

## Safety summary

Michael always reminds his staff of a comment made to him early in his career, 'Safety first, last and always'. Common sense has to be practised in every workplace. Regular safety checks of equipment are essential. You cannot foresee all hazards, so make absolutely sure you have an escape plan. A clean work environment really does result in a happy work environment. ■

## In case of a fire or chemical emergency

1. Report the incident to the nearest member of staff
2. Call the fire service by dialling 999 (or 112 on a mobile)
3. Exit the building immediately, closing any doors to contain the fire
4. If the fire is small and you or another member of staff have been given the required training, the fire may be extinguished with an appropriate fire extinguisher, provided it is safe to do so
5. Go to the fire assembly point and wait for the fire service. No one should re-enter the building until the all clear has been given

PHOTOGRAPH BY MICHAEL BRETT

Michael leading by example and making sure his hands are away from the blade

PHOTOGRAPH BY GMC/ANTHONY BAILEY

The correct type and capacity of fire extinguisher should be available for use in accessible locations


PHOTOGRAPH BY GMC/ANTHONY BAILEY

Chemicals should be stored in lockable cabinets and a register of all contents maintained

For further information, visit:

- www.michaelbrettfurniture.co.uk
- www.bucksfire.gov.uk/contact-us/stations/high-wycombe

# WIN! WITH RECORD POWER

**The perfect kit for anyone new to the hobby!**


PHOTOGRAPH COURTESY OF RECORD POWER: WWW.RECORDPOWER.CO.UK

# *Win a Record Power woodturner's starter kit worth over £1000!*

To enter the competition and see full terms and conditions go to:

**WWW.WOODWORKERSINSTITUTE.COM/C/WIN**

Password: WTWIN16

THE CLOSING DATE FOR ENTRIES IS THE 2ND NOVEMBER 2016

**KIT INCLUDES:**

DML305 305mm Lathe • SC3 Chuck Package • RPCHS8 8-piece Bowl and Spindle Set
RSBG8 200mm Grinder • CGV336-4 Twin Motor CamVac Extractor and accessories

*Woodland ways*

PHOTOGRAPHS BY GARY MARSHALL AND ROBIN E WILD, UNLESS OTHERWISE STATED

# Old England in the fall

## – or, as we call it, autumn

As much as **Gary Marshall** would like to see New England in the fall, he is reminded that Old England has plenty to show as summer yields to winter

Well here we are, another summer draws to an end and winter is approaching. In the woods, the sap has slowed down or stopped; berries are being raided by blackbirds; fieldfares make their way westwards towards our shores. Subtle changes are afoot.

You may remember my spring article on the blossom clock. Well, our native trees are not as reliable in their order or intensity when changing colour in autumn. Looking at oaks (*Quercus robur* and *Q. petraea*) for example, one oak may remain green until nearly December, where its neighbour may have changed colour to its distinctive russet browns as early as the start of October.

Ashes (*Fraxinus excelsior*) often have a very short autumn; one day green and the next day seemingly bare. Look out for those that put on a show of autumn colour in a pale buttery yellow, with keys (bunches of seeds) to match. Many people think of our beautiful beeches (*Fagus sylvatica*) as archetypal autumn trees. Leaves will vary from summer green, through yellow to rich coppers, bronzes and russet.

### Autumn leaves

Other trees can really show off their colours. I love the dogwoods (*Cornus sanguinea*) that turn the deepest purple with stems to match, showing their clusters of blackberries. A star of the hedgerows is the field maple (*Acer campestre*) that rivals its European cousin, the Norway maple (*Acer platanoides*), for its bright golden hues. Don't forget the humble but colourful hazel (*Corylus avellana*) and, if the squirrels, woodmice and dormice haven't got there first, its tasty bunches of hazelnuts too.

Some birches and poplars can hang on to a handful of bright yellow leaves right into the winter, defying all but the fiercest of gales. Rich browny-red hawthorn (*Crataegus monogyna*) haws often outdo its small yellow and brown leaves for colour, as do the sloes on blackthorn (*Prunus spinosa*), adding a bluish-purple tinge to the hedgerows, surrounded by pale yellow leaves.

The leaves of elder (*Sambucus nigra*) are surpassed by their berries, as too are the rowan tree (*Sorbus aucuparia*) and the madly gaudy spindle (*Euonymous europaea*).

Locally, I love the swooping yellow branches of hornbeam (*Carpinus*

Above: Soaking up all that Old England has to offer – hopefully more than rain!

*betulus*), and of course my more rare favourite, the wild service tree (*Sorbus torminalis*) (you'll have heard enough about this in my previous articles).

Just before I end, I can't ignore a couple of our best non-native trees to watch out for: the fiery larches (*Larix* spp.) and the spectacular and aromatic liquidambar, or sweet gum (*Liquidambar styraciflua*) in yellow, crimson and deep purple. ■


## Gary Marshall

Gary has had a life-long interest in woodlands and the countryside. He trained in countryside management and subsequently ran a company working with the local County Councils and Unitary Authority and their Countryside and Rights of Way Teams, as well as a wide range of conservation organisations.


PHOTOGRAPH COURTESY OF WIKIMEDIA COMMONS

Beech leaves in autumn

PHOTOGRAPH COURTESY OF WIKIMEDIA COMMONS

Autumn leaves

Psychedelic spindle berries

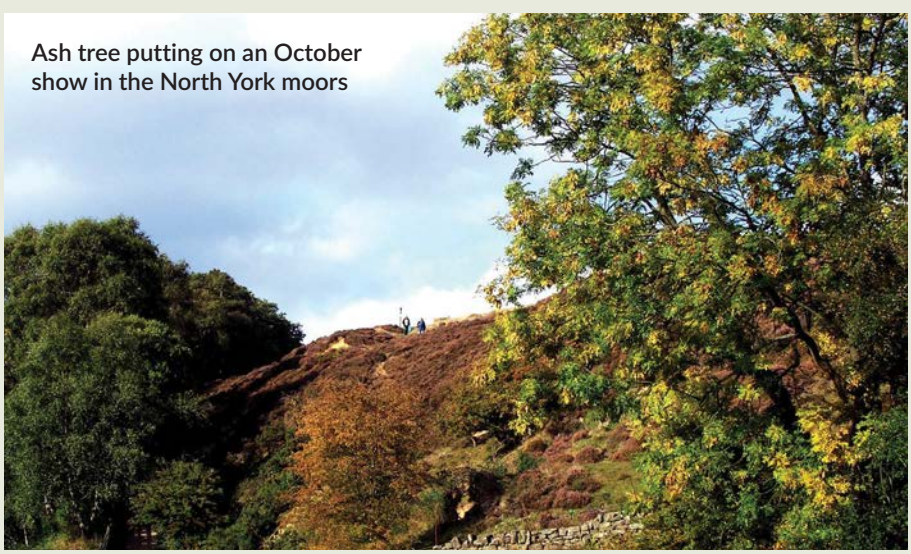
PHOTOGRAPH COURTESY OF WIKIMEDIA COMMONS

Oak leaves in autumn

PHOTOGRAPH COURTESY OF WIKIMEDIA COMMONS

Leaf of the wild service tree

Firethorn (*Pyracantha* spp.) with its massed berries



Ash tree putting on an October show in the North York moors

PHOTOGRAPHS BY LOUISE BIGGS

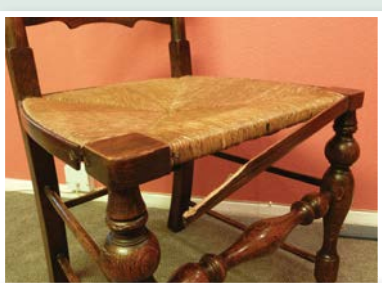
# Ladder back chair restoration

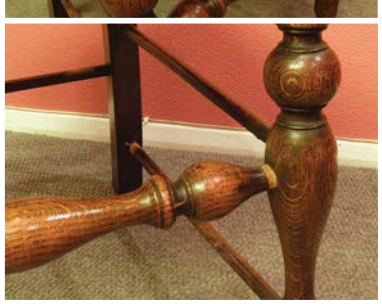
## Louise Biggs restores her client's faith in her much-used family dining chairs

My client's father was a cabinetmaker who many years ago made an oak dining table and six chairs. After decades of everyday use with his family, and now with his daughter, the chairs were in need of some restoration. Two chairs from the set were in a worse condition than the remaining four, so we decided to focus on these two and do the remaining chairs in pairs at a later time.

### Assessment

- The rush seats were sound, although a little soft and stretched in the middle, and the reeds were very finely twisted.
- The seat rails into the back legs and the side rails into the tops of the front legs were loose.
- Stretcher rails and top/mid rails in the back frame were loose.
- All of the edge trims were loose.
- One edge trim was broken, several of these were split and they all had damage due to re-fixing with nails and screws over time.





When the seat rails are only a little loose, you can sometimes part the rush enough to knock a joint out and get some glue into it without removing the entire seat. As all the joints were loose it was decided to remove the seats and have them re-rushed in the same pattern. The downside is that there is no way to artificially colour rush; it changes with light, air and general use, but has to do this naturally, which leaves a stark difference between old and new for a period of time.

### Tools used

- Glue pot
- Animal/hide glue
- Utility knife
- Masking tape
- Screwdrivers to suit
- Rubber mallet
- Restorer's cat's paw
- Side cutters
- Old cabinet scraper
- Plane
- Chisels of various sizes
- Fine toothed saw
- Sash cramps
- G-cramps (if required)
- Rule
- Drill bit
- Drill stand or hand drill
- Plug cutter
- Polishing materials
- PPE – breathing and eye protection, gloves

### Wood

- Oak (*Quercus robur*)

## Stages of restoration

1 The first step was to remove the edge trims. The screws were easily removed, although some did resist. In this case, I generally tighten the screws up a little which then releases them to be unscrewed. It was easier to punch the nails right through so as not to cause any further damage to the edge trims when levering them off.

2 The rush seats had to be removed carefully as they were required as patterns. It took a little manipulating, but I cut through the rush on the four edges and then taped the top edge to keep the twists of rush in place.

3 By supporting the underside and working around the four edges, I then pushed the seats down through the middle of the frames until all four edges were released and the seats could then be removed.

4 Having labelled the various sections with low-tack masking tape to keep the components of the two chairs together, I knocked the frames apart using a rubber mallet. With the front and back frames separated, I moved on to the front legs. If more weight is required, use a hammer, ensuring you hit against a protective softwood block to avoid damage to the chair frame.

5 With the side rails removed, I poured a small amount of methylated spirit into the holes, allowing it to soak into the wedge and the top of the leg. This helped to break down the animal glue, releasing the wedge and the leg. If the polished surface is to be kept, be very careful that the methylated spirit does not dribble out of the hole or from any gaps. Applying a bit of gentle force, the legs were prised out of the blocks and the front stretcher rail released.

6 As with many chairs of this type, the top rail of the back frame had been nailed through from the back of the leg. The nails had to be prised out without causing damage to the surrounding timber. Using an old chisel, I carefully removed the wood from around the head as I only needed to grasp the top of the nail. Using an old worn cabinet scraper to protect the surrounding wood, the nail was eased out using a pair of side cutters. If nails are embedded and space permits, lever the top rail from side to side. ➤

## Wedged joint on turnings

A wedged joint on a turned section is often seen on Windsor chairs. In most cases, the turned section will pass right through the seat or rail to be wedged from the other side, so the wedge is clearly visible.

In the case of these chairs, the tops of the legs and the wedges are contained within square blocks on either end of the front seat rail. The hole for the leg is tapered, just like those in Windsor chairs, but within the top block, with a saw cut in the top of the leg. The thickness and length of the wedge has to be judged correctly so that when the joint is glued up, the wedge opens up the top of the leg into the tapered hole, while being pushed down the saw cut until the top block and leg come together. Too long or too thick and the wedge will have done its job before the joint has fully tightened.


1


2


3


4


5


6

FIND
MORE
FREE
MAGAZINES

HTTP://SOEK.IN

7 The old glue was removed from all the joints and the remaining old wedges were removed from the front legs. A fine saw was used to clean out the wedge, keeping the saw blade within the waste material so as not to increase the size of the cut.


7

8 Using animal/hide glue, the back frames were then re-glued, adding sash cramps and protective blocks. They were checked across the diagonal and the cramps adjusted as necessary in order to pull them square then measuring again until both sides were the same.


8

9 The front frames were the next task. To re-glue the front stretchers, the seat rails were put in place while dry and the stretcher rail glued in order to get the frame square.


9

10 Once the glue had set, the size of the new wedges was worked out and the seat rails and wedges were glued in place using two sash cramps to pull the rails down upon the legs. As I use animal/hide glue in a glue pot, this stage needed to be worked quickly before the glue started to set. The sash cramps applied the correct pressure needed to push the wedge into place and tighten the joint.


10

11 With the front and back frames glued up, these were then joined by re-gluing the side seat rails and stretchers.


11

12 My attention then turned to the holes left by the nails, through the back legs and top rails. If only to spare a thought for restorers following behind me, I drilled out the holes to take a dowel. This would strengthen the joint while covering any damage caused around the hole when the nails were removed. A piece of masking tape around the drill bit acted as a depth stop. The dowels were formed of oak, by hammering a square section through a homemade dowel plate.


12

13 With the chairs re-assembled, the screw holes in the seat rails, that had been left by the fixing of the edge pieces, were plugged with timber and the splits in the edge strips were cleaned out and glued up, then held with masking tape.


13

14 On the one broken edge piece, a long joint was planed to


14

remove any damage caused by the break and a section of old oak was then prepared to size and rub-jointed onto the edge piece. When the glue had set, this repair was shaped in to the edge strip using a spokeshave and abrasives.

15 With the edge strips glued up, the various old screw and nail holes were drilled out using a standard twist bit to clean up the damaged areas before they were plugged with old oak.

16 The various plugs were trimmed back flush to the edge strips then finished with abrasives. The chairs and the edge strips were then treated with Bald's Balm, which cleans the surfaces and revives the finish.

17 The repaired areas on the edge strips, the dowels through the top rail and any other areas were then stained with a mix of oil stain colours to achieve the right colour match.

18 Once they were sealed with shellac sealer, these areas were then polished up. At this stage, further colouring could be carried out. I tend to use a blend of red and black polish with earth pigments if required. The top rail dowels were coloured out to blend in, with the chair on the ground.

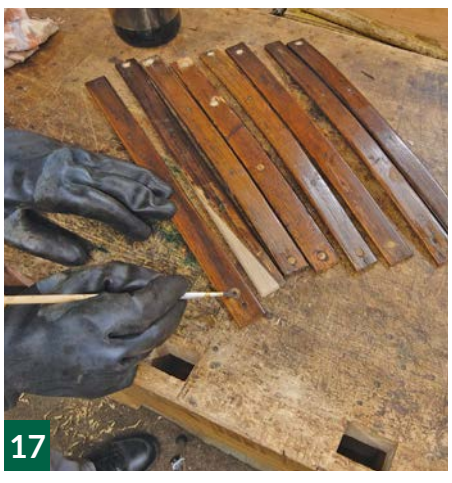
19 In order to get the colouring right on the edge strips, I had to simulate the position they will be in when on the chair; they were held in a vertical position. If I kept them horizontal, the light would give a false reading for the colour and they would then look wrong when pinned back on to the chair.

20 The rush seats proved to be a headache even for my expert colleague, Frances White, due to the very fine twist of the rush. Once completed, the edge strips were then pinned back in position. As the pins were going in different positions to the original ones, a fine hole was drilled to the diameter of the pin, so the strips did not split again. With the pins hammered in, the heads were left just under the surface with the use of a pin punch, so they could be filled and coloured out.

21 The two chairs were then given a good coat of tinted wax and buffed up before being returned to my client. ■


15


16


17


18


19


20


21


## Louise Biggs

Having completed her City and 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

mafell

# We have lift off!

## KSS40 18M bl

5 in 1 Cordless Universal Saw System

Universal portable sawing system re-invented. Greater portability. Performance beyond all expectation. Innovative brushless battery technology for maximum performance. Five saws in one compact system: (1) Precision crosscutting system. (2) Plunge cut saw. (3) Shadow gap saw. (4) Portable circular saw. (5) Flexi guide for precision rip and parallel cuts. Compact solid case for transporting. Meticulously designed down to the final smallest detail.

Larger models available!


## BATTERY TECHNOLOGY


The innovative, high-performance 18V 5.2Ah Lithium ion battery technology achieves superb cutting quality. Automatically monitors charge and temperature.

## SEE VIDEO DEMO!

- **Go to: nmatools.co.uk**
- **Search: 'Mafell KSS300'.**
- **Click: 'VIDEO' on the KSS300.**

**Same saw - corded version!**

***VIDEO DEMONSTRATION BY ALAN HOLTHAM.**

NMA AGENCIES LTD

**NMATOOLS.CO.UK**

**Email: info@nmauk.com Tel: 01484 400488**

**Unit 1, Brookfoot Business Park, Brighouse, West Yorkshire, HD6 2SD.**

WARRANTY 3 THREE YEARS

# MAKING Jewellery

# Exclusive subscription offer for Making Jewellery magazine




## SUBSCRIBE TO 6 ISSUES OF MAKING JEWELLERY FOR JUST £20, SAVING MORE THAN 30%!

**Making Jewellery** is the UK's first and best-selling jewellery magazine, for novices, hobbyists, and sellers alike! Each issue features lots of projects and ideas for making stylish and professional-looking jewellery. These step-by-step projects are suitable for every skill level and use a variety of techniques, from simple stringing to metal clays, and silversmithing to woodwork.

### Reasons to subscribe...

- pay only £3.33 per issue, instead of £4.99
- elegant new look with more projects in every issue
- learn new techniques with step-by-step guides
- tips and tricks from jewellery professionals
- free beads with some issues
- free delivery direct to your door


**LOTS OF FANTASTIC PROJECTS IN EACH ISSUE!**

To claim this exclusive subscription offer, simply select a 6-issue subscription to ***Making Jewellery*** from **www.thegmcgroup.com** and enter code A5091 at checkout. Alternatively, you can contact our subscriptions team on **01273 488005**

**New UK subscribers only. Not available by direct debit. Offer expires 26/10/16**

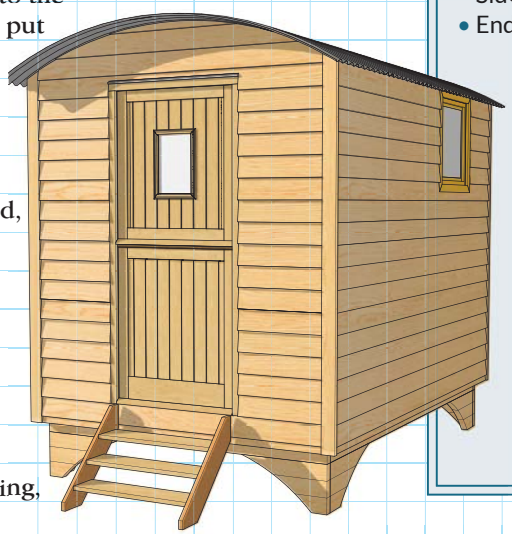
PLANS 4 YOU

# Shepherd's hut – part two

## Simon Rodway sees his shepherds hut to completion

In this second part of building a shepherd's hut, I'm going to look at how to add some flesh to the bones of the timber structure put together so far. First of all, there remains one additional structural element to put in place; the shaped rafters. For the sake of economy, I have cut these from 18mm plywood, but glued and screwed pairs of these profiles together to form a reasonably substantial rafter, able to pick up the plywood joints and give the roof structural rigidity. The curvature of the rafter should be taken from the inside curve of the roof cladding, which is traditionally made from corrugated steel sheet. This can be bought from various suppliers, ready made as a roof profile, and the curvature and span varies. Make sure the roofing is one of the first things you select when starting on your hut.

Set out the top curve of your first rafter on a sheet of plywood, then transfer this curve about 56mm vertically downwards from midpoint to midpoint. By doing this, you can use the bottom cut of one rafter as the top cut for the one below, saving time and trouble. It also means the rafter is slightly deeper in the middle than at the ends. Leave this slightly longer and don't cut out the birdsmouths at this stage. Once you have fitted the first rafter at one end, just inside the studwork end wall, transfer the positions of the birdsmouth cuts to the other rafters to get a consistent height and line of curvature along the roof. Fix securely at the ends into the timber framing, bearing in mind that this will



### Cutting list

**All 9mm plywood**

| | |
|---|---|
| • Roof sheet | 2 @ 2230 x 1220mm |
| • Roof sheet | 1 @ 2230 x 670mm |
| • Side sheet | 4 @ 2250 x 1220mm |
| • Side sheet | 2 @ 2250 x 670mm |
| • Front sheet | 2 @ 2177 x 597mm |
| • Front sheet | 1 @ 2122 x 335mm |
| • Rear sheet | 2 @ 1902 x 715mm |
| • Rear sheet | 1 @ 1902 x 692mm |
| • Rear sheet | 1 @ 2122 x 610mm |
| • Ceiling lining | 2 @ 2120 x 1220mm |
| • Ceiling lining | 1 @ 2120 x 560mm |

**Western red cedar (*Thuja plicata*)**

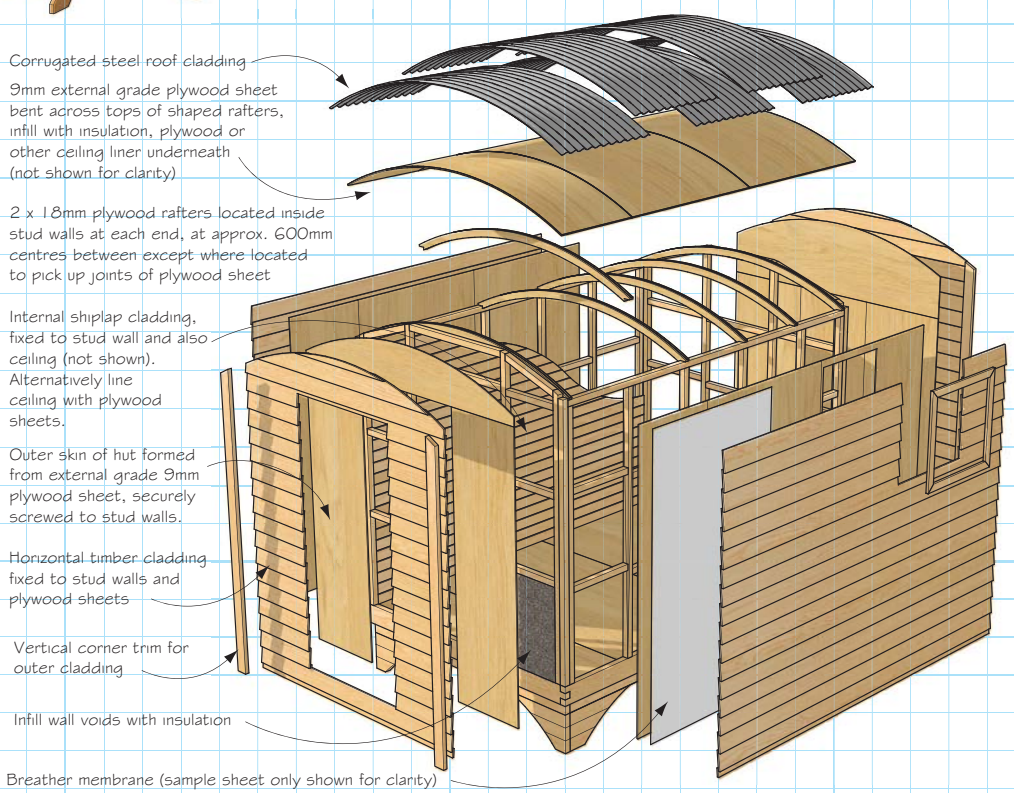
| | |
|---|---|
| • Corner fillets | 4 @ 2309 x 86 x 30mm |
| • Side cladding | 2 @ 3110 x 2271 x 25mm |
| • Front/rear cladding | 2 @ 2532 x 2028 x 25mm |

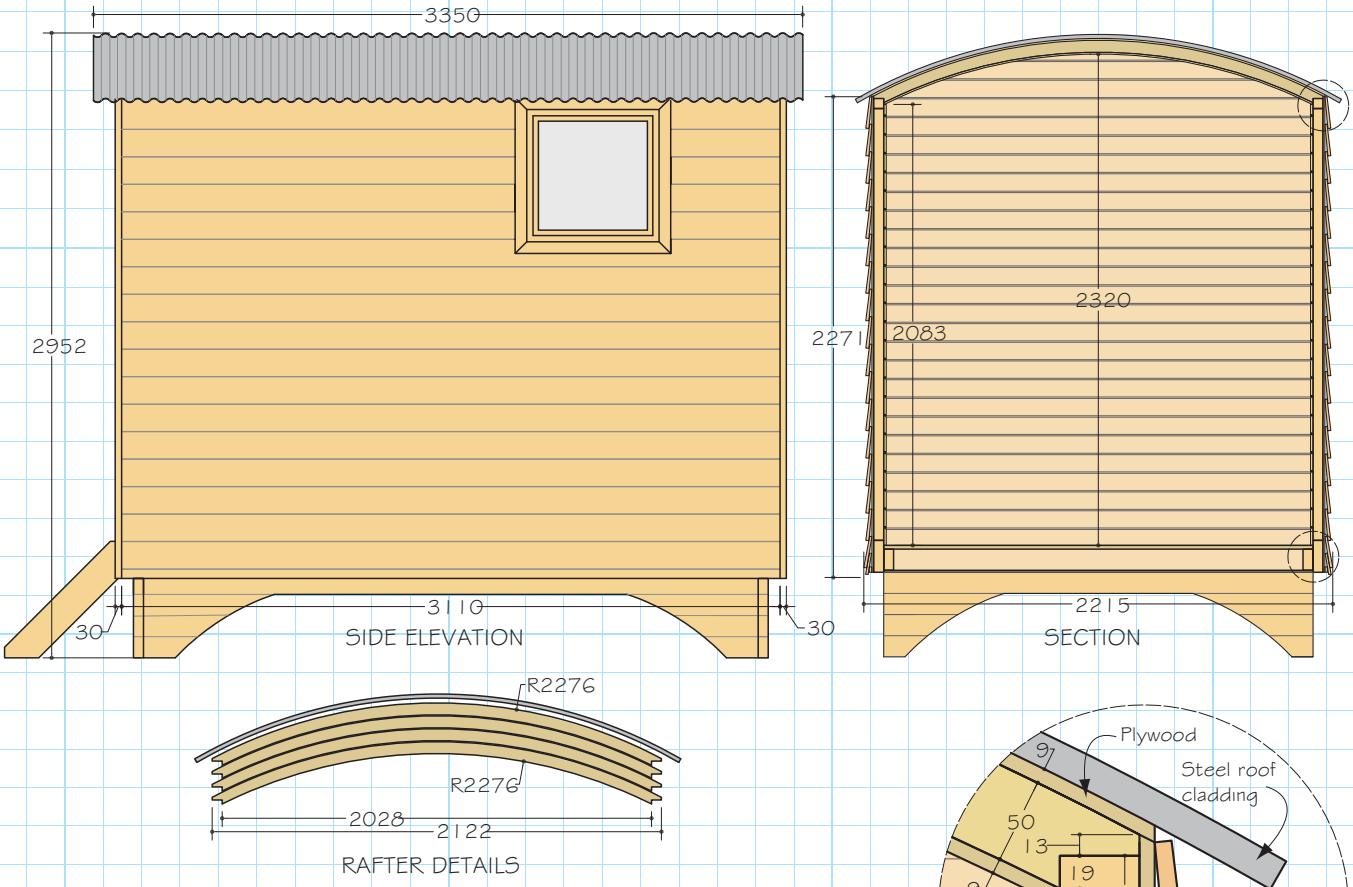
**Shiplap**

| | |
|---|---|
| • Side wall lining | 2 @ 2998 x 2083 x 12mm |
| • End wall lining | 2 @ 2320 x 2028 x 12mm |

### Details

- Plywood sheet sizes, particularly on end wall, are for guidance only, as they are dependent on stud positions and the size of the door opening for the front sheets. Rafters can all be cut from one sheet of 18mm plywood.
- Cladding and lining are given as overall areas covered, and will vary according to section sizes of both. Additionally, door and window openings should be subtracted from this area where appropriate. Internal lining is given as the area of each wall; subtract for corner joints as required.






anchor your roof to the main structure. Some sort of steel angle bracket or cleat is a really good idea, as shallow pitched roofs can generate a lot of lift in high winds.

At this point, you can finish the top sections of the end studwork walls, as the verticals were left long, so cut these flush with the curve of the rafters and brace in between with noggins. With the rafters in place, it is time to add the outer skin to your hut, which in this case is 9mm external grade plywood, a breather membrane and timber cladding. The plywood, as long as it is securely screwed to the studwork, forms very strong structural bracing on the sides and roof, where it will need to be bent into place using the rafters as formers. Obviously, the plywood sheet needs to be cut around the door and window openings, allowing for any framing that you are using. The architrave I've shown mitred around the window is actually fixed onto the surface of the ply, with the cladding finished up against it, but you need to consider these details and how the openings are going to be finished at this stage.

The breather membrane, which will really help to keep your hut dry internally, goes on top of the plywood skin, with joints overlapped and taped according to the manufacturer's specifications. Next, the roof and wall cladding can be fixed in place, with vertical trim on the end walls to finish the horizontal cladding against. Although it is expensive, using western red cedar, with its resistance to rot and insect attack, for the outer cladding will mean a minimum of maintenance over the coming years. The corrugated steel roof cladding will come with recommended overlaps per sheet and frequency of fixings, so make sure you stick to these.

Once your outer layers are in place, and your door and window are installed, infill the wall and ceiling voids with insulation, between all the vertical and horizontal wall timbers and between the rafters. Fixing non-rigid insulation into the ceiling void from below is a tricky operation, but taping across at regular intervals between the rafters until the lining is in place is one answer. Finally, it is time to add the internal linings and I have suggested tongue and groove shiplap for the walls, which you could also use on the ceiling, but that is a matter of personal preference.

All that now remains is to add some steps to your front door and enjoy the retreat that you have created, in peace and tranquillity! ■


## Simon Rodway

Simon Rodway also runs LineMine, a website with articles and online courses on drawing software. A new course, 'SketchUp for Woodworkers', is proving really popular. For details and to get discount coupons, see website details below.

Email: sjr@linemine.com

Web: www.linemine.com/courses


DOWNLOAD
Woodworking
CRAFTS
TODAY FOR JUST £1.99
AND GET 1 FREE ISSUE
Subscribe and get individual issues wherever you are
+ save money!
6-month subscription £14.99
12-month subscription £26.99
Single issues £2.99
pocketmags.com
kobo
nook
by Barnes & Noble
BlackBerry
SAMSUNG
Clean up your act
with dust-free routing
Make a travisher
Windsor chair
Space-saving
SHAKER HALL SHE
UPCYCLING, RECYCLING & RESTORATION SPECIAL
Make a 'shabby chic' wall cabinet
PROJECT:
'Wormy' maple side table
FEATURE:
Woodturner Jason Townsend
TECHNIQUES
Create surface effects with paint finishes
9:41 AM
100%
Antique mirror restoration
Tricks of the trade
Oak dividing screen
Carved cat sculpture
Traditional Shaker bench
ROLLS ROYCE FEATURE
MARQUETRY BUT

QUICK MAKE

# Garden kneeler

You don't have to suffer from a bad back to realise that our handy kneeler is just what you need

1 Use a standard pre-sanded pine shelf board, 200mm wide, and cut two pieces roughly 700mm long.

2 Mark hand cutouts near one end of each board and cut the holes by using a jigsaw, first drilling a pilot hole for the blade to go through.

3 Round all edges of the hand holes and the outer edges of both boards with a rasp except at the bottom ends which must be left square.

4 Cut, glue and screw two lengths of batten to the bottom ends of the boards. These will stop the boards sinking into the ground and will help to spread the load.

5 Saw off a length of the same shelf board, slightly longer than the foam rubber kneeler pad you intend using. Cut, glue and screw two corner strips one under each end.

6 Now glue and screw the board at a slight kneeling angle between the two upright boards going into the corners strips from the outside faces of the uprights. Ensure you make the position identical on both uprights.

7 Apply a varnish to the whole piece to seal it. Once dried, spread a coat of thixotropic contact adhesive to the underside of the kneeler and the top surface of the kneeling board. When the glue is tacky, press the kneeler pad down in position. Now you can get down to weed the garden and up again, much more easily than before! ■

## Things you will need

- Jigsaw
- Drill
- Handsaw
- Rasp
- Wood glue
- Screwdriver and screws
- Rubber kneeler pad
- Varnish
- Thixotropic contact adhesive

## Wood

Pine board (*Pinus sylvestris*)

- 2 @ 200 x 700mm
- 1 @ 200 x length of kneeler pad plus a little extra

PHOTOGRAPHS BY GMC/ANTHONY BAILEY


# Top tips for surface preparation

When you make a project preparing the surface is an important part of the process, so here the **Editor** provides some do's and don'ts to help it go smoothly

The way you treat a surface to get a finish will depend on what it is you are working on and how you want it to end up. A precious antique needs a very careful sympathetic approach to restoration, while a recycled pallet project will take some harsh treatment with coarse abrasives. So you need a different approach that suits each job.

Here are some useful tips and guidance to help you.

1 If an important surface is dented, often a highly visible top surface, you can use a steam iron and paper or an iron with a damp cloth to lift the crushed fibres. Don't try this on an antique though! Leave the wood to dry and if necessary use a fine grit paper to rub away any projecting fibres. Don't expect a perfect result but it will be much less visible.

2 Stripping off an existing finish is justified if it doesn't have a delicate patina or 'acquired' surface finish like antiques do. It becomes necessary if the finish is too thick and likely to clog a sander, paint or varnish for example. Use a safe type of stripper, follow the safety instructions and be patient as the process takes a little time. Neutralise the chemical action in accordance with the manufacturers instructions.

3 Often, surfaces are just very dirty or clogged with wax. You can buy wax cleaning agents that, when used with medium or fine wirewool, can clean a surface nicely ready for a new finish. Wipe away all the dirty residue and allow the surface to dry before any further work.

4 Sanding is the process of 'roughing up' the surface of wood to make it smoother. This is a bit perverse, scratching a surface with sharp pieces of abrasive material just to get a better finish – but it works.

5 There is one golden rule, start with coarser abrasive and work through increasingly finer grits until you are satisfied with the result. This depends on the job, fine quality cabinet work demands a fine finish while joinery will take a coarser finish.

6 Sanding a turned item is often done on the completed item or parts of it, on the lathe while it is turning. It can't be done static as the results would be poor and it is harder work. Remember to remove the toolrest for safety and have an extraction hood close to the work to take the fine dust away.

7 With furniture it is always better to do most abrasive work before a job is fully assembled if you can. It is much easier to work on separate parts and sanding can reach into corners, etc. or before mouldings are applied so it gets sanded properly.

8 One of the worst offences is 'cross grain' scratches caused where the abrasive goes over a join line between perpendicular components. This is hard to avoid but do the piece that butts to the other piece that

If the wood is dented you can use a steam iron and a sheet of cloth to help remove the dent


A wax cleaner and medium wire wool or a scouring pad will remove a lot of dirt from the wood grain

**Above:** There is a very wide range of abrasives available to suit different needs

**Right:** Abranet is particularly efficient at sanding surfaces and it doesn't clog like conventional abrasive paper

runs through, so when you do the latter hopefully its scratch lines will obliterate the other ones.

9 Prepare timber correctly first. If it isn't beautifully flat and smooth to start with, don't expect abrasives to somehow create a perfect result. Softwood can be bought fully prepared and some sections of hardwood also. Anything else will need a planer/thicknesser to flat it and square it.

10 Choose the right starting grade of abrasive. For cabinetwork (as an example) no coarser than 120 grit and possibly finer. This obviates a lot of work and damage in sanding. Veneered surfaces need a finer starting grit still, 240 then running through to 320 grit and possibly 400, the bigger number indicating finer grit particle size.

11 Although DIY stores and builders merchants stock standard aluminium oxide abrasive there are a much wider choice available if you search around. Specialist abrasives and woodworking suppliers can supply finishing papers and web type flexible material and Abranet with is a highly efficient non-clogging form of abrasive.

12 To check whether a surface is really ready to have a finish applied you can put a thin coat of sanding sealer or water-based varnish on an area and check how it looks against the light once it has dried. Also, don't ignore the power of touch as fingertips are a sensitive way of checking the quality of a surface. ■


**Above:** Sanding on turnings is normally done with the work rotating, which is easier and gives a more consistent finish than static sanding

Where wood grain meets at different angles, great care is needed to avoid cross-grain scratches occuring

# Ask the *Experts*

This is your chance to challenge our Editors and for them to answer your comments and queries

ANTHONY BAILEY
Editor,
*Woodworking Crafts* magazine

MARK BAKER
Group Editor,
GMC woodworking magazines

## MAN VS MACHINE

*"This may be more of a philosophical question for you. In a modern digital age with desktop CAD/CAM machines that rout and carve, are craft skills going to die out and be lost forever and do we really need them anyway? Is the outlook for woodworking skills maybe rather depressing?"*

Greg Norman


Working with hand tools is both quieter and more satisfying because skill is involved

*Anthony replies:* Oh dear, you sound like you are on a bit of a downer! Unlike many questions of this era which many of us struggle to deal with, craft skills and in this context, woodworking in particular, have in some ways never been stronger. Yes, you can buy your own CAD/CAM machining centre at a price not entirely 'out of sight' and by the same token, it is true craft education has slumped for a variety of reasons – cost, lack of teaching skills, health and safety and perceived lack of need for such skills. But it's not all bad by any measure. Many, many people want to practise hand skills, often precisely because they want the polar opposite activity to their high stress jobs and always being at the beck and call of emails, texts and social media. That is not to decry the use of programmed machining, it does have a place, but it simply makes us operators, rather than people with hard learnt 'hand and eye' skills which are much more satisfying and improve over time with more experience. Even though teaching of crafts is largely in the hands of private teaching establishments, or maybe because of it, these learnt skills are going to be with us for a long time yet. Indeed, many ancient skills are being revived, green woodworking being one such example. The difference is that in the main we now do these things for pleasure, rather than economic necessity.

## HARD AS NAILS

*"This isn't exactly a woodworking question, it's more of a metalworking one. I've tried drilling a piece of steel and my apparently sharp engineering drill bits won't even look at it. What's the matter here; is the steel hardened in some way? Is there a solution to my drilling problem, please?"*

Nev Biddle

*Anthony replies:* This is quite a common problem, asking steel to cut steel which, when you think about it, is asking rather a lot. The tooling has to be quite a lot harder and the cutting angles on the tip of the drill also have to be correct for it to cut properly. A standard drill bit won't cope and may get damaged as it overheats, even with cutting lubricant applied during drilling. There are drills with a percentage of cobalt in the alloy, which are tougher but may still struggle. I have a side interest in scything, i.e. cutting grass the traditional way. I bought a top quality Austrian blade, but I needed to bolt it to the snath (handle) not clamp it, which it was designed to do. The blade tang was hardened so my drills would not cut through it. Fortunately, I had a Trend carbide-tipped piercing bit which I fitted in a drill press. Running at low speed, it not only made a hole exactly where I wanted it without wandering off course, but it went like a knife through butter. There was no overheating and the long spiral meant there was no tendency to 'grab' as it exited through the other side. I did, however, need a thick block of wood underneath, placed in the machine vice to prevent the tip going straight into the vice itself!

A carbide bit made short work of drilling this blade tang

## STUCK INSERTS

*"I have recently got into routing and trying to work safely and do things by the book. I have an insert plate which has tightly fitting insert rings that need changing as the cutter diameter changes. It seems to be quite an effort to get the rings out as they are such a tight fit. Have you got any tips to making this easier to do?"*

Gerry Smythson

*Anthony replies:* Insert rings have to fit very tightly and flush with the table surface. If they didn't they could easily bounce out due to the high level of vibration during machining. Workpieces could catch on exposed edges of the insert rings if they didn't sit down tightly. Manufacturing tolerances are quite carefully worked out so the rings are a snap fit. My own experience is that the outer ring can be popped out by levering with a large screwdriver; it shouldn't cause damage as they are made out of a tough grade of plastic. The inner ring or rings are a different matter. I found they would sit inverted in the space where they normally sit right way up. Then a smart thump from the handle of a screwdriver or other implement makes them pop out downwards so they are sitting around the router collet nut. Actually fitting rings back in does require some pressure but they should snap back into place. I hope this advice helps.

The set of insert rings can be prised out using a screwdriver to force them upwards and out

Now rest the inverted inserts in the large opening and thump the inner ring with the back end of the screwdriver; it should then separate easily

## IN A FIX

*"I need to fix some 75 x 50mm framing on walls to put up studwork to sub-divide a room. I'm not sure what the right fixings are but the walls are evidently brick as they are so solid."*

Gina Richards

*Anthony replies:* The first thing is to be reasonably sure there are no buried wires or pipes. You can use a metal and current detector. Decent ones are more expensive, but more reliable. Often the best way is to study any wall disturbance and the location of the nearest sockets, pipes, etc.

Standard wall plugs are inadequate for larger timber sections. Frame fixings, i.e. those which go straight through the wood into the wall, are best with at least one and a half the timber thickness buried in the masonry for a solid fixing. You need ideally a mains drill with SDS fitting and hammer action as it can deliver more torque than many cordless drills and a long masonry bit of the right diameter. Don't try using it to drill the holes in the wood as the tip will be too blunt; instead use a brad point bit, drill all the holes, then hold the timber on the wall in the correct position as determined by measuring and spirit level. Now use the masonry bit to drill and mark the wall where all the holes are. Remove the timber and proceed to drill all the marked holes to full depth making sure the combined timber thickness and masonry hole are greater than the frame fixings. Now replace the timber and hammer the frame fixings through the wood deep into the wall. The plastic sleeve sets in position flush with the surface of the wood and the steel centre is hammered home also sitting flush. There is a crosshead you can turn for a neat finish but is seldom usable and the fixing will be set hard in the wall, just belt it one more time to make it sit neatly.

'Knock through' frame fixings are a very effective way to fix frame components to solid masonry

STAR QUESTION PRIZE

The Tool Marketing Company, or TOMACO, as it is known, who sell a variety of tool brands, including COLT, Sharp Edge and Narex Tools, are pleased to be sponsoring the 'Ask the Experts' section in collaboration with GMC Publications.

Each issue's 'Star Question Prize' will receive a Narex six-piece chisel set worth £79.95 and all other published questions will receive a 20mm half-round fine cut Narex rasp worth £20.95. For more information see www.tomaco.co.uk

TOMACO THE TOOL MARKETING COMPANY

If you have anything to say, write to: The Editor, *Woodworking Crafts*, 86 High Street, Lewes, East Sussex BN7 1XN.
Alternatively, email: anthonyb@thegmcgroup.com

By submitting your questions and photos, you agree that GMC Publications may publish your Work in our magazines, websites, electronic or any other mediums known now or invented in the future. In addition GMC may sell or distribute the Work, on its own, or with other related material. This material must not have been submitted for publication elsewhere

# Fixtures & finishes

For our upcycling and restoration special, we thought we'd find some great products... so you don't have to!


## Saral transfer paper sampler pack

Saral® wax-free transfer paper is the superior way to transfer a pattern, template or freehand design to any surface. Saral comes in five colours. Contains five sheets of transfer paper, size 216 x 279mm, one of each colour; graphite, blue, yellow, white and red.

## Brass furniture sash knobs

A classic, traditional, British made, solid brass, cupboard sash knob. This machine made, hand polished and finished cabinet knob is circular in shape with a flat face. Available sizes: 10mm, 13mm, 19mm, 25mm.

## Vinyl gloves

Use gloves, even with waterbase products. Get several pairs if you are planning to layer colors on your project. Applicators will rinse free very well, but the dyes and pigments in waterbase products can stain your hands.

## FireWriter from Antex

Decorate wood, leather or other materials through the careful application of heat with this precision tool. Designers can use the various temperatures to create different shades from very light, to a much deeper burn or heavier infills.


## Le Tonkinois varnish

Le Tonkinois varnish is a natural oil-based yacht varnish, using a Chinese formula dating back two or three centuries. It removes your brush-marks, brings out the natural beauty of the timber, doesn't crack or flake off and is permanent – simply add a further coat every few years.

## 3M cubitron clean sanding film disc

3M has integrated its innovative Precision Shaped Grain – PSG – technology into a brand-new sanding disc, which can last up to six times longer than conventional A/0 80 grit. These sanding discs are an addition to the Hookit range of abrasive discs and the grades range from 80+ to 120+ and can be used on a variety of surfaces, including wood, paint, metal and composites.

## Mirka Gold abrasive sheets

Packs of 10. Sheet size: 230 x 280mm. Mirka Gold is an all-round sanding material that can be used for many purposes. In order to achieve an optimal sanding result, the semi-open grit binding and special stearate coatings are designed to prevent clogging and pill forming.

## Cabinet H hinges – Antique Brass

Solid forged brass cabinet hinges; ideal for cabinets, sideboards or kitchen cupboards. Supplied with finish matching brass woodscrews for surface mounting.


## Milk paint

If you like chalk paints or true milk paints, try pre-mixed Milk Paint from GF. You can mix it, lighten it, distress it, glaze it, layer different colours, antique it – perfect for upcycling or repurposing furniture. Available in 28 mixable colours.

## Contacts

**3M cubitron clean sanding film disc**
Contact: 3M
Price: £34
Web: www.3m.co.uk

**Brass furniture sash knob**
Contact: Tool Nut
Price: From £2.50
Web: www.toolnut.co.uk

**Cabinet H hinges**
Contact: Tool Nut
Price: From £17.99
Web: www.toolnut.co.uk

**FireWriter**
Contact: Antex
Price: £149.99
Web: www.antexcraft.com

**Le Tonkinois varnish**
Contact: B & D Murkin
Price: From £12.50
Web: www.letonkinoisvarnish.uk

**Milk paint**
Contact: General Finishes
Price: £21.60
Web: www.generalfinishes.co.uk

**Mirka Gold abrasive sheets**
Contact: Tool Nut
Price: From £10.50
Web: www.toolnut.co.uk

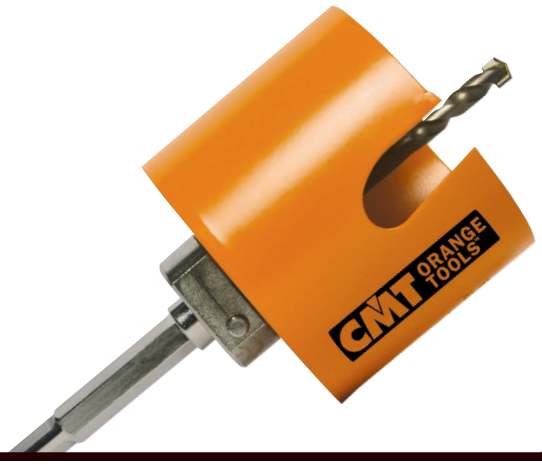
**Saral transfer paper sampler pack**
Contact: Wood Crafts Supplies
Price: £5.75
Web: woodworkscraftsupplies.co.uk

**Vinyl gloves**
Contact: General Finishes
Price: 66p
Web: www.generalfinishes.co.uk

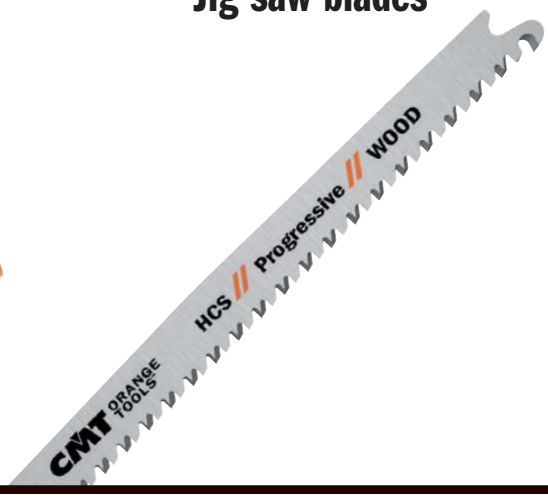
# CMT ORANGE TOOLS™

## Saw blades


## Hole saws




## Jig saw blades




## Sabre saw blades


## Tools with bore & knives

## Router bits & sets

# THE WIDEST TOOLING RANGE

TOMACO
THE TOOL MARKETING COMPANY

**For more information and to find your nearest stockist please visit www.tomaco.co.uk**

# DIY Garage door stile repair

A long overdue repair requires some lateral thinking to sort it out, as the **Editor** discovers!

This garage, like so many, had been converted for storage, so the up-and-over door no longer opened. One stile had become quite rotted at the bottom. Without being able to get proper access to it, some crafty repair techniques were needed to put it right.

1 The first job was to work out how far the rot went. The stile was marked where the wood needed to be cut, so that all the rot would be removed. Because of poor access to the damaged area, the repair section would have to be made up of two pieces; a shorter one behind and a full length section on the front. A weather-angled bevel cut was required to minimise the risk of any water ingress into the finished repair. This cut had to sit flush with the garage door to allow the facing piece to be fitted into place. A multi-tool with curved blade was used (not unlike the cill repair in *Woodworking Crafts* issue 17).

2 The rotted section was levered away and the weather-angled bevel cut was cleaned up with a chisel.

3 A flat face was now created in line with the garage door. ➤


1


2


3

4 Where the original stile is standard softwood, the let-in pieces were oak (*Quercus robur*). The lower rear area was cleaned up and a section of wood was cut to depth and width and pushed neatly into the lower rear gap.

5 The front piece was cut to depth but slightly over length, and marked against the existing stile so that it could be trimmed to slide in nicely. The 'weather bevel' was vital so that water could not run backwards into the joint.

6 The new front piece needed trimming down width-wise. Once cut to size, the faces and edges were planed smooth.

7 The repair piece was tested for fit while the back section was removed. Note that it does not go into the ground socket in the concrete to avoid a repeat of the rot trouble.

8 To eventually disguise the fixings, some oak plugs were cut using a plug cutter. These were matched to the size of the drill/counterbore that was going to be used for the screw holes in the front repair piece.

9 The two pieces were drilled, ready to fix together in situ. Behind the stile area, you can just see polystyrene insulation board, which cannot be fixed into.

10 PU glue was applied to the rear piece of oak on the top edge and the front meeting face.


11


12


13

**11** This piece was pushed upwards and held to create a tight fit, so that it wouldn't drop down while the front piece was screwed to it.

**12** The front piece had PU glue applied to the bevel and was then screwed to the pre-glued rear section. Next, the side was drilled to take two frame bolts, which would lock the whole assembly to the wall.

**13** Before fixing, a quick check made sure the new piece was running in line with the existing stile but not quite vertical as the spirit level shows, so it was adjusted with a screw driver before fixing in place.


14


15

**14** The plugs were glued and tapped into the screw holes, ready to trim off flush later, once the glue had cured.

**15** Exterior filler was used to fill any surface deficiencies, followed by sanding off when dry.

**16** Everything was then sanded down, including the door and rest of the frame, followed by coating everything with wood/metal primer undercoat before rubbing down, ready for the finishing touches.


16


17

**17** Finally, the door joint was sealed and a coat of white gloss paint completed the job. The door stile was now weather tight and safe for some years ahead. This proved a very satisfactory and smart outcome! ■

SIVE • EXCLUSIVE • EXCLUSIVE • EXCL

# SUBSCRIPTION OFFER


## SUBSCRIBE...

to 12 issues of *Woodworking Crafts* for only £40 **(saving over 20%!)** and receive a Trend® Snappy drill set worth £21 for **FREE!**

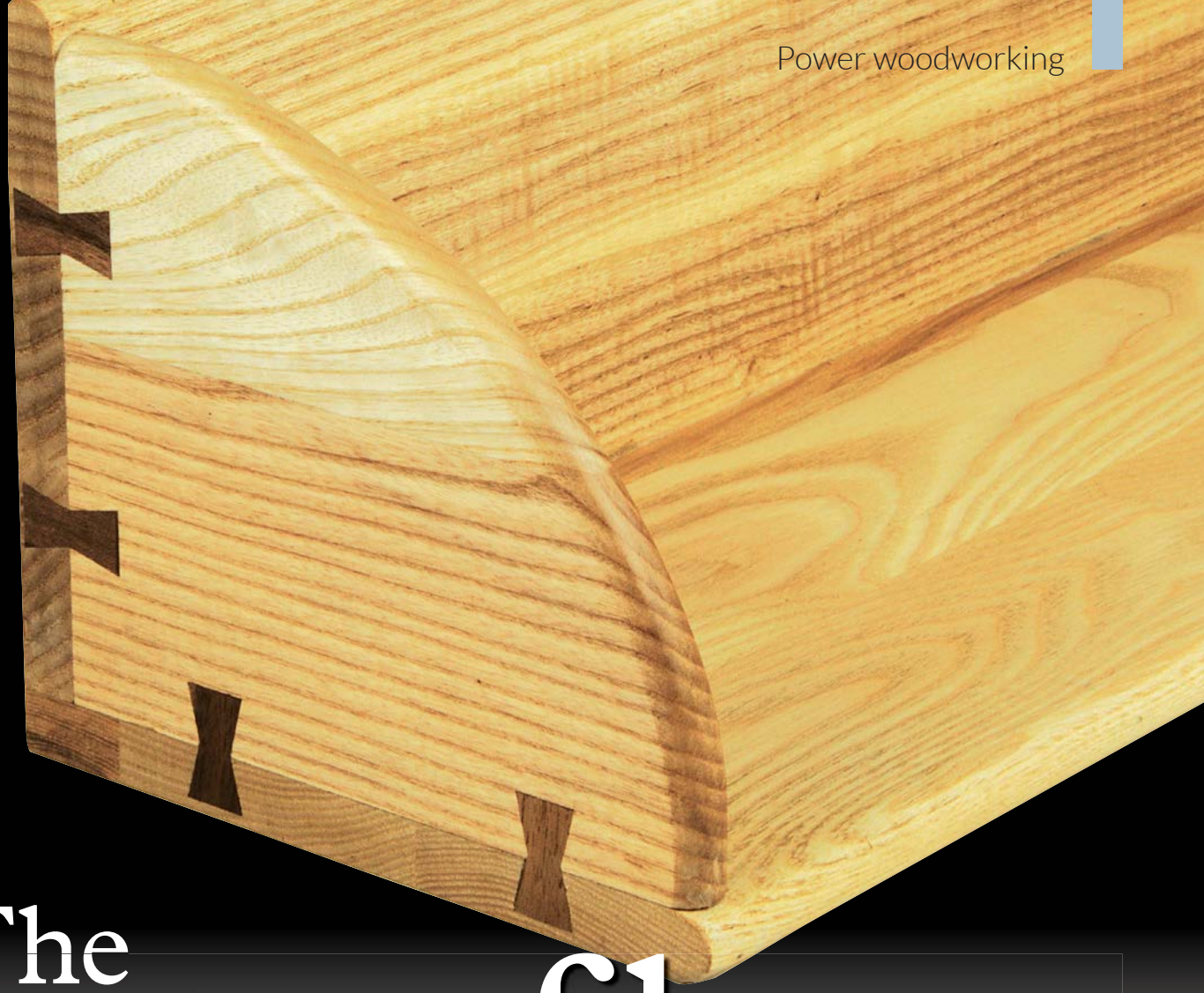

## Reasons to subscribe...

- Pay only £3.33 per issue instead of £4.25
- Free delivery direct to your door
- Expand your range in woodworking knowledge and learn new skills
- Apply techniques and work with different tools and materials
- Cover everything from green woodworking to cabinetmaking to DIY, upcycling and restoration

TO SUBSCRIBE VISIT: **WWW.THEGMCGROUP.COM/OFFER/A5092**

UK SUBSCRIBERS ONLY. WHILE STOCKS LAST. NOT AVAILABLE BY DIRECT DEBIT. OFFER EXPIRES 31/10/2016

PHOTOGRAPHS BY GMC/ANTHONY BAILEY, UNLESS STATED OTHERWISE



# The butterfly joint

## Colin Sullivan takes us through butterfly joints using Trend router cutters

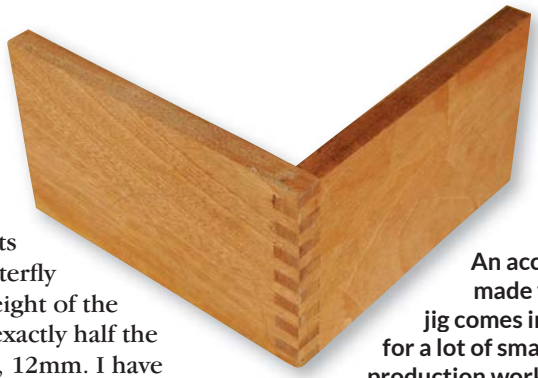
Do you ever get a gut feeling about some jobs? I remember going to measure up for some fitted cupboards some time ago and getting the distinct feeling that no matter how hard I tried the client would never be satisfied. My persivearence paid off eventually and that is what happened when our editor asked me to try out these Trend router cutters. I've never needed to make butterfly joints before and the only time I recall seeing them in the flesh was on Arts and Craft furniture.

They were used on tables, partly as decoration, but mainly to help hold the joints together between the boards on the top. On the face of it, it looks straightforward, two matched router cutters produced especially for making these unusual joints. But I was in for a shock; this is a routing operation that requires very precise setting up. There are seven faces to this joint and they all have to fit neatly together.

To find out how difficult it is to make these butterfly joints I set about making a simple shelf to hold CDs. I wanted to use only the table router because much has been written about it recently and I presume most of you have one. They're simple to set up and most things can be done without making yet another special jig. The butterflies are made from American walnut (*Juglans nigra*) and the shelf parts are made from ash (*Fraxinus excelsior*) as this forms a contrast and makes the joint more visible. I would strongly recommend the use of test pieces for this joint as it's not for the faint hearted. ➤


**The Trend dovetail shaped cutter is made at 104°, a larger angle than the usual dovetail cutter and it has a ¼in shank. The matching butterfly spline cutter has a ½in shank and is 46mm in length**

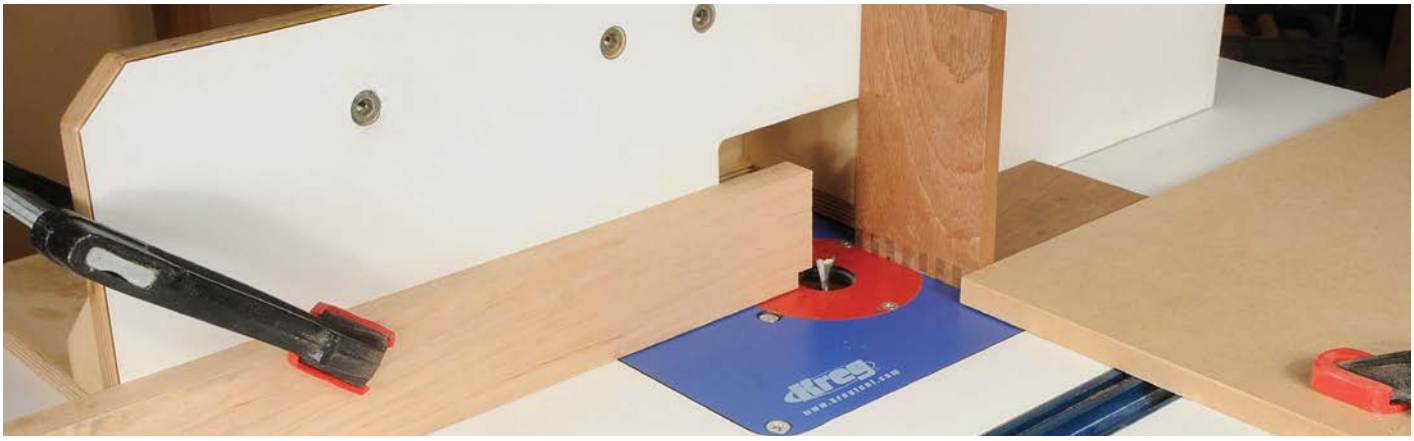
## MAKING BUTTERFLY SOCKETS



An accurately made vertical jig comes in handy for a lot of small batch production work on the router table or saw

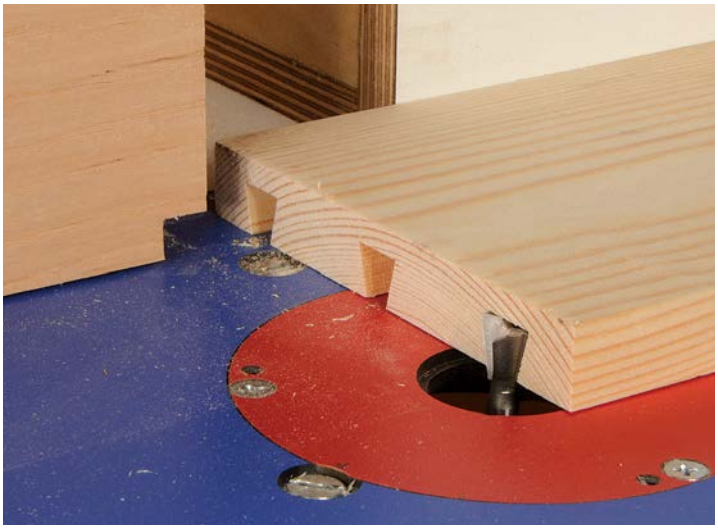

The height required for the dovetail cutter is 12mm. This gauge from Trend takes some of the guesswork out of setting up

There are two ways to set about this joint and I chose to cut the dovetail shaped sockets first and make the butterfly splines to fit it. The height of the cutter must be set to exactly half the length of the butterfly, 12mm. I have a 90º template for vertical work that can be used on the saw or router. By cramping the end piece on the jig I could feed it onto the cutter, the jig needs to run in a track or between the fence and a strip of wood. This is because the cutter kicks the wood away from the fence and must be fed onto the cutter as slowly as possible to avoid break out. Although the cutter is only about 12mm in both directions, it can still drag the wood out of your hand in the most brutal way if you're not prepared for it.
A stop is important because the cut is not right through the end piece, but as deep as possible. The way I set the joints out meant I had to alter the position of the fence several times. In future I would think about it more carefully and make the ends and the shelf the same width, to be able to cut more of the dovetail shapes on the same setting and then trim them to size. My lack of forethought meant I had to mark these cuts carefully onto the shelf and back piece, then line them up centrally with the cutter. The shelf and back was laid flat on the router table to make the cuts, leaving the height of the cutter in the same position.



The router table set up and ready to go with stop, secondary fence and vertical jig

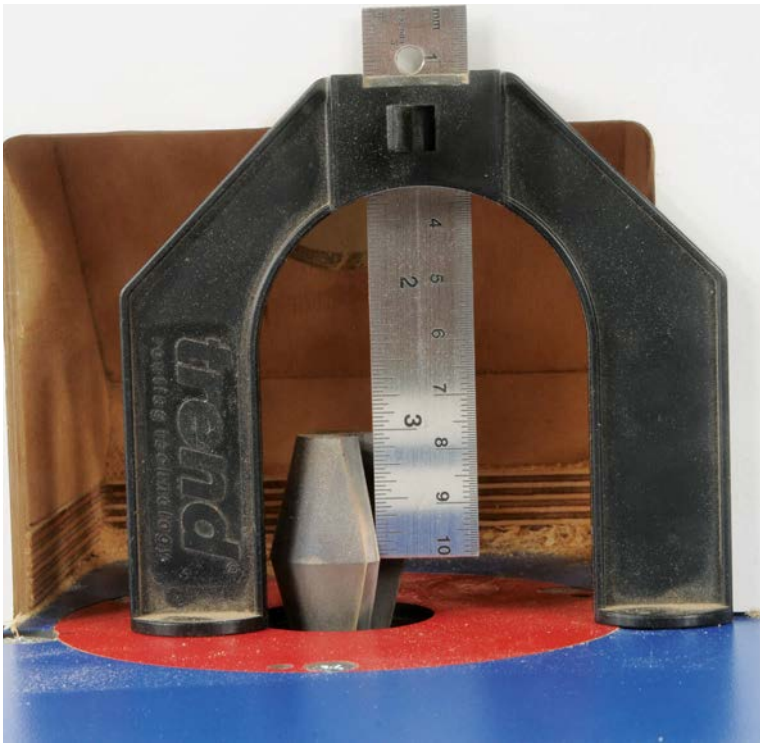
A small cut-out in the stop prevents a build up of waste material and helps with extraction



No extra support is required when creating the dovetails while working flat. The fence can be adjusted across the router table after each of the components have been machined at that setting

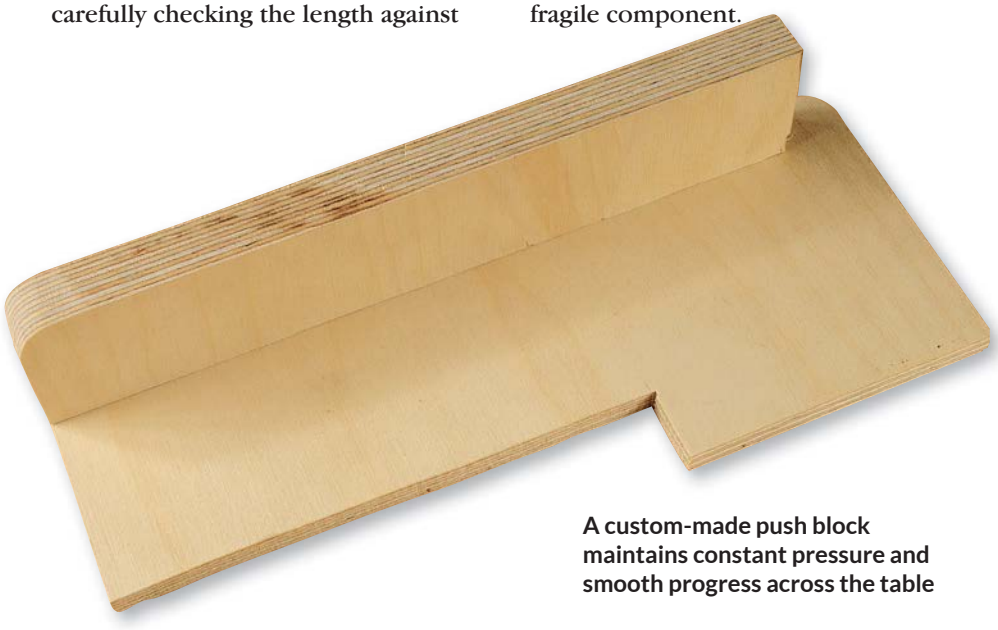
# CREATING BUTTERFLY SPLINES

Measure the size of the butterfly spline required from two mating components...

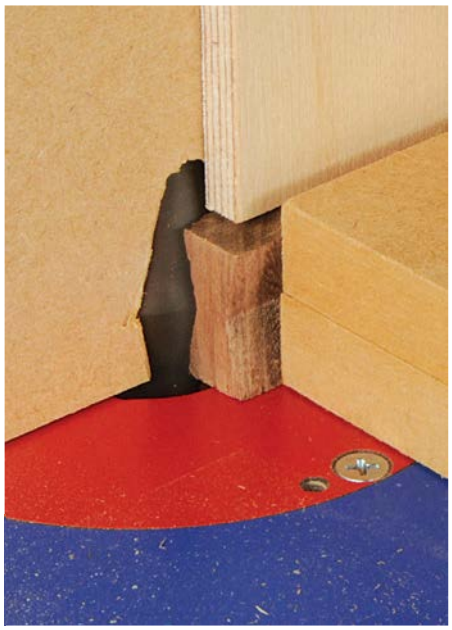



... transfer this measurement to the spline cutter in the router table

The cutter supplied for this has a ½in shank and is much larger in length at 46mm. By the time you read this Trend will have increased their dovetail cutter range to allow for larger splines to be used. I would think it's essential to have a choice and to be able to make bigger butterfly joints. The grain on the butterfly joint needs to run along the length of it, so it's made from a piece of wood cut across the grain. Any tension in the wood will show up now and make it curl very slightly. To overcome this I cut the wood slightly over size, planed it flat on one side and ran it across the saw to size, carefully checking the length against the two dovetail cuts laid together. With the butterfly spline cutter in the table router, I set the centre of the cutter exactly to the length of half the joint in height. Then by adjusting the fence a few times I managed to get the butterfly to fit the dovetail. Extreme care and patience is required at this stage and I spent longer doing this than any other part of the operation. The cutter works well across the grain but it still needs a second fence to keep the size consistent and it's now quite fragile because of being short grain. A custom-made push block allows constant pressure to be applied to this fragile component.



A custom-made push block maintains constant pressure and smooth progress across the table



A through fence as well as a second fence will reduce vibration of the work piece considerably

## Trend cutter details

Butterfly spline cutter 104°
Ref: 10/40X1/2TC
Price: £62.40

Leigh dovetail cutter 104°
Ref: L120X1/4TC
Price: £22.80

From: www.trend-uk.com

## TEST FIT AND ASSEMBLY

The finished test pieces did not require any adjustment...

After cutting a few butterflies from this section I was able to dry fit the shelf together and check the accuracy of my setting out. Next, a quick sanding and it was ready for gluing up. The end sections were left square to make cramping up as easy as possible and shaped after the glue had set. Previously I said there were two ways to set about this joint and the other way is to make the dovetail cut to fit the butterfly, on reflection I think that it would be even more difficult than the way I chose. This is far from being an easy joint to make, there are so many variables to take into account and precision is required at every stage. Is the result in the end worth the effort? I'm not sure, it looks fine, but it's more than decoration, it has to form a function and hold the various parts together.

... just tapping home and levelling off once the glue had dried

## EXAMPLES OF BUTTERFLIES AT WORK

### Bill Laberge

In Bill's Arts and Crafts style furniture he uses embellishments that are functional as well as decorative. Instead of a dowel to pin a mortise and tenon joint, he'll use a peg that's raised and chamfered. Likewise the butterfly spline is decorative, while also providing structure. He makes a router template to create the spline itself as well as the slot that will receive the spline. There's no limit to the shape of the spline which will often be determined by the grain of the wood. For more information visit **www.williamlaberge.com**

PHOTOGRAPH BY JOHN CONTE

An example of butterfly joints in the work of Bill Laberge

### George Nakashima

In addition to makers associated with the Arts and Crafts style George Nakashima's work features butterfly ties to great visual effect although this is not the primary reason for using them. His style is distinctive, he approaches construction with an integrity for the material and a sympathetic ear to what was once a living thing. Symmetry, balance and proportion are interpreted differently as he seeks to produce pieces that are every bit a part of the life cycle of this incredible resource. ■

PHOTOGRAPH BY ROBERT HUNSICKER

This table by George Nakashima shows a very different use for butterfly spline joints

# Advertisers Index





# WOODEN CONSTRUCTION KITS

## *FUN TO BUILD AND FULLY FUNCTIONING*

Winner of 2013 Top Toy of the Year,
and Children's Choice Awards!

Suitable for ages 9+

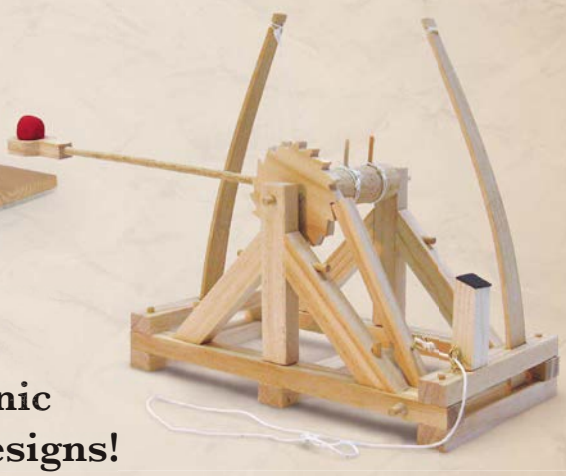
**Da Vinci Trebuchet**
£16.99

**Da Vinci Helicopter**
£14.99

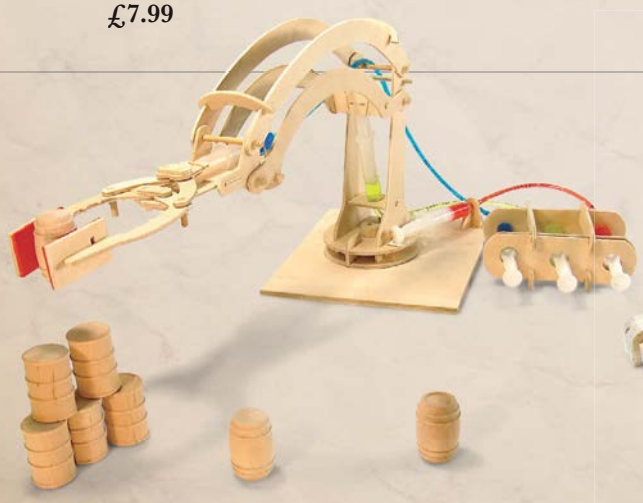
**Da Vinci Ornithopter Wooden Kit**
£25.00

**Da Vinci Bridge**
£7.99

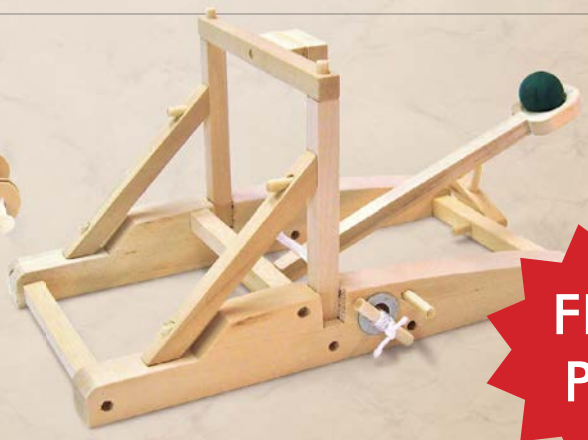
**Based on real, iconic Leonardo Da Vinci designs!**



**Da Vinci Catapult Wooden Kit**
£14.99



**Robotic Arm Wooden Kit**
£14.99



**Medieval Catapult Wooden Kit**
£14.99

FREE P&P

## CALL **01273 488005** TO ORDER YOURS TODAY

QUOTE: R4891

THE CHIPPENDALE INTERNATIONAL SCHOOL OF FURNITURE

www.chippendaleschool.com



www.johnlloydfinefurniture.co.uk
+44 (0) 1444 480388 | SUSSEX

Allan Calder's Ltd Sandpaper Supplies

Unit 2B Churnet Works, James Brindley Road, Leek, Staffordshire ST13 8YH

We are supplying top quality brands of sanding abrasives for all types of wood turners.

Web: www.sandpapersupplies.co.uk

Email: sandpapersupplies@yahoo.co.uk
Tel: 01538 387738

When you need a reliable tradesman for work on your home...

...choose a member of The Guild of Master Craftsmen.
For a tradesman you can trust – and a job done well.

findacraftsman.com
The only place to list members of The Guild of Master Craftsmen exclusively

WEALDEN TOOL COMPANY

Router cutters
Spindle tooling
CNC tooling/collets/toolholders
Bandsaw blades, jigsaw blades
Circular saw blades

www.wealdentool.com

JOIN US ON FACEBOOK
Like our page for regular updates!

WoodworkersInstitute

HOBBY'S
Annual 2017 • Number 47
£3.25 P&P Free
NOW 324 pages

NEW: A range from Dolls House Emporium, useful work and storage stations, and amazing laser-cut plywood mechanical models. Also colourful music box kits, a Matchcraft motorbike and quick-assembly doll's houses.

Available from WH Smith & leading newsagents, or directly from Hobby's.

New articles about pyrography, railway architecture, and George Duckett's review of Constructo's Cutty Sark kit

Hobby's, Knight's Hill Square. London SE27 0HH. 020 8761 4244. Mail@hobby.uk.com
Visit us at www.hobby.uk.com

FREE PLAN COUPON for a working matchstick timepiece

THE MODELMAKER'S YEARBOOK

Would you like to advertise your business to a wide network of woodworkers and hobbyists alike?

Contact Russell Higgins 01273 402841
or russellh@thegmcgroup.com

# Coming next month in Woodworking CRAFTS

ISSUE 19 ON SALE 29 SEPT

**MINI SERIES!**
Find out what you need to know to start turning

# *Amber Bailey takes care of her thin veneers*

- Jason Townsend makes simple keepsake boxes
- Louise Biggs designs a walnut fire surround
- Lee Stoffer introduces a woven top stool project

**PLUS:** Woodland Ways with Gary Marshall • DIY bi-fold doors

**Editor** Anthony Bailey Email: anthonyb@thegmcgroup.com, **Deputy Editor** Briony Darnley, **Designer** Jan Morgan, **Head of Woodworking Design** Oliver Prentice, **Senior Editorial Administrator** Karen Scott, **Illustrator** Simon Rodway (www.linemine.com), **Chief Photographer** Anthony Bailey, **Group Editor, Woodworking** Mark Baker, **Production Manager** Jim Bulley, **Production Controller** Amanda Allsopp Email: repro@thegmcgroup.com, **Publisher** Jonathan Grogan, **Advertising Sales Executive** Russell Higgins Email: russellh@thegmcgroup.com, **Marketing** Anne Guillot, **Subscriptions** Helen Chrystie Tel: 01273 402 873 Fax: 01273 478 606 Email: helenc@thegmcgroup.com
**Printed in the UK by** Stephens and George Print Group, **Distributed by** Seymour Distribution Ltd Tel: 020 7429 4000 **WOODWORKING CRAFTS (ISSN 2057-3456) is published every four weeks by GMC Publications Ltd, 86 High Street, Lewes, East Sussex, BN7 1XN**

**SUBSCRIPTION RATES** (includes postage & packing)

| | UK | Europe | Rest of World |
|---|---|---|---|
| 12 issues: | £51.00 | £63.75 | £71.40 |
| 24 issues: | £102.00 | £127.50 | £142.80 |

US customers should call the Subscription Department for subscription rates in USD ($).

Cheques made payable to: GMC Publications Ltd.
Current subscribers will automatically receive a renewal notice (excludes direct debit subscribers). Post your order to: The Subscription Department, GMC Publications Ltd, 166 High Street, Lewes, East Sussex, BN7 1XU, UK. Tel: +44 (0)1273 488 005 Fax: +44 (0) 1273 402866 Email: pubs@thegmcgroup.com Web: www.thegmcgroup.com

Woodworking is an inherently dangerous pursuit. Readers should not attempt the procedures described herein without seeking training and information on the safe use of tools and machines, and all readers should observe current safety legislation. Views and comments expressed by individuals in the magazine do not necessarily represent those of the publishers and no legal responsibility can be accepted for the results of the use by readers of information or advice of whatever kind given in this publication, either in editorial or advertisements. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means without the prior permission of the Guild of Master Craftsmen Publications Ltd.

Makita®

# THE NEW 10.8V CXT RANGE

**Jigsaw**
JV101D

**Impact Driver**
TD110D

BL MOTOR
**Brushless Combi Drill**
HP332D

**Combi Drill**
HP331D

BL MOTOR
**Brushless Drill Driver**
DF332D

**Drill Driver**
DF331D

BL MOTOR
**Brushless Drill Driver**
DF032D

**Drill Driver**
DF031D

**Circular Saw**
HS301D

**Tile Cutter**
CC301D


**Reciprocating Saw**
JR103D / JR105D

**Drill Driver & Impact Driver Kit**
**CLX201AJ**

**Combi Drill & Impact Driver Kit**
**CLX202AJ**


CXT LITHIUM-ION

## Battery Fuel Gauge

Four LED's on the back of the battery pack activated by a push button, shows the current charge of the battery cells.

## Compact eXtreme Technology

- Individual cell monitoring
- Battery protection circuit
- Low temperature performance to -20ºC
- Battery fuel gauge on battery


BL1040B

3 YEAR WARRANTY

Visit www.makitauk.com to register for your Makita 3 Year Warranty.
*Terms and conditions apply.*

Follow Makita UK

More information can be found at www.makitauk.com

# Engineered Precision


## Get a Grip!

SJA 300

**SuperJaws XXL** portable workstation with a powerful 1000kg clamping force and controlled clamping pressure.

Constructed from tough, powder-coated steel, **SuperJaws XXL** boasts a 1000mm clamping width and will securely clamp almost anything from timber and bikes to doors and fence panels.

Features include a lock/release switch for fast release of the workpiece, reversible jaws for extra-wide capacity and foot-operated clamping for hands-free operation. The greater load capacity of 250kg, allows larger workpieces to be clamped.


triton
Precision Power Tools

tritontools.com