Woodworking CRAFTS

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

Make a mitre cutting jig

for accurate results

FEATURE

Amberley Museum & Heritage Centre

PROJECTS

The Editor's toolbox

Bedroom storage unit

Carved green man mask

Japanese-style coffee table

POCKET HOLE JIG TEST • UPCYCLED WRITING SLOPE • HEXAGONAL PLANTER • WYCH ELM BAST

Machine Mart

65 SUPERSTORES NATIONWIDE

WHERE QUALITY COSTS LESS

Clarke TABLE SAWS

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

FROM ONLY £72.99 EXC.VAT £87.59 INC.VAT

BEST SELLER

CTS10D

INCLUDES LEFT & RIGHT TABLE EXTENSION

MODEL	MOTOR	BLADE	EXC.VAT	INC.VAT
CTS800B	600W	200mm	£72.99	£87.59
CTS11	1500W	254mm	£154.99	£185.99
CTS10D	1500W	254mm	£169.98	£203.98

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

CS4-6E

£92.99 EXC.VAT £111.59 INC.VAT

Clarke 6" BELT/ 9" DISC SANDER

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

CS6-9C

£239.00 EXC.VAT £286.80 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°

£129.98 EXC.VAT £155.98 INC.VAT

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

EVOLUTION FURY5-S TABLE SAW

3 YEAR WARRANTY

FROM ONLY £159.98 EXC.VAT £191.98 INC.VAT

- 1500W motor
- 0-60° mitre gauge
- Cutting depth: Steel 3mm, Wood 85mm at 90° or 58mm at 45°

Clarke WOODWORKING VICES

STANLEY Record

FROM ONLY £14.99 EXC.VAT £17.99 INC.VAT

WV7

MODEL	MOUNTING	JAW (WIDTH/OPENING /DEPTH)mm	EXC.VAT	INC.VAT
Clarke CHT152	Bolted	150/152/61	£14.99	£17.99
Stanley Multi Angle	Clamped	72/60/40	£18.99	£22.79
Record TV75B	Clamped	75/50/32	£21.99	£26.39
Clarke WV7	Bolted	180/205/78	£29.98	£35.98

BLACK & DECKER POWER PLANERS

TE-PL850

- 82mm cutting width

FROM ONLY £54.99 EXC.VAT £65.99 INC.VAT

MODEL	MOTOR	DEPTH OF CUT	EXC.VAT	INC.VAT
Einhell TE-PL850	850W	3mm	£54.99	£65.99
B&D KW750K - G	750W#	2mm	£57.99	£69.59

Clarke 1" BELT/ 5" DISC SANDER

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

£69.98 EXC.VAT £83.98 INC.VAT

CBS1-5

Clarke 40" WOODTURNING LATHE

Ideal for woodturning in the workshop

- 1016mm distance between centres allows for turning longer spindles
- Inc. tool rest, tail stock, drive centre, face plate & 3 chisel
- Large turning capacity of 350mm
- 4 turning speeds

NEW

CWL1000B

ONLY £136.99 EXC.VAT £164.99 INC.VAT

LOCKABLE TAILSTOCK

BENCH MOUNTED

Clarke 13" MINI WOOD LATHE

£154.99 EXC.VAT £185.99 INC.VAT

CWL325V

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

TURBO AIR COMPRESSORS

airmaster

- Superb range ideal for DIY, hobby & semi-professional use

FROM ONLY £89.98 EXC.VAT £107.98 INC.VAT

* 'V' Twin Pump

8/250

MODEL	MOTOR	CFM	TANK	EXC.VAT	INC.VAT
8/250	2HP	7.5	24ltr	£89.98	£107.98
7/250	2 HP	7	24ltr	£94.99	£113.99
11/250	2.5HP	9.5	24ltr	£109.98	£131.98
8/510	2HP	7.5	50ltr	£119.98	£143.98
11/510	2.5HP	9.5	50ltr	£139.98	£167.98
16/510*	3 HP	14.5	50ltr	£209.00	£250.80
16/1010*	3 HP	14.5	100ltr	£259.98	£311.98

Clarke 4" BELT/ 8" DISC SANDER

- Includes two tables
- 550W 230V motor

£159.98 EXC.VAT £191.98 INC.VAT

CS4-8

Clarke DUST EXTRACTOR/ CHIP COLLECTORS

CDE7B

CWVE1

FROM ONLY £109.98 EXC.VAT £131.98 INC.VAT

- Powerful 1100W motor
- 50 litre bag capacity
- Flow rate of 850M3/h

MODEL	MOTOR	FLOW RATE	BAG CAP.	EXC.VAT	INC.VAT
CWVE1	1100W	183 M3/h	50Ltrs	£109.98	£131.98
CDE35B	750W	450 M3/h	56Ltrs	£144.99	£173.99
CDE7B	750W	850 M3/h	114Ltrs	£159.98	£191.98

Clarke HIGH VELOCITY FANS

NEW

CFF18C100

18" BLACK FLOOR FAN

18" CHROME FLOOR FAN

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

NEW

*chrome #black

CFF18B100

MODEL	SIZE/TYPE	EXC.VAT	INC.VAT
CBF20	20" Box Fan	£36.99	£44.39
CFF18C100*	18" Floor Fan	£39.98	£47.98
CFF18B100#	18" Floor Fan	£39.98	£47.98
CPF18B100	18" Pedestal Fan	£49.98	£59.98

Clarke AIR TOOLS

CAT165

CAT111

FROM ONLY £21.99 EXC.VAT £26.39 INC.VAT

HUGE CHOICE IN-STORE/ONLINE

MODEL	DESCRIPTION	EXC. VAT	INC. VAT
CAT111	Orbital Sander	£21.99	£26.39
CAT160	6" Dual Action Random Orbital Palm Sander	£39.98	£47.98
CAT165*	10mm Air Belt Sander	£39.98	£47.98
CAT168	50mm Right Angle Orbital Sander	£34.99	£41.99

*was £59.98 inc. VAT

Clarke HARDWOOD WORKBENCH

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

CHB1500

£149.98 EXC.VAT £179.98 INC.VAT

Clarke DISC SANDER (305MM)

- Powerful, bench mounted
- 900W
- Dust extraction port

£129.98 EXC.VAT £155.98 INC.VAT

CDS300B

Clarke BELT SANDERS

- Ideal for surface removal, sanding and finishing

Makita

ABRASIVE SANDING BELTS IN STOCK

BS1

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

MODEL	MOTOR	M/MIN	EXC.VAT	INC.VAT
Clarke BS1	900W	380	£36.99	£44.39
Clarke CBS2	1200W	480	£79.98	£95.98
Makita 9911	650W	75-270	£89.98	£107.98

Clarke DETAIL SANDERS

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

CDS-1V

FROM ONLY £19.99 EXC.VAT £23.98 INC.VAT

MODEL	WATTS	EXC.VAT	INC.VAT
PS105	105W	£19.98	£23.98
CDS-1V	280W	£29.98	£35.98

ALL MODELS INC. SANDING SHEETS

Clarke SHEET SANDERS

- Ergonomic design for optimum comfort

*was £41.99 inc.VAT

CON300

FROM ONLY £16.99 EXC.VAT £20.39 INC.VAT

MODEL	SHEET SIZE	MOTOR	EXC.VAT	INC.VAT
COS200	190X90mm	150W	£16.99	£20.39
CON300^	230X115mm	330W	£32.99	£39.59

Clarke RANDOM ORBITAL SANDER

- Adjustable front handle improves control
- 7000-14000rpm

£32.99 EXC.VAT £39.59 INC.VAT

CROS3

INC DUST BAG AND SELECTION OF 125MM DIAMETER SANDING DISCS

Clarke ELECTRIC POWER FILE

CPF13

- Variable belt speed
- Tilting head

*Black & Decker

FROM ONLY £49.98 EXC.VAT £59.98 INC.VAT

MODEL	MOTOR	BELT SIZE (mm)	EXC.VAT	INC.VAT
CPF13	400W/230V	13x457	£49.98	£59.98
KA900E*	350W/230V	13x455	£59.98	£71.98

Clarke CIRCULAR SAWS

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

CON185

*Includes laser guide

FROM ONLY £41.99 EXC.VAT £50.39 INC.VAT

MODEL	MOTOR	MAX CUT 90/45 (mm)	EXC.VAT	INC.VAT
CCS185B	1200W	65/44	£41.99	£50.39
CCS2	1300W	60/45	£59.98	£71.98
CON185*	1600W	60/40	£62.99	£75.59

VAC KING WET & DRY VACUUM CLEANERS

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

#was £119.98 inc.VAT

FROM ONLY £49.98 EXC.VAT £59.98 INC.VAT

* SS = Stainless Steel

MODEL	MOTOR	CAPACITY DRY/WET	EXC. VAT	INC. VAT
CVAC20P	1250W	16/12ltr	£49.98	£59.98
CVAC20SS*	1400W	16/12ltr	£59.98	£71.98
CVAC20PR2	1400W	16/12ltr	£64.99	£77.99
CVAC25SS*	1400W	19/17ltr	£67.99	£81.59
CVAC30SSR*#	1400W	24/21ltr	£89.98	£107.98

Clarke PORTABLE THICKNESSER

- Max thickness cap. 125mm and 250mm wide
- Planing depths adjustable from 0-2.5mm
- Powerful 1250W motor

£219.00 EXC.VAT £262.80 INC.VAT

CPT250

Clarke 18V CORDLESS DRILL/DRIVERS

Clarke CONTRACTOR

powered by Li-Ion

CON18Li

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

MODEL	VOLTS	BATTS	EXC. VAT	INC.VAT
CON18Ni	18V	2 x Ni-Cd	£69.98	£83.98
CON18Li	18V	2 x Li-Ion	£89.98	£107.98

Clarke CONTRACTOR 18V BRUSHLESS COMBI DRILLS

- 2 forward and reverse gears

NEW RANGE

powered by Li-Ion

CON180LI

FROM ONLY £109.98 EXC.VAT £131.98 INC.VAT

MODEL	VOLTS	BATTS	EXC. VAT	INC. VAT
CON18LIC	18V	2x 2.0Ah Li-Ion	£109.98	£131.98
CON180LI	18V	2x 4.0Ah Li-Ion	£169.98	£203.98

Clarke OSCILLATING BOBBIN SANDER

- Dust collection port
- Inc. 6 sanding sleeves/bobbins

COBS1

£139.98 EXC.VAT £167.98 INC.VAT

Clarke BOLTLESS SHELVING/BENCHES

- Simple fast assembly in minutes using only a hammer

SAVE 10%

WHEN YOU BUY ANY MIX OF 4 FROM THIS RANGE SAVE AT LEAST £23.99 INC.VAT

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

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

CHOICE OF 5 COLOURS

RED, BLUE, GREY, SILVER & GALVANISED STEEL

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

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

Clarke WHETSTONE SHARPENER (200MM)

- Produces razor sharp cutting edges on chisels, planes, etc.
- Inc. 3 tool holding jigs, workpiece clamp & support frame, polishing paste & water trough

CWS200B

ONLY £119.98 EXC.VAT £143.98 INC.VAT

Clarke PLANERS & THICKNESSERS

CPT800

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

FROM ONLY £184.99 EXC.VAT £221.99 INC.VAT

MODEL	PLANING WIDTH	MAX THICK. CAPACITY	EXC. VAT	INC. VAT
CPT600	6"	120mm	£184.99	£221.99
CPT800	8"	120mm	£219.98	£263.98
CPT1000	10"	120mm	£299.00	£358.80

Clarke OSCILLATING BELT & BOBBIN SANDER

- Sand concave, convex, straight or multi-curved pieces
- Dust collection port
- Inc. sleeves, drum & belt

£179.98 EXC.VAT £215.98 INC.VAT

COEBS1

FAST, EASY FINANCE

- Over 12, 24 or 36 Months
- Purchases over £300
- 12.9% APR, 10% Deposit*

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Clarke SLIDING COMPOUND MITRE SAWS

BEST SELLER

- For fast, accurate cross, bevel & mitre cutting in most hard & soft woods
- 1800W motor
- Laser guide

FROM ONLY £89.98 EXC.VAT £107.98 INC.VAT

CMS10S2

MODEL	BLADE DIA/BORE (mm)	MAX CUT DEPTH/CROSS	EXC.VAT	INC.VAT
CMS210S NEW	210/30	60/120	£89.98	£107.98
CMS10S2	254/30	78/340	£139.98	£167.98

Clarke MITRE SAWS

CMS210

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

Laser Guide ‡ Sliding Compound

- Quality Range of Mitre saws and blades in stock

MODEL	BLADE DIA/BORE (mm)	MAX CUT DEPTH/CROSS	EXC. VAT	INC. VAT
CMS210	210/30	60/120mm	£59.98	£71.98
Einhell TC-MS 2112	210/30	55/120mm	£59.98	£71.98
Einhell TC-SM 2131#	210/30	62/310mm	£129.98	£155.98
Einhell TC-SM 2534‡	250/30	75/340mm	£159.98	£191.98

Clarke WORK TABLE SUPPORTS (PAIR) CWTS1

ONLY £29.98 EXC.VAT £35.98 INC.VAT

- Ideal if you have your own work top or want to build a steel or wood workbench • Inc. mounting holes for worktop, shelf and floor

SIMPLY ADD YOUR OWN TOP

BEST SELLER

Clarke DRILL PRESSES

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

FROM ONLY £66.99 EXC.VAT £80.39 INC.VAT

CDP152B

B = Bench mounted
F = Floor standing

MODEL	MOTOR (W) SPEEDS	EXC. VAT	INC. VAT
CDP5EB	350 / 5	£66.99	£80.39
CDP102B	350 / 5	£79.98	£95.98
CDP152B	450 / 12	£149.98	£179.98
CDP202B	450 / 16	£189.00	£226.80
CDP10B	370 / 12	£198.99	£238.79
CDP452B	550 / 16	£229.00	£274.80
CDP352F	550 / 16	£229.00	£274.80
CDP502F	1100 / 12	£499.00	£598.80

Clarke CONTRACTOR BOSCH JIGSAWS

BEST SELLER

FROM ONLY £15.99 EXC.VAT £19.19 INC.VAT

CON750 *DIY #Professional

MODEL	POWER (W)	DEPTH OF CUT (WOOD/STEEL)	EXC. VAT	INC VAT
CJS380*	420W	55/6mm	£15.99	£19.19
CON750#	750W	80/10mm	£27.99	£33.59
Bosch PST700E*	500W	70/4mm	£49.98	£59.98

Clarke BENCH BANDSAW

- Produces fast, precise mitre & longitudinal cuts
- 350W motor
- 7.5" throat size
- Cuts in all types of wood

£129.98 EXC.VAT £155.98 INC.VAT

CBS190B

BISCUIT JOINTER

- 11000rpm Operating Speed • 860W motor • 14mm Cutting Depth • Inc. dust bag, storage case and face spanner for cutter change

NEW

2 YEAR GUARANTEE

£52.99 EXC.VAT £63.59 INC.VAT

TC-BJ900

Clarke MORTISING MACHINE

£174.99 EXC.VAT £209.99 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 SCROLL SAWS

CSS400C

FROM ONLY £82.99 EXC.VAT £99.59 INC.VAT

BEST SELLER

- 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	£82.99	£99.59
CSS16VB	90W	550-1600	£94.99	£113.99
CSS400C	90W	550-1600	£114.99	£137.99

Clarke CORDLESS STAPLE/NAIL GUN

- All models include nail/staple pack and tough moulded case • 18V 2Ah Li-ion power pack • 18 Staple/Nail Gauge

ONLY £109.98 EXC.VAT £131.98 INC.VAT

CONSN18LIC

SPARE NAILS / STAPLES IN STOCK

ELECTRIC AND CORDLESS MODELS IN STOCK

Clarke MULTI FUNCTION TOOL WITH ACCESSORY KIT

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

£39.98 EXC.VAT £47.98 INC.VAT

CMFT250

Clarke STATIC PHASE CONVERTERS

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

PC60

ROTARY PHASE CONVERTERS ALSO IN STOCK

FROM ONLY £229.00 EXC.VAT £274.80 INC.VAT

CONVERT 230V 1PH TO 400V 3PH

MODEL	MAX. MOTOR HP	FUSE	EXC.VAT	INC.VAT
PC20	2HP	10Amps	£229.00	£274.80
PC40	3.5HP	20Amps	£269.00	£322.80
PC60	5.5HP	32Amps	£319.00	£382.80

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

£57.99 EXC.VAT £69.59 INC.VAT

CDTJ12

Clarke PROFESSIONAL BANDSAWS

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

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

CBS300

FROM ONLY £199.00 EXC.VAT £238.80 INC.VAT

MODELS ALSO FEATURE:

MODEL	THROAT DEPTH	MAX CUT 90°	MAX CUT 45°	EXC. VAT	INC. VAT
CBS225	228mm/9"	90mm	50mm	£199.00	£238.80
CBS300	305mm/12"	165mm	115mm	£399.00	£478.80
CBS350	340mm/14"	225mm	160mm	£498.00	£597.60

Clarke CONTRACTOR BOSCH ROUTERS

- Powerful heavy duty machines ideal for trade and DIY use

CR2 INCLUDES 15 PIECE KIT WORTH OVER £20

FROM ONLY £46.99 EXC.VAT £56.39 INC.VAT

CR1C

*DIY

MODEL	MOTOR (W)	PLUNGE (mm)	EXC.VAT	INC.VAT
CR1C*	1200	0-50	£46.99	£56.39
Bosch POF1400ACE	1400	0-55	£89.98	£107.98
CR2	2100	0-60	£119.98	£143.98

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)

£69.98 EXC.VAT £83.98 INC.VAT

Clarke GRINDERS & STANDS

- Stands come complete with bolt mountings and feet anchor holes

6" & 8" AVAILABLE WITH LIGHT

FROM ONLY £32.99 EXC.VAT £39.59 INC.VAT

STANDS FROM ONLY £47.98 INC.VAT

POLISHING KITS 4" TO 8" FROM ONLY £27.59 INC VAT

With sanding belt *8" whetstone & 6" drystone

MODEL	DUTY	WHEEL DIA.	EXC.VAT	INC.VAT
CBG6RP	DIY	150mm	£32.99	£39.59
CBG6RZ	PRO	150mm	£42.99	£51.59
CBG6RSC	HD	150mm	£54.99	£65.99
CBG6SB#	PRO	150mm	£54.99	£65.99
CBG6RWC	HD	150mm	£59.98	£71.98
CBG8W* (wet)	HD	150/200mm	£56.99	£68.39

Machine Mart Xtra

Professional woodworking tools and machinery from Record, Sheppach, SIP and more!

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In the September issue...

Hello everyone and welcome to the September issue of Woodworking Crafts

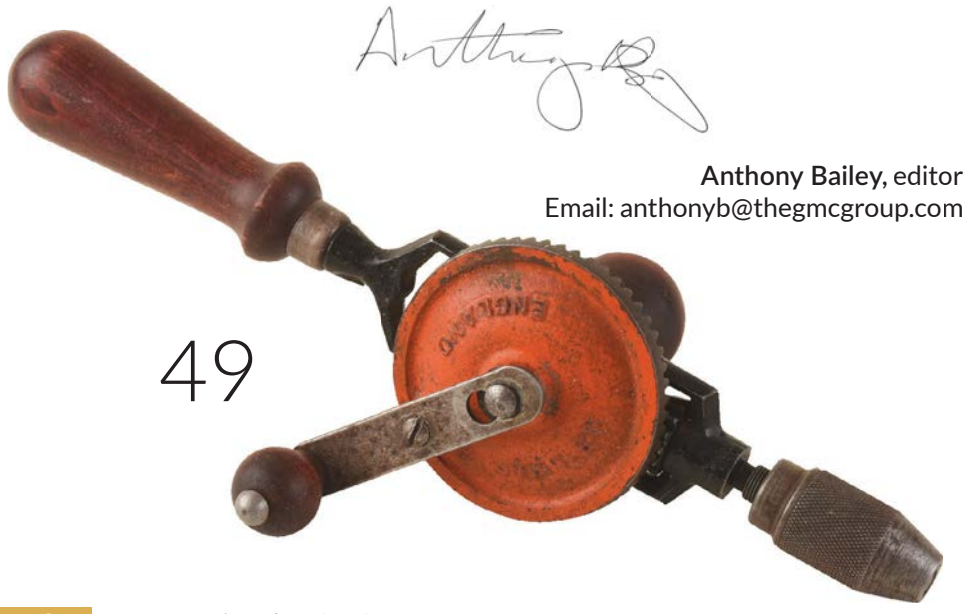
A meeting of minds

Does anyone remember James Burke, who regularly appeared on BBC's *Tomorrow's World* and various other tech-based programmes? I do, and I remember him giving a lecture, back in the '90s I suppose it was, when he made the prophetic statement that 'in the future it won't be what you know, but how you communicate it'. In other words, it isn't the content that matters, but knowing how to pass that content around to people you think should receive it. We all get spam emails, which are a perfect example of something that someone else thinks you need – even though you don't. How about free apps on your phone that contain ads to offset the cost of the 'freeness'? We are now in a world obsessed with communication. Sit in any restaurant and see how many couples are actually engrossed with their mobiles, rather than conversing with each other – don't blame kids for a lack of social engagement either, this is the world we have given them…

So, on a more positive, uplifting note, there are magazines – such as this one. We don't press it on anyone, you have chosen to buy it because you want to. We don't fill it with tosh, we have real people making and doing real things, with wood. Sometimes it's easy to forget there are also many other people out there, like you and I, using tools and working with wood and other materials. What we need to do is rebuild a society where we can not only care more about each other and junk selfishness, but also learn or relearn practical skills which enable our survival as a species, and give us pleasure and satisfaction in the process.

That is my little homily over and done – but while I have your attention, I do feel there needs to be a better way to link the digital world we are stuck with and the world of print we elect to read. Well, if you are an iPhone owner (sorry android users, this doesn't work for you) you can download an app called URL Scanner.

Point the scanning rectangle at any URL (web address) in *Woodworking Crafts* – many articles have weblinks at the end – or any other magazine if you must, tap the screen and it will take you straight to that website, so long as you have internet access. Clever eh? It becomes a bit addictive, thus rather undermining my argument about the need to disengage from the digital world.



Anthony Bailey, editor
Email: anthonyb@thegmcgroup.com

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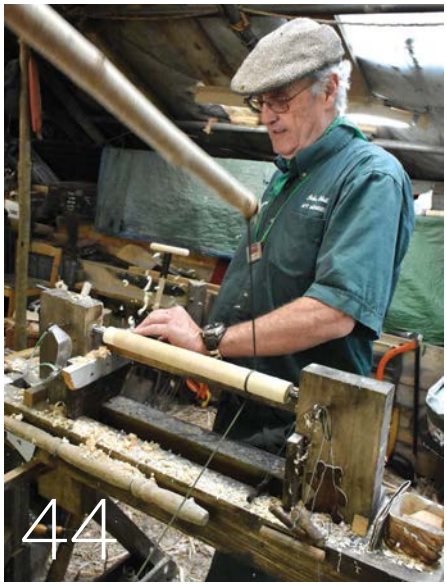

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There is a vast array of handles and knobs available. Traditional comes in various flavours and so do contemporary designs too

Design INSPIRATION

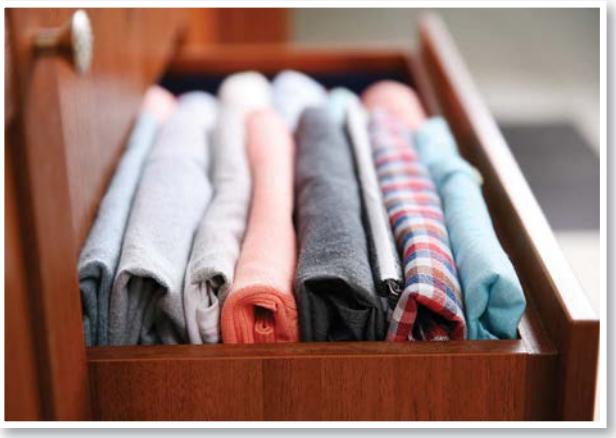
Wardrobes are all about storage but generally hidden away. What makes your own project unique may be down to the choice of handles and internal fitments

Make hanging space to suit the typical length of garments, that way you may be able to fit drawers underneath as well

Right: A pierced pattern with ring handles can create a room atmosphere when combined with drapes and other touches

For special items it may be preferable to have individual compartments and careful storage so they are always ready to use

Hangers don't have to be bent wire, choose a design that looks good but also gives correct hanging to each garment



Careful folding and organisation takes a little time but more will fit in and you won't be ashamed to open the drawers!

Sometimes the simplest of drawer pulls combined with soft-stop runners are quite enough and go well with wood grain

PHOTOGRAPHS COURTESY OF SHUTTERSTOCK

PHOTOGRAPHS ON THIS PAGE BY BEN HURRELL - HYLANDS HOMES

Bedroom storage unit

Louise Biggs creates a custom wardrobe

Designed by Jon Hurrell of Hylands Homes, the units would provide some much-needed storage space. Fitting in one end of a small bedroom which had an odd configuration of walls at one end, the units were constructed in my workshop before being disassembled, transported and fitted in place by the client. The oak fascias are dry fitted and have been left wider in order that the client can scribe them to the shape of the walls and ceiling. The pull-out hanging rail will also be fitted by the client. The job, with the exception of the fascia, is constructed from white oak-veneered MDF boards of varying thicknesses.

Site visit

The site visit revealed that the walls were anything but square, upright or even parallel. The necessary measurements were taken so that a full-sized workshop rod could be drawn out, making the necessary allowances for the walls. The height was reduced by 20mm and the width/depth of each unit reduced 20mm/10mm accordingly. The drawing had the key dimensions and the details were worked out to proportionally resemble the drawing.

1 The wardrobe unit was to be divided into two parts in order to get it upstairs. The division was made above the drawers. The four sides of the units were cut to size and a rebate cut along the back edge to allow for the back panel. The top and bottom of the upper section were fitted into a rebate half the thickness of the board. This was stopped in from each end to prevent the MDF board splitting and was cut using the router and a straight cutter.

2 The shelf of the upper section and the bottom of the lower section had a housing cut the thickness of the board. This was cut in two passes with a 12mm cutter in order to get the tightest fit. The router was run against a guide clamp carefully measured and set up to cut at right angles to the front edge.

3 A matching piece of board was used to check the fit into the housing and adjustments were made on the second cut to obtain the necessary fit. Shoulders were then cut on both ends of the shelf/top/bottoms so that the back rebates and front edges were flush.

4 The top of the lower section was held with two rails, the back rail set flush with the rebate, the front rail positioned behind the drawer front so it was not visible. Large dovetails were marked out and cut at the ends of the rails using a Gent's saw. ➤

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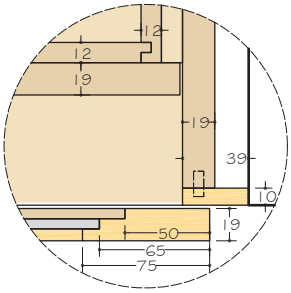
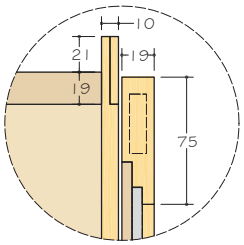
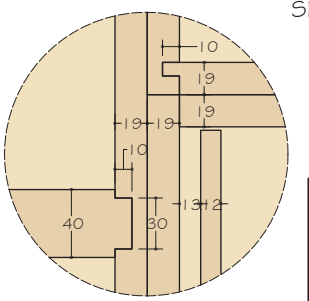
PHOTOGRAPHS BY LOUISE BIGGS UNLESS OTHERWISE STATED

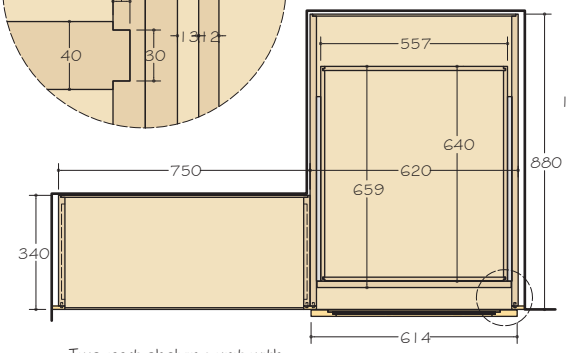


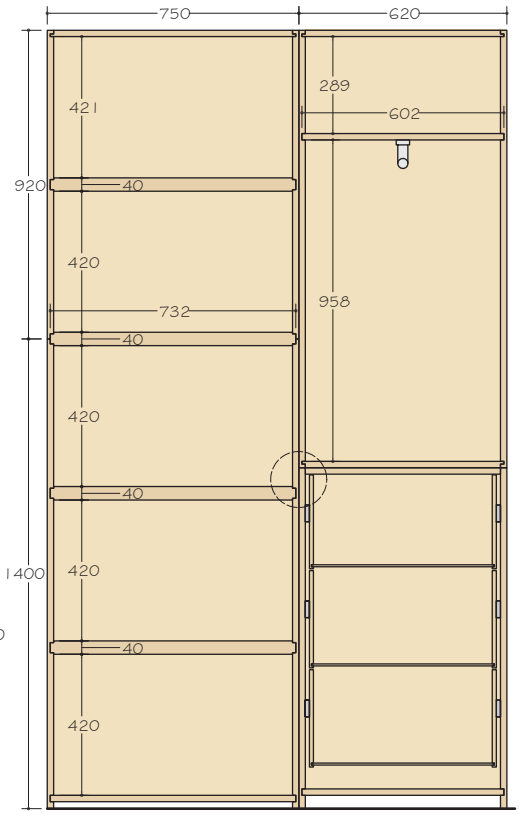


SECTION DETAILS

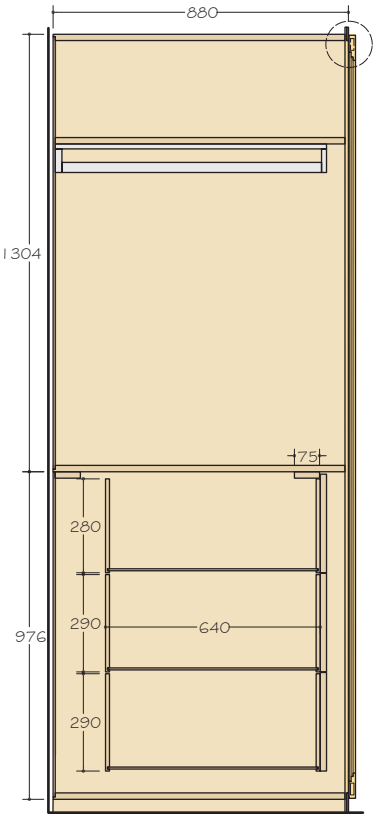


PLAN / SECTION





CROSS SECTION

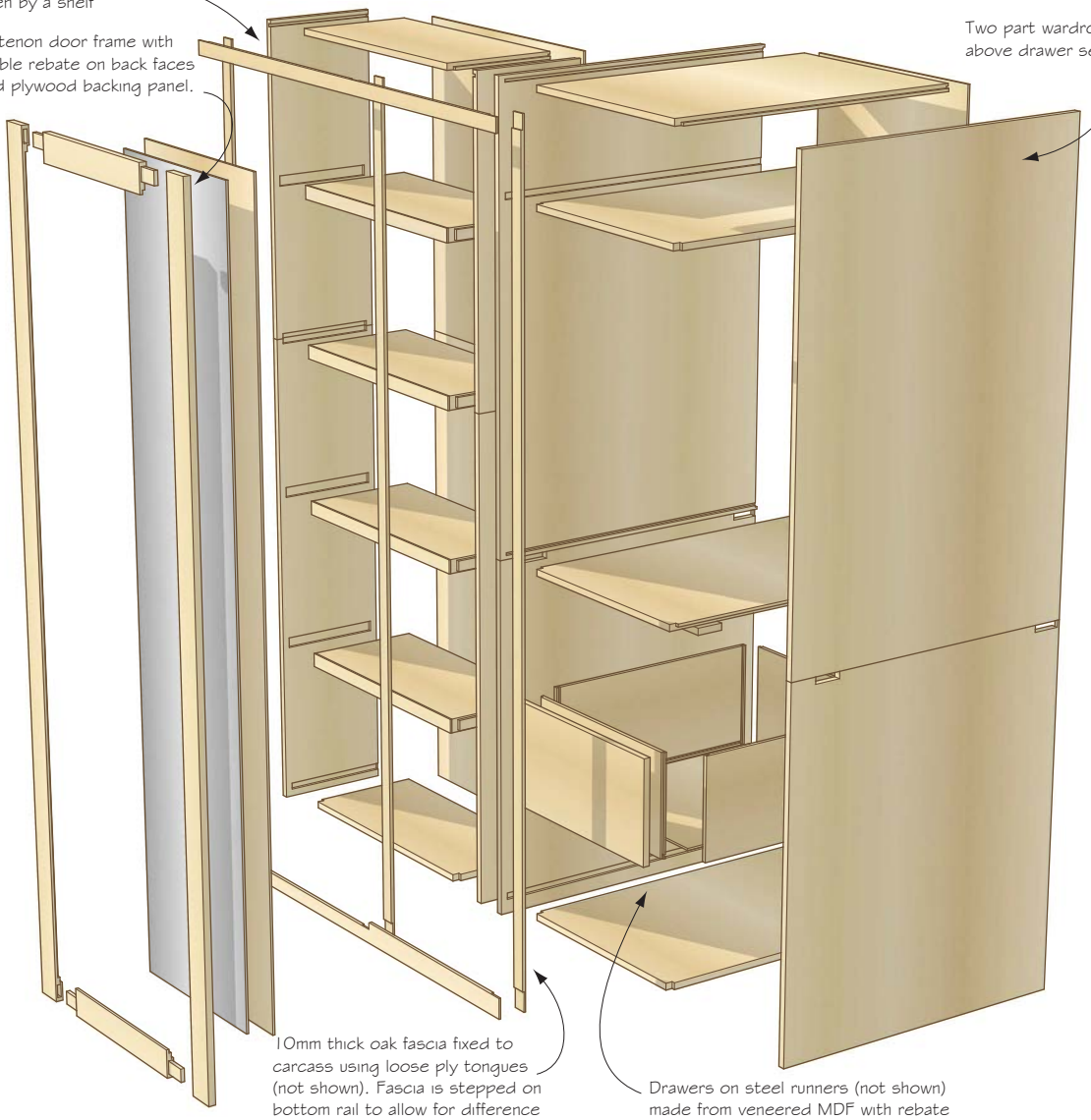


SHORT SECTION

Two part shelving unit with division hidden by a shelf

Mortice and tenon door frame with stopped double rebate on back faces for mirror and plywood backing panel.

Two part wardrobe unit divided above drawer section



10mm thick oak fascia fixed to carcass using loose ply tongues (not shown). Fascia is stepped on bottom rail to allow for difference in bottom shelf heights

Drawers on steel runners (not shown) made from veneered MDF with rebate joints to drawer box and false front

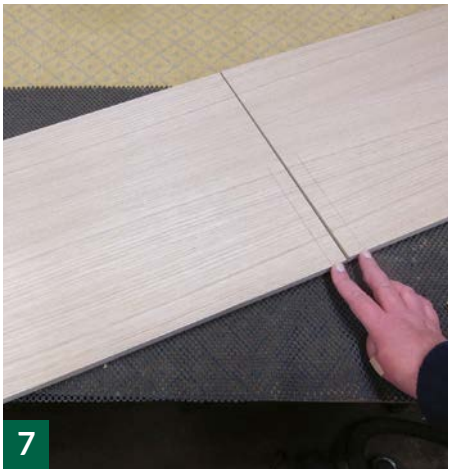
5 Once the rail joints were positioned and marked, the side panels were cut. The dovetails were cut down the sides before the shoulder line was cleared and the waste removed using a chisel, adjusting as required for a tight fit.


5

6 The two sections of the wardrobe unit were ready to be glued and screwed together with the backs being glued and pinned. These were put aside while the shelving unit was made. All exposed edges were covered with an iron-on veneer.


6

7 The shelving unit was also made in two sections, the split being placed in the middle of one shelf. The side panels were marked for the top and bottom and the position of the shelves. Being 40mm thick this allowed a good amount of shelf to be fixed into the bottom and top section.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8 A 20mm housing was cut into the side panels using a router and guide clamp, allowing them to be fitted from the back with a stopped shoulder at the front. A 10mm rebate was cut on either side of the shelf to lock the shelves into position. With all the housings and rebates cut the two sections were glued and screwed together.


8

9 I would normally make the drawer carcasses from timber and dovetail the corners but the client requested they were made from MDF, which left the problem of how to joint them for the greatest strength considering the size of the drawers. The bottom panel would be contained within a groove, the corners would have a stopped groove on the sides with the back and front panels rebated for a flush fit. With all the positions marked out the grooves and rebates were cut using the router and a straight cutter. The carcass for the top drawer was kept 20mm shorter to allow clearance for the top rail of the carcass.


9

10 Each drawer carcass was glued up using sash cramps with protective blocks at the corners. Being MDF and with little chance of moving the bottoms were glued into place. This is not something I would normally do but it would add more strength to the large carcass. ➤


10

11 A plinth was set up on the floor and packed/wedged until it was level in both directions. Using a variety of tapes, the packing/wedges were secured and the plinth held in position. Before assembling the units on the plinth a groove was routed around the edges to take a loose tongue which would form the joint for the timber fascia. The grooves were kept clear of the joints for the main carcasses.

12 The carcasses were screwed together to form the two units before being positioned on the plinth when the two units were screwed together. The screws to join the bottom sections were kept behind the line of the drawers. In the top sections they were drilled to take a coloured screw cover. The screws were all fitted from the inside of the wardrobe into the shelving unit.

13 The inner parts of the double extending runners were fitted to the drawer carcasses, 90mm down from the top edges. A clearance of 65mm was left for the bottom hinge of the door. Double checking all calculations, a board was cut to support the bottom drawer runners in the correct position. With the bottom runners fitted the exercise was repeated to fit the middle and then the top runners. This ensures the runners are fitted at the same height. A small block positions the runners back from the front edge.

14 With the drawer carcasses fitted, the secondary drawer fronts were fitted, starting with the bottom drawer and working up. Thin card was used to act as a spacer down the sides and along the top edges. The fronts were fitted by screwing through from the inside of the carcass and can be removed in order to fit the drawer handles.

15 The oak fascias were planed to 10mm thick, the middle fascia covering the join of the units was planed to the correct width and grooves cut on the router table to correspond with the loose tongues on the carcass. The two outer uprights were left wider for scribing into the walls. The bottoms of the units were at different levels, requiring a step to be cut in the fascia. To keep a straight edge this was run through the tablesaw and the return sawn off by hand.


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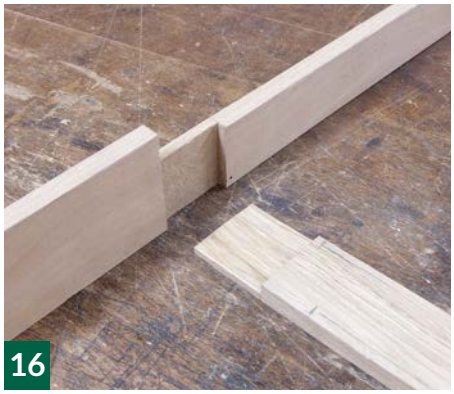

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16 Half-lap joints were cut at the corners of the fascia and at the mid stile top and bottom. The thickness was marked with a gauge and the joints cut by hand. All of the fascias were fitted dry, but would be glued in position on site at the fitting stage.

17 The door frame was mortise and tenoned at the corners with stopped double rebates cut on the inside edges the first for the mirror and the second for the ply panel fitted behind the mirror. Typical 'kitchen style' hinges were fitted with a 180° swing to clear the drawers.
One hinge was fitted at the bottom and three spaced out across the top unit, necessary due to the weight of the mirror.

18 The rebate for the mirror was blacked out, the mirror placed in the frame and the back panel fitted. The units were now finished, abraded through the stages with a final clean up, and ready to be delivered and fitted on site by the client. ■

Tool List

- Panel or table saw
- Planer/thicknesser
- Gents and dovetail saw
- Chisels – various sizes
- Pin hammer
- Screwdrivers – various sizes
- Drill and drill bits
- Router plus cutter and table
- Iron for iron-on edging
- Jack plane
- Cabinet scraper
- Guide clamp
- Sash and 'G' cramps
- Squares – various sizes
- Full dust extraction.
- Personal Protection Equipment
- Ear protection
- Safety glasses
- Dust mask

17

18

A woodworking glossary

The letter T

TABLESAW A stationary, motor-driven circular saw which has a crown guard, fence, mitre protractor and may have an outfeed table and/or dimensioning table.

TACK CLOTH A sticky cloth used to remove dust particles from a surface before applying lacquer, varnish or French polish.

Tack cloth used to remove dust

TACK TIME The time it takes glue to begin to grip – some adhesives claim a fast tack time.

TAIL The dovetail shape of a joint whose shape is cut into the face of a board and which fits around the pins.

TAILSTOCK The unpowered end of a lathe with centrepoint fitted, which holds one end of a workpiece while spindle turning.

TAMBOUR A type of sliding door that employs a number of narrow wooden strips meeting in a loose tongue and groove, attached to a piece of backing cloth and set in a track.

Tambour shutter cabinet by Mark Findley

TAPER Any cut that gradually decreases a workpiece's dimension toward its end.

T-BAR CLAMP A more heavy-duty version of a sash clamp, used for applying controlled pressure during panel assembly.

T-bar clamps holding a slatted frame

TEAR-OUT Splintering caused on the underside or end of a workpiece when a saw blade, router bit or other cutter exits the wood.

TEETH PER INCH (TPI) A method by which saw blades are classified based on the number of teeth in a 1in span. Still used instead of metric measurement.

Teeth per inch on a skip-tooth blade

TEMPERING A heat process used to harden a blade or knife to create a better cutting edge.

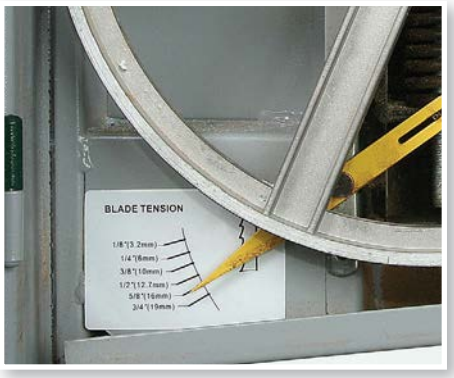
TEMPLATE A pattern used to guide a router or other cutting tool.

TENON The stub on the end of a workpiece, usually with a shouldered profile to insert into a matching hole, or mortise that is cut into another workpiece.

A template for a panel

PHOTOGRAPHS BY GMC/ANTHONY BAILEY UNLESS OTHERWISE STATED

TENSIONING Describes the amount of tautness applied to a bandsaw blade by using an adjustment handle. It varies according to blade width; wider ones needing greater tensioning.



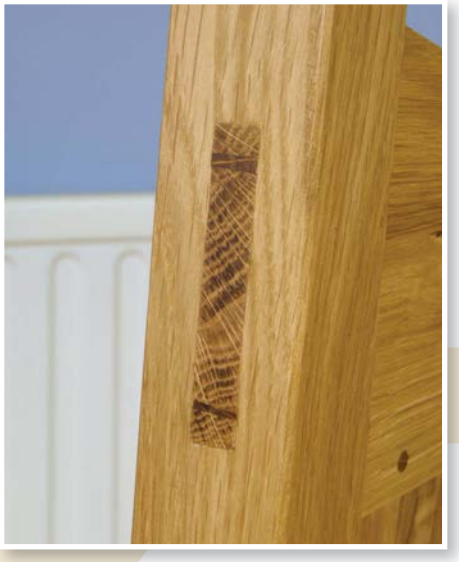
Tensioning scale on a bandsaw blade

PHOTOGRAPH BY ALAN HOLTHAM

THREADED INSERT A small metal cylinder threaded inside and with some form of thread pattern on the outside, designed to be screwed into a workpiece and left there as a precise anchoring point for a bolt or threaded fastener.

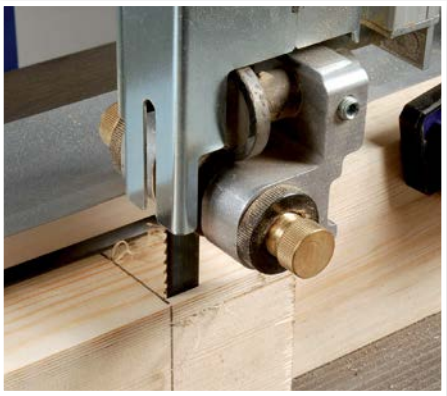
THROUGH DOVETAIL JOINT Similar to the half-blind dovetail joint, but much easier to make. It offers great strength and visible joinery on both faces of the corner. It typically appears in case construction to join the top, bottom and sides. Also commonly used in drawer box rear joints.

THROUGH MORTISE-AND-TENON JOINT The through tenon is exposed on the opposite side of the joint. It needs to be well executed or the exposed end can look a little sloppy.



Through-wedged tenon

THRUST BEARINGS A metal wheel or bearing mounted behind a bandsaw blade which prevents the blade from moving backwards and off the bandwheels.



Thrust bearings

TIGER FIGURE A type of wood grain that somewhat resembles a tiger's stripes, typically in oak.

T-NUT Mounting hardware in a T-shape, driven into a workpiece and left there as an anchoring point for a bolt or other fastener.

TOE-NAIL The act of driving a nail at an angle through one workpiece into another. Fixing perpendicular studwork for partition walls is a typical example.

TOGGLE CLAMP A clamp with set open and closed positions and adjustable to suit a specific workpiece dimension.

TONGUE-AND-GROOVE JOINT A long grain of two boards using a narrow tongue on one board fitting in a slot on the other. It may be combined with a V-groove or a bead edge to create a traditional panelling effect. When used vertically on walls it is known as 'wainscot'.

TOOLREST An adjustable, horizontal metal bar mounted on a lathe bed that the turning is rested on for shaping the workpiece.

A toolrest mounted close to the blank

TORQUE A measure of the amount of force used to rotate a shaft in machines.

TORX HEAD A screw or bolt head with a driving recess that resembles a star pattern.

TOTALLY ENCLOSED FAN-COOLED (TEFC) A type of motor.

TREAD In stair construction, literally the part that is trodden on. The upright sections are risers.

TREEN Small wooden objects such as bowls or utensils.

A boxwood treen barrel pot

TRIPLE CHIP TOOTH Flat-top ground teeth on a circular saw blade that have 45° chamfered corners on the cutting edges, designed to make clean cuts in faced or veneered board.

TRUING Successfully making a surface square or flat, making it correct i.e. 'the truth'.

TRUNNION A bracket used in pairs between which another component can swivel.

TRY SQUARE A hand tool used to confirm perpendicularity and to mark right angles on wood.

PHOTOGRAPH BY JOHN BULLAR

Try square for accurate marking out

T-SLOT A slot of metal or wood in an inverted T-shape, used as a guide for accessories on saw or router tables.

TUNG OIL An oil finish made from tung nuts, generally used in many oil finishes as one of the ingredients.

TUNGSTEN CARBIDE An alloy of tungsten and carbon used as hard cutting edges, such as the tips of circular saw blades or router cutters.

TURNERY Items turned on a woodturning lathe or a green wood pole lathe.

TWIST DRILL A drill bit comprising a cylindrical shank with helical flute to carry away the waste material, the end ground in a conical shape, the meeting of cone and flute forming the cutting edges. ■

Twist drill bits

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PHOTOGRAPHS BY GMC/ANTHONY BAILEY

Oak contrast coffee table

Anthony Bailey's Japanese-style table requires diligent machine sanding to achieve an immaculate, dyed-oak finish

This contemporary, compact coffee table design has a slight Japanese influence. A relatively easy project, there are nevertheless some critical design features that need to be thought about as you make it.

Board preparation

First, saw all parts over size and plane and thickness. Plane only one edge of each as the top, shelf and ends are all joined from two pieces of board each. Make sure these meeting edges are truly square before biscuit jointing them and gluing up with PVA.

The biscuits' only function is a locational one, in order to get nice, flush faces. Position them so they won't get exposed when these boards are trimmed to size. Cramp up, check for flatness and leave to dry. It is wise to use paper on the sash cramps to avoid surface staining due to iron contact if you use oak.

Once dry, all these boards will need flatting with a belt sander. If there is any degree of unevenness in the surfaces you may need to do the unthinkable and belt sand cross grain. Once levelled in that direction, revert to normal sanding with the grain.

However, the cross-grain scratches won't go away, so later on a random orbital sander will be necessary, using several different grades of increasingly fine abrasive grit to remove these unwanted scratches. Even more importantly, because the whole underneath part of the table will be dyed dark, the dye will pick out any remaining scratches.

Sizing components

Now size all components exactly. Note that the shelf and the stretcher have dovetailed ends to fit the leg housings, meaning you must add these amounts to the finished sizes.

In order to be able to do that you need to know which housing cutter you intend using. This is a job for a big cutter in a ½in shank router mounted in a suitable table. The cutter I used is years old and doesn't get a great deal of use as dovetail housings aren't an everyday event. It is a Wealden TCT bit, 19mm at the fat end, and I allowed for a 10mm depth of cut, so in my case it was component length plus 10mm x 2 to give the finished size.

1 Use a crosscut blade when sizing parts so the finish is reasonable, then do one or two passes over the planer to finished size. Leave the end grain sawn to avoid tear-out as would happen on the planer. The stretcher needs to be thicknessed to final width.

Bevelling edges

2-3 The next task is to set up the router table for bevelling the edges. The degree of bevel is a matter of taste but the legs have a larger bevel than the shelf and stretcher's smaller one. It doesn't matter whether you use a bearing-guided cutter or not, so long as the fence and cutter height are set correctly. As always, use scrap stock to check the result first. The bottoms of the legs are also bevelled to sit nicely on carpet and to make it possible to move the table around.

4 The top is a different proposition, needing a very large undercut bevel with a very minor one on the top edges. Do the latter first, using a smaller router and bearing-guided cutter.

Putting on a bevel

Next, set up the sawtable with the blade angled at 40° to give a more subtle result. Different sawtables will angle the blade arbor either left or right depending on the machine, so how you achieve a regular, neat bevel will be determined by this. ➤


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5 In my case I used the dimension table and fence to feed the top blank forward, while using an offset block against the rip fence. This meant each side was cut correctly as the block was pressed against the top edge of the blank.

6 Even so, although the result was good it still needed one pass at 0.5mm setting with a hand electric planer and then a belt sanding all round.


5


6

USING A DOVETAIL HOUSING JIG

A The photographs show the principle of the jig. It is a wide-bladed T-square with a slot running most of the length, allowing the guidebush a smooth run.

B You can create this slot on the circular saw but the cut must stop short of the other end. For the stretcher housing a batten is screwed across in the correct position, thus stopping the router from machining too far in.

C Get the router set up and set the cut depth with it sitting in the housing jig and the cutter resting on the workpiece. Withdraw the router, plunge and lock at the preset depth and switch on. Slide into the jig and machine a bit over halfway. The clamps you have used will stop you doing the last section. Even if you could run through you would get breakout on the far side.

D Withdraw the router but do NOT unplunge and switch off. Move the clamps, sit the router on the gap at the far end of the jig, switch on and machine into the middle until the cuts overlap. Withdraw the router and switch off. Unplunging while in the workpiece will, of course, cause damage to the work. Now comes the tricky bit – machining the actual dovetails. Dovetail housings are very strong but getting a neat fit is harder, especially as each board you have belt sanded will probably be a very slightly different thickness. Use offcuts to check the fit – don't try it with the actual components. A high fence is needed to support the boards in vertical mode and the stretcher needs a close-fitting insert around the cutter and a 'breakthrough' subfence for maximum support. You are aiming to get the correct cut height and depth on both sides of your scrap pieces.

E-G Check the fit in the housings which have already been cut. When it seems to be a comfortable fit, machine one dovetail joint and see how well it fits. If it is too tight set the fence back a fraction; if it's too loose then I'm afraid you are relying on glue too much, so better to make too shallow a cut and adjust it afterwards. Repeat the cut on all joints and do a dry assembly. **Note:** the stretcher needs one end trimmed back and rounded with a chisel to allow it to fit the housing neatly.

A


B

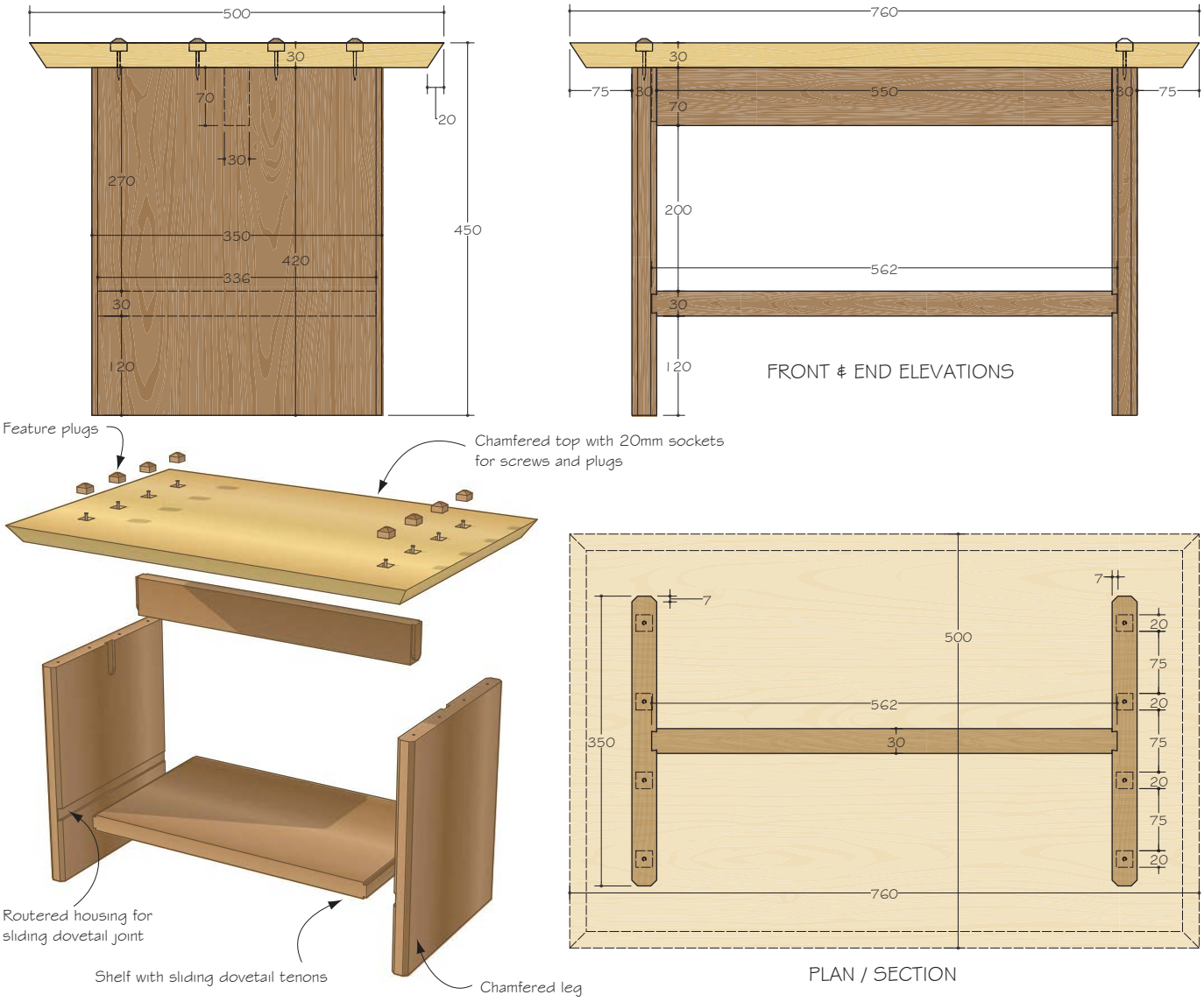

C


D


E


F


G



Dovetail housing

Now comes the dovetail housing, and for this you will need a jig and a suitable guidebush in your router, usually 30mm diameter – see panel for setup and use.

Underframe assembly

Before final underframe assembly sand all surfaces thoroughly until all cross-grain scratches have gone. Apply glue to both halves of the housings and tap gently together. Ensure the shelf is centred on the legs and the stretcher sits flush with the top of the legs.

7 Cramp-up square then, using a damp cloth, wipe off the surplus glue and leave to dry.

Dyeing technique

Fine sand down to 320 grit where there are dried glue-wetting marks, ready for dyeing. Oak calls for a fairly neutral dark-brown dye, certainly not one with a reddish hue. There are different sorts, such as naptha (oil-based), spirit or water-based. I chose Vandyke brown spirit dye as I wanted a non-grain-raising dye that wouldn't react badly with cellulose sanding sealer.

8-9 Apply the dye with a formed pad of rag or a brush and work very quickly, avoiding runs. Do this until the wood has absorbed all possible dye evenly. Wipe off thoroughly, finishing with the grain, and allow plenty of time for it to dry. ➤


7


8


9

FITTING PLUGS

A Drill the plug holes using a suitable sharp spade bit to a depth of 10mm or so.

B-C Square out the holes with a sharp chisel to, say, 20-24mm square. Use the centrepoint hole for centring the drill bit for the screw holes and drill right through into the legs. Now, use long, twinfast screws to fix the top on, allowing the heads to sink into the wood.

D-F Almost the last act is to make the plugs, bevelling the caps on a disc sander or inverted belt sander, cut to length, apply the same wood dye as the underframe and apply a finish on them. Finally, glue and fit them in the plug holes, apply clear finish to the entire top and, bar a light waxing, the job is done.


A


B


C


D


E


F

Finishing touches

10 Apply your chosen finish over the underframe, very carefully finishing with the grain. Do this in several coats, allowing each to dry in between and taking particular care with the first coat to avoid disturbing the dye. Sand the top thoroughly and apply a clear finish on the underside.

Fitting the top

11 The top can now be fitted to the base using hidden screws. Position it carefully and mark lines where the screws will be, including cross-marks for the individual screws. ■


10


11

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Meet the contributors...

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

Gareth Irwin

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

Amber Bailey

Amber is a marquetarian and surface design artist with a background in furniture restoration. She has trained in prestigious decorative art schools on both sides of the English Channel and is now based in North Wales working for a furniture company using laser-cut marquetry.
Web: **www.abmarquetry.com**
Email: **ab.marquetry@gmail.com**

Simon Rodway

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

Alex Burnett

Joining the army at 16, Alex became a Yeoman of the Guard, completing 25 years on the active list. He was presented with the Royal Victorian Medal by Her Majesty the Queen for his duties with the Yeomen of the Guard. Joining the Defence Courier Service after leaving the army, in the intervening time he refurbished a cottage in Cornwall and completed a woodworking course.

Louise Biggs

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

Neil Lawton

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

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.

Duane Cartwright

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

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

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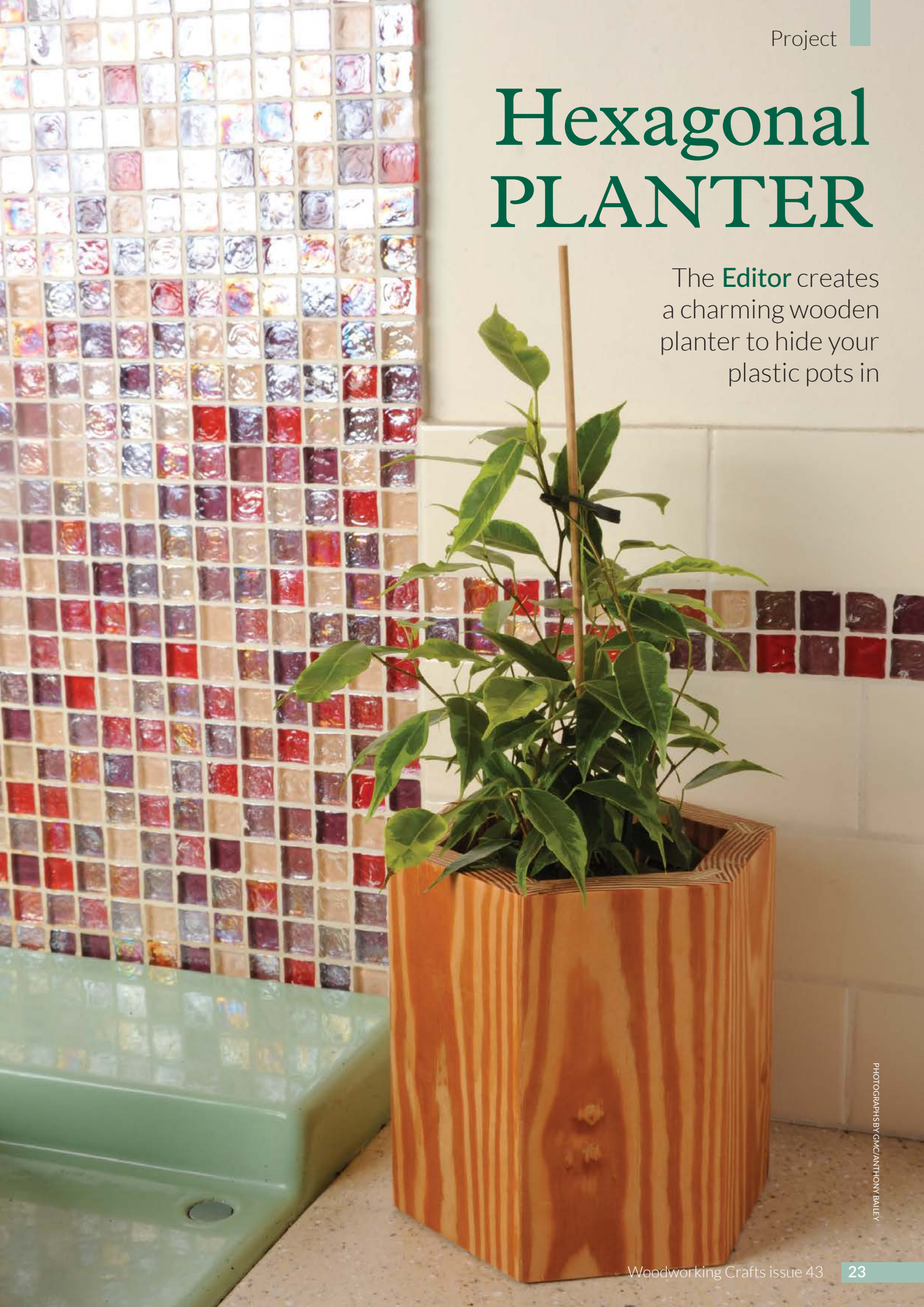
Hexagonal PLANTER

The **Editor** creates a charming wooden planter to hide your plastic pots in



PHOTOGRAPHS BY GMC/ANTHONY BAILEY

This hexagonal wooden planter is a rather charming way to present your indoor plants. Not only does it look good and can be made in a variety of sizes and suitable timbers, but it has made use of a rather nifty jig method for using your router table as an edge planer.

Now that summer is upon us you can show off all your plants to good effect and hide any of those unsightly plastic pots in the process.

MAKING THE JIG

1 In order to make a hexagonal structure you need to machine timber at an angle of 30°. A jig is required if you do this with a router on the table, but first the fence requires packing out at the outfeed side to turn it into an edge planer. I used two thicknesses of veneer and double-sided tape to achieve this. Next, with a long straight cutter and with the packed-out, outfeed side level with the edge of the cutter, I successfully planed a board of maple. You can also straighten a crooked edge by machining the offending section and then re-running the entire edge.


1


2

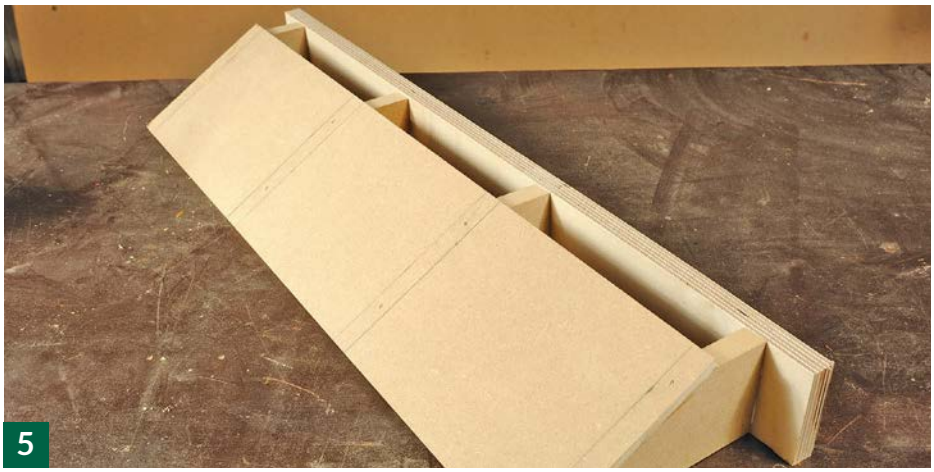

3


4

2 Having achieved the basic requirement, you now need to make up a slanted jig using some 30° wedge-shaped pieces with a thin board on the top surface.

3 Pin the board on carefully so the wedges are firmly fixed in line with one another and there are no dips or bumps.

4 Now fix a thicker strip of ply or MDF along the back of the jig. This will help hold it all together and make it possible to clamp it in place.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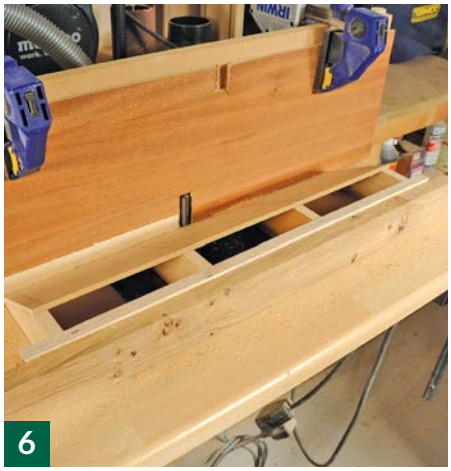
5 The finished jig should look like this. We can now fit it to the router table.

6 The jig needs to be clamped in place using clamps that do not stand up too high so they cannot interfere with the workpiece as it is pushed through.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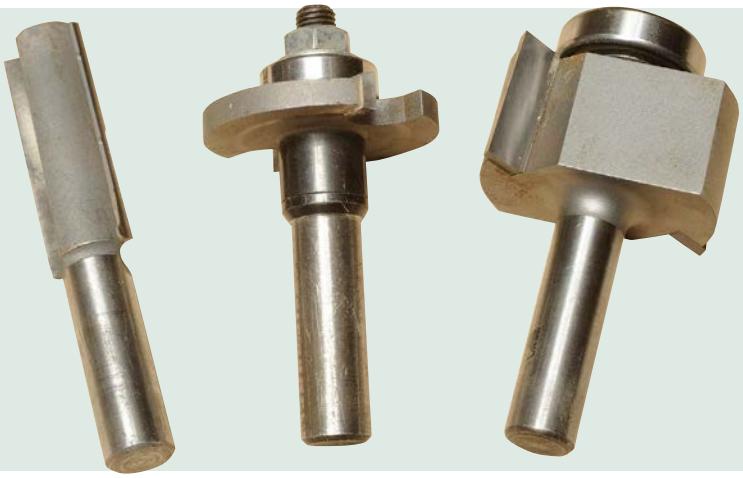
7 If you find the workpiece catches on the outfeed side, use a knife or chisel to bevel the leading edge of the tape back.


7

THE CUTTERS

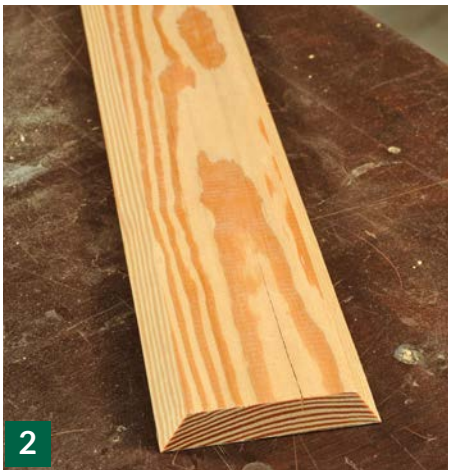
Just three cutters are needed: a longish straight cutter, either 16 or 19mm diameter, a 6mm groover mounted on an arbor and a large rebate cutter with a removable bearing in case you need to adjust the groove depth. All these cutters are on ½in shanks.



MAKING THE PLANTER

1 I decided on the size of pot I wanted and cut the timber for the hexagon to width. Then the lengths were machined on the jig with the straight cutter fully raised so it can cut the entire width of each edge. The first cuts take away very little but it doesn't take long to reach a fully bevelled edge.

1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2 A finished section which, when measured, was remarkably parallel. It now needs to be cut into finished lengths.

3 Each section needs a slot to take a loose tongue. This is done with a 6mm groover on an arbor raised up enough that the slot is close to the inside edge, preventing the outer edge breaking off. The jig has been pulled away slightly so the edge of the bevel sits low down to assist the slot positioning. Note that the outfeed packers have been removed.


3


4

4 The bottom will also fit in a groove. Each component is run across the groover with the pushblock behind for safety.

5 A dry fit using ply strips as loose tongues shows just how successful this machining procedure really is.


5


6

6 The planter bottom blank is marked out by sitting the dry-assembled planter on the board and drawing inside, then marking an inner line that represents the amount of tongue required to fit in the grooves made in the side pieces. ➤


7


8


9

7 The bottom has its tongue formed using a rebate cutter and a breakthrough fence for safe, even working. Note that the waste from cutting out the bottom is used as a perfect push piece.

8 The finished bottom with a tongue formed all round. Check it fits the side grooves before assembly.

9 The loose-tongue position which stops short of fouling the planter bottom when inserted.

10 An old technique but using modern luggage straps and spare fence rods – the Spanish windlass. This is necessary in order to persuade the glue to be exuded from the grooves. Wipe up surplus glue and leave to set.

11 The loose tongues are trimmed off flush and the planter sanded to a finish all round ready for a coat of varnish. ■


10


11

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Triton pocket hole jigs

Want a quick, easy way to make your projects? Maybe you should invest in a pocket hole jig

PHOTOGRAPHS BY GMC/ANTHONY BAILEY

The most sophisticated version with positive clamping, height adjustment and extraction port

There is an old adage – 'never be the first to come up with a good idea'. Well, Triton looked at what is already out there and then come up with its own improved variant on a theme. We were lucky enough to see the new pocket hole jig range demonstrated and to have a go too. Until now you may not have considered the advantages of pocket hole jointing, but perhaps you should, because it is so quick and easy to do. Triton has a new range of four jigs, ranging from cheap and compact to more expensive and sophisticated. I gather there are more products in the pipeline but this is its starter offering.

What are pocket holes?

Antique table tops were often held on to the underframe with 'pocketed' i.e. recessed, screws. The modern concept takes it to a more precise and easy level designed to create fast butt joints with or without glue. You can create anything from a photo frame, as we did at the demonstration day, right up to a king-sized bed if you use the system correctly. Some might argue it isn't 'proper' woodwork, but if you lack skill, time or inclination this is the perfect way to get a good result quickly. It is also potentially demountable for transport and installation.

The three smaller jigs – adjustable pocket hole left, twin pocket hole mid, single pocket hole right

The jigs

The smallest and cheapest is the single mini jig. Like all the jigs it comes with a special stepped drill, which in combination with a cordless drill makes each pocketed hole by running through a hardened steel insert in the jig. It is clamped in place and has a reversible lip to position it precisely at the edge of a workpiece. It is a two-part jig with a scale on the base and toothing so it can be set according to material thickness as part of a joint, one part of which is end-drilled and the other part face-drilled. Small, rare earth magnets are used to hold the jig together and the jig and clamp together – nice, neat touches. It comes with stepped drill, square tip driver, a sample pack of special screws and one each of the pine and oak plugs. The driver bit is long, so access into awkward corners isn't an issue, and the matching screws ensure a very positive driving ability without 'cam out'. They are flat under the heads so they sit tightly in the pockets without any danger of pulling through the wood.

The next jig has two holes but is otherwise a similar design. Most pocket hole joints will need two side-by-side pocket and screws for strength. Next up is the adjustable version where you can alter the spacing. Finally we get to the nicely anodised aluminium twin pocket jig, which has height adjustment and an extraction outlet for chipping. It can be screwed down and is the ideal production jig.

The complete clamping eight-piece pocket hole jig set

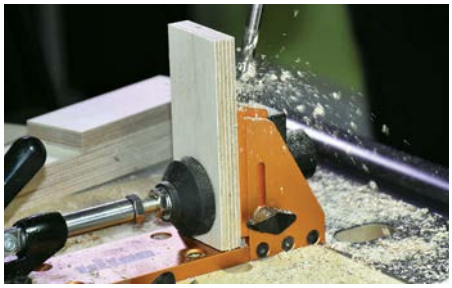
USING THE JIGS TO CREATE A PHOTO FRAME


Demonstrating the angle the drill must take in the wood


How the drill will protrude through the jig base


Reversible end stop and rare earth magnet for gripping to a clamp


Using a 10p piece to set the correct drill depth


Fast drilling of a pocket hole with good chippings removal rate


The long, square tip bit driving in the pocket hole screws


Using a Rockler routing workpiece clamp to rout the frame


Sanding the frame corners on a Triton bench-top sander

Verdict

On demonstration day we had to use the jigs along with a new model of Triton router and a static sander to create our own photo frames – a good test of following simple instructions and hopefully not screwing up in front of everyone. I'm pleased to say we all did this without any mistakes, which is much more down to good instruction and a jointing system that is incredibly simple to use rather than our collective skill level. I've used pocket hole jigs before and I know just how easy it is to make a project. A mitre saw for crosscutting teams perfectly, because you can then get nice, tight-fitting joints. So I would say the Triton jigs are good value for money and a new way of working. ■

Prices – RRP inc. VAT

Clamping pocket hole jig eight piece: £79.78
Single mini pocket hole jig: £14.82
Double mini pocket hole jigg: £28.75
Adjustable pocket hole jig: £40.60
Pocket hole plugs 50pk: £3.89

All the jigs come with stepped drill and collar, square-tipped driver, and screws and plugs starter kit.

Pocket hole screws

example prices only – full range available

Zinc pocket hole screws washer head -
Fine No.7 x 1¼in x 250pk: £7.84
Coarse No.8 x 1½in x 500pk: £14.98
Coarse No.8 x 2½in x 250pk: £16.37

Web: www.tritontools.com/en-GB


The finished photo frame

NEWS & EVENTS

All the latest events and news from the world of woodworking

A contemporary view of the scene painted in John Constable's *The Hay Wain*

PHOTOGRAPH COURTESY OF SHUTTERSTOCK

Literary landscapes

A recent story in the *Daily Telegraph* about 'literary landscapes' under threat caught my eye. It isn't a new story really, since there has been a long-running battle between campaigning groups and organisations such as the Campaign to Protect Rural England, Woodland Trust, etc to save important landscapes from ever-encroaching development. Not just those with literary associations but those connected with famous painters – and what about English pastoral music? Elsewhere in this issue Gary Marshall discusses the need to protect ancient woodlands from development and agriculture – but what about the bigger picture? The CPRE wants special designation for landscapes to be protected just as we already protect buildings. Are beautiful, inspiring landscapes not worthy too?

What has given the most recent impetus to this desire to protect cherished landscapes is a campaign to protect what is left of the inspiration for EM Forster's *Howards End*, a novel in which an ever-expanding London slowly consumes what is left of rural Hertfordshire.

Suggested views include Slad Valley, Gloucestershire, the inspiration for Laurie Lee's *Cider With Rosie* and Constable Country on the Suffolk-Essex border – think of the paintings *Flatford Mill* and *The Hay Wain*. Then there is a new development threatened next to the Grade I listed house that inspired Thomas Hardy's *The Mayor of Casterbridge*. Already gone is the open piece of Berkshire land that inspired *Watership Down*, a story of rabbits escaping the developers.

How about the plan for a bypass for Sudbury, Suffolk, that, according to local campaigners, will destroy the view as so famously seen in Gainsborough's painting of Mr and Mrs Andrews, set on their new estate in 1748? So far 6,000 people have signed a petition to save countryside that has stayed largely unchanged for many generations.

The list goes on and on. Poets – John Clare's Helpston, once in Northamptonshire, now Cambridgeshire; Hilaire Belloc's Sussex, as reflected in his South Country and West Sussex Drinking Song; Wordsworth's Lake District; and AE Houseman's Shropshire.

Even if these landscapes manage to escape the greedy clutches of developers spurred on by government housing targets, they risk being trampled under foot either by tourists or the everyday needs of commerce and industry. Do you live in, or know of, a beautiful part of the country that is currently under threat? One vote, one signature, one comment may seem insignificant, but if we all thought that way our amazing countryside would have already been decimated beyond hope.

There are occasional 'wins' – a plan by the trustees of Snape Maltings, Suffolk, to construct a vast car park that would decimate the surrounding marshlands much beloved by the festival founder Benjamin Britten, has now been dropped thanks to a unified opposition.

To find out more visit: CPRE (Campaign to Protect Rural England) **www.cpre.org.uk**

SHOWS

Handmade Edinburgh – The Contemporary Craft & Design Fair
Friday 10-Sunday 12 August 2018, 10am-5.30pm
Royal Botanic Garden Edinburgh, 20A Inverleith Row, Edinburgh, EH3 5LR
www.handmadeinbritain.co.uk

South Downs Show 18-19 August 2018, Queen Elizabeth Country Park, nr Petersfield, Hants, PO8 0QE
www.southdownsshow.co.uk

Biddenden TractorFest & Country Fair
18-19 August 2018, Woolpack Corner, Tenterden Road, Biddenden, Kent, TN27
www.tractorfest.co.uk

Henley Country Craft Show 24-27 August 2018, Stoner Park, Henley-on-Thames, RG9 6HF
www.thecraftshows.co.uk/henley-on-thames

Stock Gaylard Oak Fair 25-26 August 2018, Stock Gaylard Estate, Sturminster Newton, Dorset, DT10 2BG
www.stockgaylard.com

Charcoal and Woodyard Weekend
25-27 August 2018, Weald and Downland Museum, Singleton, West Sussex, PO18 0EU
www.wealddown.co.uk

FangFest – Festival of the Practical Arts
1-2 September 2018, Fangfoss, Nr York , YO41 5QZ
Facebook: **Fangfest Festival of Practical Arts, Fangfoss, Near York**

Selfbuild & Design Show
8-9 September 2018, Westpoint, Exeter, EX5 1DJ
www.selfbuildanddesignshow.com

Into The Trees 14-16 September 2018, Pippingford Park, Nutley, East Sussex, TN22 3HW
www.into-the-trees.co.uk

Apple Day 23 September 2018,

PHOTOGRAPH BY GMC/ANTHONY BAILEY

Bentley Wood Fair

Stanmer Park, Falmer, Nr Brighton, BN1 9QA
brightonpermaculture.org.uk

Bentley Wood Fair 28-30 September 2018, Bentley, Halland, East Sussex, BN8 5AF
www.bentley.org.uk/woodfair

Web links for you

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HCA (Heritage Crafts Association)
Check out #MondayMaker each week – different craft skills, including wood, of course. Let's keep crafts alive.

Instagram

#westdeancollege
Check out the latest creative activity of students and the delightful settings around the college too…

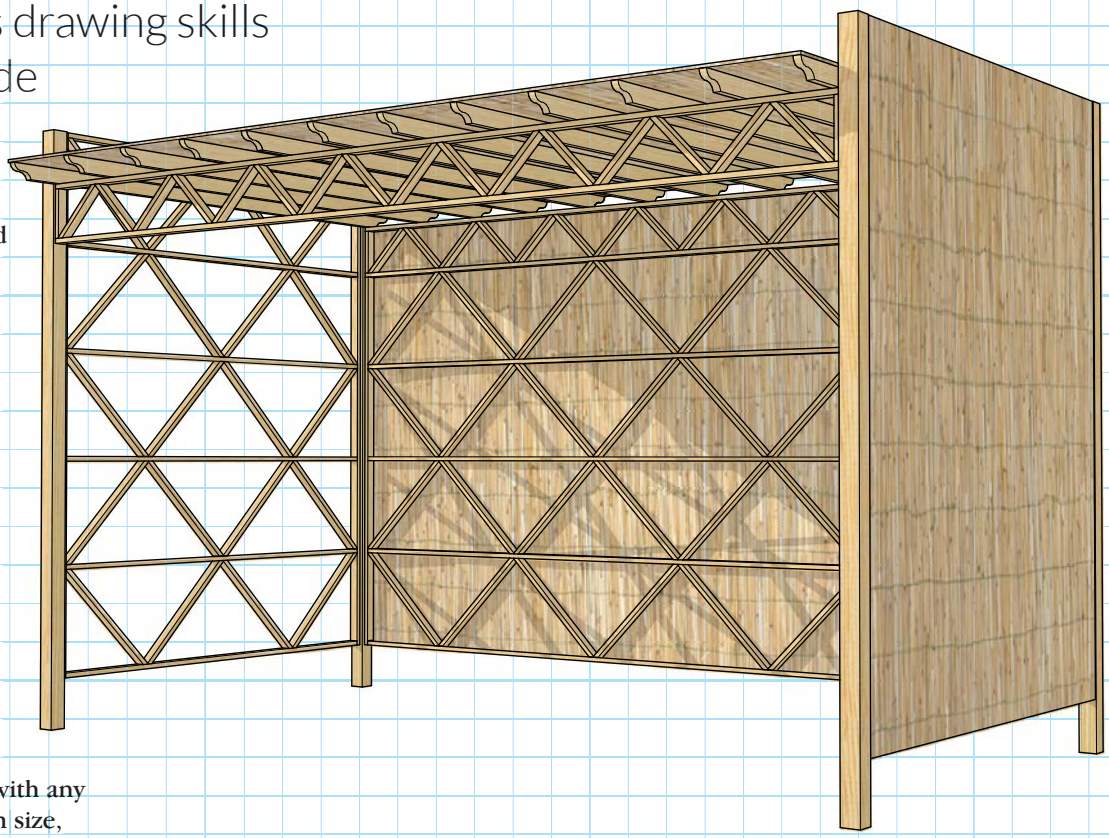
Twitter

@BlackHeartsArt
A husband and wife chainsaw carving duo producing amazingly realistic sculptures, carved and coloured and lifelike.

PLANS 4 YOU

Sun and wind screen

Simon Rodway's drawing skills put us in the shade



Timber engineering is something that has always fascinated me, as it has the capacity to create large and often elegant structures using relatively little wood. This has the potential dual advantage of lower cost and a lower carbon footprint for whatever you are building. The open-lattice nature of this sun and wind screen shelter also means that you can easily alter shading and screening to suit time of day or year by removing cladding panels without the structure itself forming a barrier.

One of the biggest issues with any larger-span structure is beam size, even with very light loading large and expensive section sizes can be required. One answer to this is the lattice beam, or truss, which has top and bottom beams, called chords, joined together vertically by additional components, which collectively are called a web. The principle is that these three parts of the beam act together so that they form a single structure, much stronger and more rigid than each part on its own. This is exactly what I have done at the front and back to join the side screens together, using a version of what is called a Warren truss to create a long-span beam from 47mm x 22mm timber, joined by angled sections of the same timber cut at 45° which form the web.

So that the beam functions properly, as well as accurate cutting it is obviously important that the angled and end vertical components are fixed securely to the top and bottom chords. Additionally, so that the whole structure lines up consistently, with the web of the beam carrying through to the panel below on the back, the centrelines of the angled web components need to cross each other through the centrelines of the chords (see detail diagram for this). This is also a requirement on the back and side panels. This is a very simple structure which really depends on this kind of accurate layout to work well visually.

Although the back panel and the side panels do not have the same structural task as the beams, they are still intended to create rigidity, which will be self bracing against wind loading, and the lattice structure forms an ideal base to fix cladding of your choice to. There is enough structure to prevent semi-rigid panels such as reed or bamboo from deforming too much on windy days, but once the cladding is removed the sides and back are open enough to let plenty of sunlight in.

For the top, I've just included some standard pergola-type beams spanning from front to back, across the lattice beams. Anything less rigid than bamboo panels for the sun shading might need some secondary battens laid across the pergola beams at right angles and closely spaced to prevent sagging in between. The front of the

Cutting list

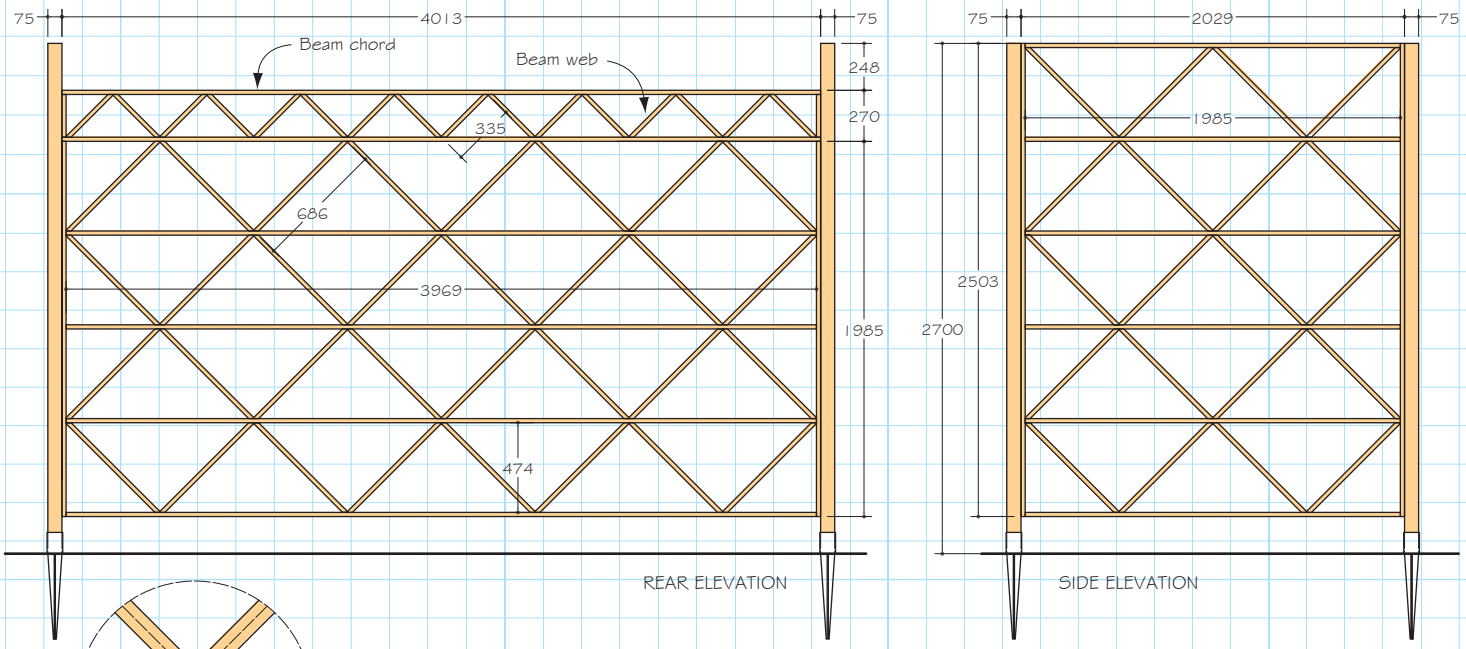
Corner posts	4 @	2700 x 74 x 75
Beam chords	4 @	4013 x 47 x 22
Beam web	32 @	335 x 47 x 22
Beam ends	4 @	226 x 47 x 22
Pergola beams	12 @	2400 x 70 x 40

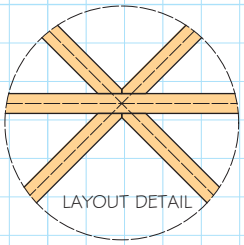
Back panel

Angled pieces	32 @	686 x 47 x 22
Horizontals	4 @	3969 x 47 x 22
Verticals	2 @	1985 x 47 x 22

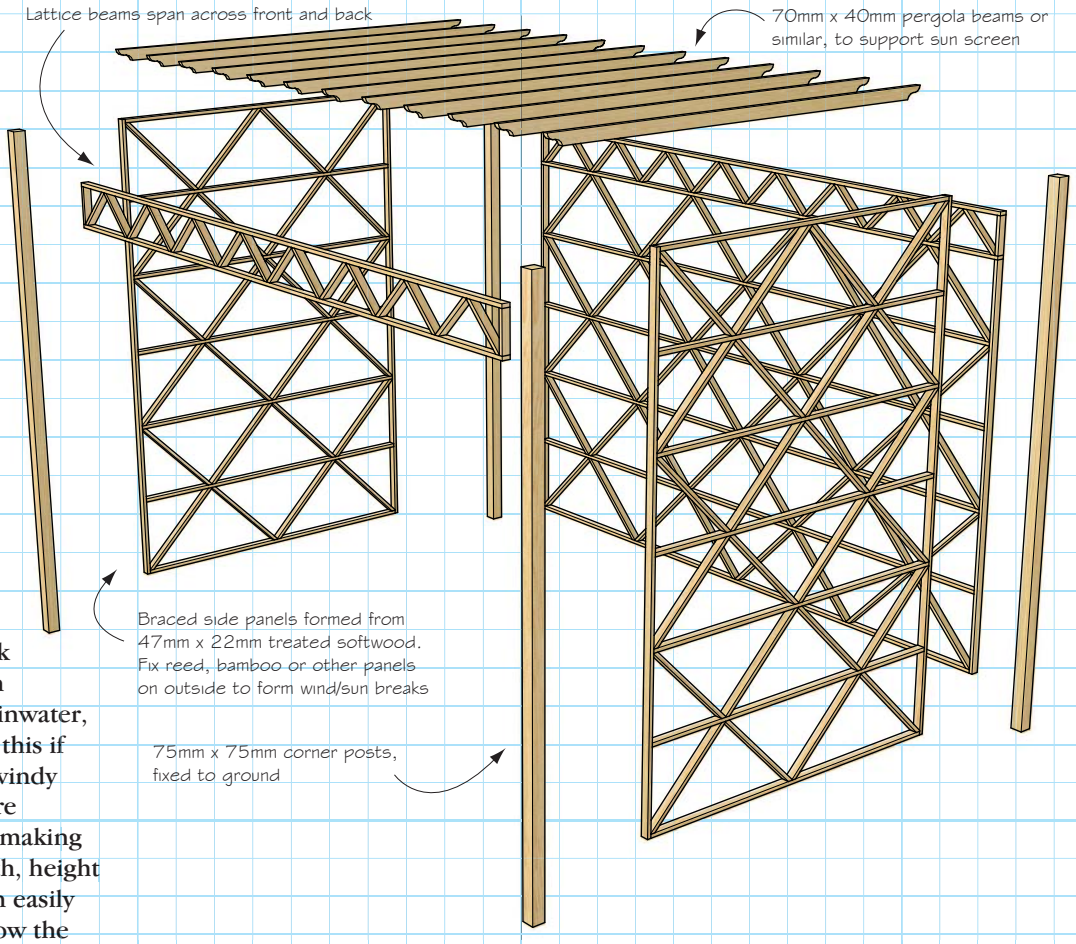
Side panels

Angled pieces	40 @	686 x 47 x 22
Horizontals	12 @	1985 x 47 x 22
Verticals	4 @	2503 x 47 x 22





To align angled bracing centre lines need to cross through centre line of horizontals



structure is left open apart from the lattice beam, which, like its counterpart at the back, is fixed securely to the 75mm square section treated corner posts. As usual with this type of structure, I've shown these posts fixed into the ground using metal post spikes to minimise the risk of rotting.

There is also an offset between the ground and the underside of the side and back panels of about 250mm, again to minimise problems with rainwater, but you can obviously reduce this if you want, especially in extra windy locations where shelter is more important. Finally, it is worth making the point that the overall width, height and depth of the structure can easily be altered, as long as you follow the principles outlined, and if you are going to do this, just sketch it up first to make sure it all fits together. ■

Upcycled writing slope

From childhood family favourite to retro desk accessory – the **Editor** makes this vintage furniture live again

As the generations remember it – minus the Fablon

PHOTOGRAPHS BY GMC/ANTHONY BAILEY

2018 seems to be the year where I am forever upcycling old furniture and knick-knacks and breathing new life into them, making them still relevant and even fun. This child's writing desk was made in the 1930s by my wife's late grandad, Ernest Shinn, a factory engineer, born and brought up in the East End of London. It had been sat at by several generations of our various families' children and grandchildren. He was a much-loved grandad who, at the time, thought nothing of making a desk for his own offspring.

There was a current-day problem – in a busy and somewhat furniture-rich household, we had simply run out of space and its design was not ideal in a now largely adult environment. What to do? My wife, Patsy, as usual had one of her brainwaves: 'Can you just cut off the legs and make it into a writing slope?' Excuse me, but in my world no project is ever 'just' because it is always more complex if it is to be done well. This piece was cherished, a part of family history, so it needed to be respected as such in its treatment.

Careful paint removal

1 The slope had been covered with a wrinkled piece of old wood-grain Fablon. It came off in an instant revealing buff-coloured Rexine, a manufactured vinyl-type product and no doubt the original writing surface. Rexine and 'mid-century' furniture go together. I wanted it to be seen again, not replaced. But, oh dear it had two very hardened layers of old gloss paint adorning it. Surely it was worth trying something aggressive to shift it?

2 I resorted to using a cabinet scraper with a residual fine burr and a drag action, after softening with cellulose thinners. It removed the topmost layers of paint allowing more thinners to weaken the remainder. My heart was in my mouth – I wasn't convinced that I could exact such harsh punishment without causing terminal damage to this venerable covering material.

3 Not only was there a wide strip of old paint, at both front and back there were large shrinkage gaps as the softwood board underneath had shrunk over time. I could try removing the tiny screws on the back and lifting it out but it could cause more damage – no, leave...

4 The thinners was actually working, although it needed plenty to remove the whitey-cloudiness left by the paint traces. It was also removing grime and the very visible patterning. That might be a problem but I was already committed, at least it was a very 'now' sort of colour in its bleached form.

Cutting down to size

5 Having scrubbed the Rexine clean and clear of paint, with only slight chafing damage on the rolled-over edges, I could now remove the legs. I keep a large screwdriver with a tip ground slim, just for narrow-slot screw heads such as these. Firm pressure was needed to get the screws to move. They will be kept for other restoration jobs.

6 The rearmost screws were inaccessible as the top had been fitted after the leg underframe was attached. The only way was to cut through the brackets close to the screws and use a chisel to split the remaining wood open and tap the screws out. ➤

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7 The paint build-up around the leg brackets needed removal before sanding the desk underside. To avoid scorching and damaging the exterior paintwork, the heat gun was aimed outwards but the scraper used sideways or inwards. This avoided accidentally pulling soft paint away from the exterior faces as I wanted to retain the paint 'history' rather than stripping back to bare wood.

8 A quick working over with a random orbital sander and 80 grit Abranet abrasive levelled the surface for baize or felt covering later on.

Pine repairs

9 The base boards of the desk had separated over time but the 'nipped off' oval nails grandad Shinn had artfully inserted to keep the boards level and joined after gluing were still doing their job. For both looks and as things would be placed in the desk, it seemed sensible to close the gap by cutting slim sticks of softwood on the table saw and trimming to fit in between the nails using aliphatic resin glue.

10 The screw holes also needed filling, most effectively done by using more softwood pared down with a chisel, pushed into each hole in turn with glue and then cut off with a Japanese flush trimming saw, both outside and inside the compartment.

11 At the back underside where a large knot had given way on the arris (meeting of face and edge), I used a chisel to cut a clean notch for a piece of quadrant to fit in and tape on while the glue dried.

12 The quadrant was trimmed off flush by using a Japanese kataba backless pull saw to flush cut with the blade lying against the carcass. Only light sanding was needed as the cut was so fine. There was also an ancient small knot hole in the carcass side which the children all remember. This was also cleaned out and plugged.

Rexine leathercloth ceased being manufactured in 2005. It was made from cellulose nitrate (which is used as a propellant in firearms rounds!), camphor oil, pigment and alcohol. Nowadays Ratchford manufactures its own leathercloth in a variety of colours - **https://ratchford.co.uk**


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13 Returning to the top, I had already decided to fill the two gaps next to the Rexine using slim softwood strips glued in place. First, the gaps needed cleaning out using a pullsaw to help straighten the painted edges.

14 The infill strips would help to emphasise the neat-looking roll-over edges of the writing surface and give a clean 'cut' to the paintwork edges.

15 The strips were a light 'hammer fit' for neatness, including pulling into place any slight bulging or looseness in the covering.

Paint job

16 Next job was running a very neat line of masking tape along where once there had been paint. It had to be exactly where the paint edge would now end and not get on to the very visible Rexine surface.

17 The edges were wiped along using decorator's caulk sparingly. This should give a neat final edge after painting.

18 Still a few problems remained before repainting. The hinges needed scraping clear of paint as they were clogged up and bare brass would look nicer. Also, the pen and pencil inserts had paint inside them and one was slightly high, so I trimmed it off level. It appeared to be a tube made from an early form of plastic resting on a copper base. ➤


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19 The corrections just went on, this time it was the uneven gap between the lid and top board caused by generous paint jobs in the past. I used a pullsaw, my favourite tool for a lot of restoration work, to run back and forth along the hinge line cutting through paint until the gapping was even from end to end.

20 You may have noticed I haven't talked about the interior of the slope. I decided to keep it as it was, with ink splodges and other marks, its history all there to be seen. So at last the painting could begin, using oil-based undercoat creating a good levelling film, also including the frame under the slope lid.

21 A piece of non-stick paper allowed the slope lid to stay up while the paint was drying. Undercoat is really good at filling uneven surfaces, creating a level finish ready for gloss coats. It was rubbed down to de-nib before glossing, but not masking the old history of earlier painting.

True in blue

22 The first of two coats using a blue slightly stronger than powder blue to give a retro look, which should contrast nicely with the fresh-looking buff colour of the slope.

23 Don't do what I did. It seemed like a good idea letting the gloss paint dry in the sun. Unfortunately every bit of minute insect life seemed to think it was a great place to land.

24 And finally – cutting along the tape edge through the paint to reveal nice clean edges. Note the nail being used to support the lid while the paint was drying. The Rexine has some 'cherished marks' remaining and the original leather texture will gradually reassert itself with time and grime. It has proved to be a very good writing surface, having a bit of 'give' when pressed on with pen or ballpoint. This project proved to be a bit more than 'just cutting the legs off', but my wife was really pleased to use a family heirloom that she hasn't sat at for… well, let's just say 'many years'. ■


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Collecting and using Wych elm bast (bark)

PHOTOGRAPHS BY GARETH IRWIN

Using plaited tree bark for seating is most appealing. **Gareth Irwin** explains how to collect it

Bast is the layer of fibrous material technically called phloem and found between the bark and timber of trees. On some trees this layer is thick, strong and flexible enough to be used as a cord or 'strapping', with various uses from a strong natural twine, to a very strong and attractive woven surface for seat tops.


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1 The two main native species that I have come across which have this quality are lime and wych elm. Although lime does grow locally to me, the trees are large and old without many younger stems necessary for the harvesting of bast. Another name for bast is 'bass', which is where lime gets its other name of basswood. Wych elm however, grows commonly in Mid Wales, appearing as a small hedgerow tree or a multi-stemmed, coppiced stool. As elms grow bigger, they usually succumb to Dutch elm disease and become the familiar skeletal tree.

2 To identify wych elm, look to the leaves and bark. Wych elm tends to have larger leaves than other elm, with a broadening profile towards the tip, whereas English elm has smaller, more pointed leaves. The bark of young wych elm appears quite silvery grey and smooth with prominent lenticels (raised pores) appearing as rows of spots along the stem. Harvesting bast requires only a few tools: a bowsaw, a sharp drawknife and sharp knife or scalpel. The fewer tools to carry in and out of the woods the better.

3 The important thing to consider when harvesting bast is the time of year. From about mid-April to mid-July the trees are growing at their fastest, drawing moisture up the xylem (sap wood) and sending nutrients down the phloem to the roots. At this time the bast will peel away from the wood with great ease. Outside this time the bast and wood will feel glued together and need to be cut away. This adds a huge amount of time to the process so I would recommend a trip to the woods in May or June and collect all you will need for the year ahead (I will come to storing later).

When selecting the stems for peeling, look for something straight, more than 3 metres in length (the longer the better) and roughly 100-150mm at the base. As a guide, a 3 metre log at 125mm wide will yield enough bast to top a chair or stool, so I might cut perhaps four or five stems at once.

At this point I want to mention nesting birds. I use a handsaw and have a good look around the area I am working in. I have yet to find a nest in the open form of a small wych elm but have in the bushes and trees nearby and I will move on if this is the case.


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4 Once your stems are felled, cut the thicker branches and tops into 1.2 metre lengths, with a Y-shape at one end – wych elm is very good for this. These will be the props for holding the stem up ready for shaving. This is a case of trial and error and some common sense. It is worth taking the time to get the stem elevated, unless you're happy to work bent over and on your knees. Take your sharp drawknife and, using a diagonal slicing action, shave the outer silver bark as thinly as you can for most of the stem. I would have the bevel up. You will notice that the branching and lenticels appear in a gently spiralling line along the stem. I tend to not bother with shaving along this line as the bast here will be riddled with holes where these branches and lenticels were. ➤


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5 The next job is to take your sharp knife or scalpel and look at the slightly spiralling line or branch stumps and lenticels. This is the amount of spiralling that the whole stem has and therefore also the fibres in the bast. Using the blade, cut a line along the stem that is parallel to these indicators. If you are planning to weave chair tops and require 25mm strips then make further cuts, parallel to each other and 25mm apart.

6 If you are not sure what you are going to use the bast for, I suggest cutting a line each side of the imperfections mentioned and having the bast in wider sheets that can be cut later. Once the long cuts have been made the bast will come away from the wood, and I find it best to roll it up as it is removed.

7 The fresh bast can be used immediately and it can be kept damp and usable in a polythene bag for perhaps a week before it begins to go mouldy. If you want to keep it for more than a week it is best to unroll it and loosely hang it somewhere to let it dry. Once dry it will become brittle, so try not to crease it to avoid breakage. The bast can be kept for years in this form and, when the time comes to use it, simply take down what you need and lower it into a river, pond or bath of cold water. After a couple of hours it will be as supple as the day it came from the tree. Lift it out of the water and you will notice it has become slimy. This slime can be removed by pulling the straps of bast through a piece of cloth held in one hand, being careful to keep the straps flat. Leave the bast to dry to a dampness that is the same as the fresh material.

8 The wych elm bast is now ready to be woven into stool tops and other furniture. ■

KITTED OUT

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

Axminster Hobby series benchtop thicknesser

The new Axminster Hobby Series benchtop thicknesser is highly portable and perfect for preparing timber for all kinds of projects in a hobby workshop.

With a powerful 1800W motor, it will quickly remove material up to 2.5mm thick with each pass. The two re-sharpenable HSS blades give 18,000 cuts per minute. This, coupled with the feed speed of 7m/min, results in an excellent ripple-free finish. The maximum timber thicknessing capacity is 153mm with a maximum width of 318mm.

Front and rear fold-down table extensions with end rollers provide support for longer boards. A 50mm-diameter dust hood allows connection to a vacuum extractor. The machine has overload protection with a reset circuit breaker, preventing accidental start-up.

All in all this is a compact and very capable machine, and comes with tools and a blade setting jig.

£389.28 inc. VAT

Please note that the price may be subject to change without notice.

For more information, please visit: axminster.co.uk

From £11

Japanese Haru Stuck-on Design interior tape

Haru Stuck-on Design was launched in the UK at Clerkenwell Design Week in May. It's the first time this unique tape has been available outside Japan. The adhesive tape can stick to all kinds of surfaces, from furniture to walls and floors, and its special technology means it can easily be peeled off without a trace. The product received a Red Dot Design Award in 2017. The tape is available in eight colour families, different patterns (some traditional, some graphic, some transparent), different kinds of materials (some tougher for floor use) and four different widths.

From: www.nittoonlineshop.eu

MINI TEST

Narex small adze

When working on larger projects or carved bowls an adze can make light work of removing the bulk but can also be capable of fine cuts. This small adze from Narex has a blade width of 50mm, a reasonably tight radius curved cutting edge and the head length is 145mm long. The total length of the adze is 290mm from the top of the head to the end of the handle and it weighs 600.

The bevel is on the outside of the curved head profile, so has an out-cannel bevel, and the head has a gentle curve arcing from the cutting edge to the back of the head. The adze comes sharpened and the bevel is nicely polished, and it is supplied with a leather sheath to protect the edge.

In use

The adze is designed for single-handed use. The handle is nicely shaped and of a length that fits well in the hand. Coupled with the 600g overall weight, it feels very well balanced. As you raise the adze and bring it down again you can use a bit of force to make heavy cuts, or gently bring it down to create the most delicate of cuts with a precise, controlled motion without causing undue strain on the arm when used for a reasonable amount of time.

The curved head profile allows the adze to cut into curved areas, so large bowls, trenchers and such like, but also allows you to create rippled texture and patterns or gentle curves on flat work.

£65.95 inc. VAT

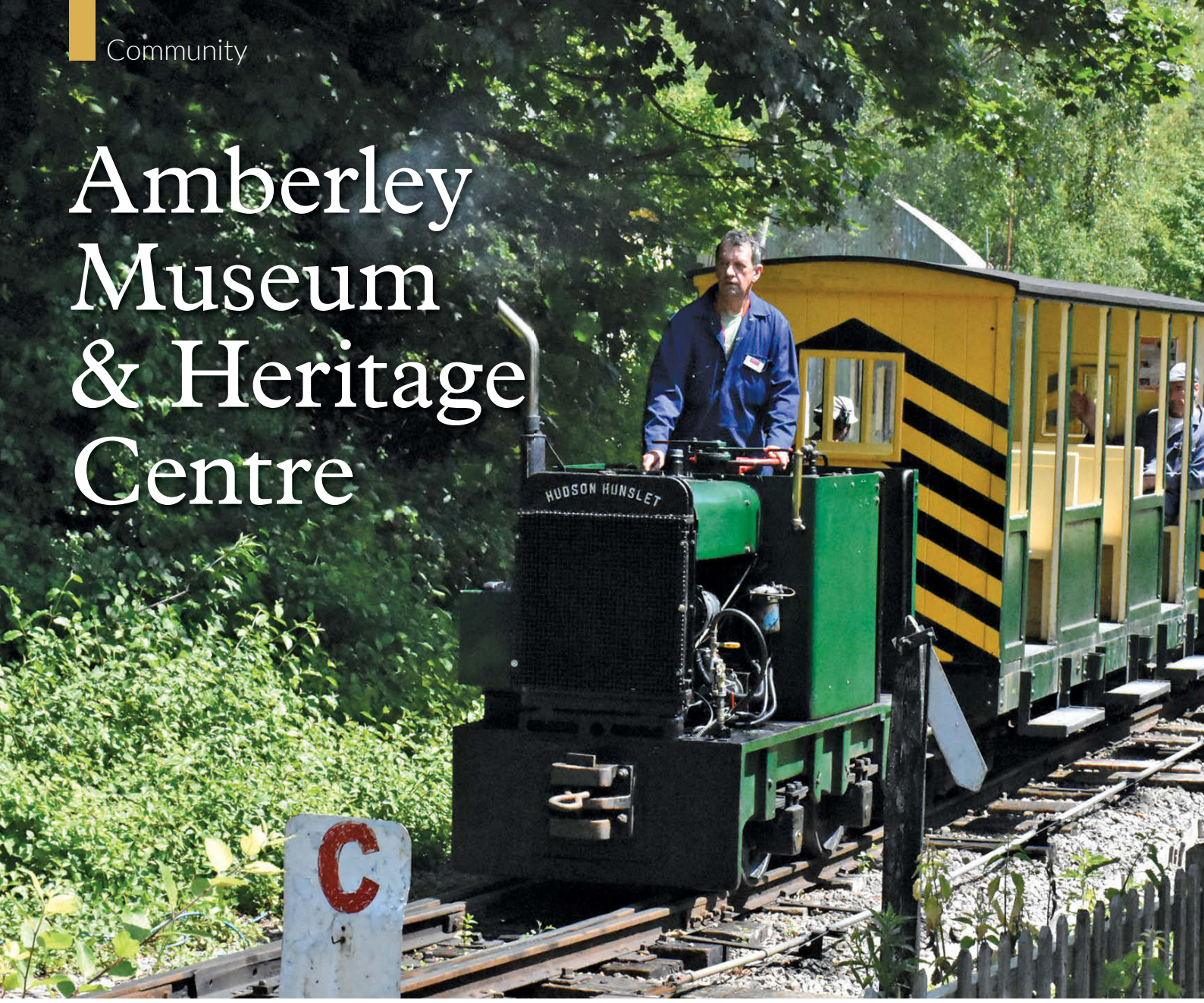
PHOTOGRAPHY ANTHONY BAILEY/GMC PUBLICATIONS

Verdict

This is a very well thought-out, balanced adze that works well without breaking the bank.

For UK enquiries regarding stockist details contact Tomaco: www.tomaco.co.uk

Amberley Museum & Heritage Centre



The Editor takes a fascinating trip into our industrial past...

I visited Amberley Museum some years ago specifically to see the TATHS (Tools & Trades History Society) exhibition and workshop, but this time I wanted to look around the whole site and, in particular, call on green woodworker Colin Wells, a.k.a. the Amberley Bodger, in his natural habitat – The Greenwood Village.

If you have never visited the museum, set in a former chalk quarry – 36 acres of natural ecology where trees, flowers and even rare orchids abound – then you are in for a treat, especially if you enjoy industrial history, which it is. Ample free parking and reasonable entrance fees make it a very worthwhile day out, because there is so much to see.

The history

In Victorian times the chalk was quarried to be 'toasted' with charcoal to create lime for making cement and mortar. It must have been a messy, noisy, smelly, even toxic process at the time, but an important part of the Industrial Revolution.

Modern times

Fast-forward to 1979 and this disused, derelict quarry became a museum created by the Southern Industry History Centre Trust, a registered charity. Today it boasts many fine static and mobile exhibits and craft demonstrations. It caters for the public and for schools and stands as an important resource for anyone wishing to learn about our industrial heritage. From what must have been meagre beginnings it now has a variety of transport exhibits, such as the Southdowns buses and coaches and fire engines. You can visit the De Witt lime kilns on foot, or take the essential trip on the narrow gauge industrial railway that once served this hive of industry. There are several substantial modern exhibit halls devoted to things such as electricity, wireless and telecommunications. The level of detail is amazing and you cannot but marvel and enjoy seeing things from your childhood and before. There are many other minor but surprising or delightful things to discover – the odd telephone kiosk, old-fashioned road signs and bollards. It is all here to see.

Volunteers

The truth is that Amberley would not be possible without its vast army of volunteers, who come from very varied backgrounds. Each area of activity is the province of a particular bunch of volunteers, intent on preserving their own specialised interest, be it buses,

railways, wireless or whatever. So they actively pursue the development of the area they need in order to restore and display what they are working on. Amberley has a management committee responsible for overseeing and running the site. It receives requests for internal or external planning permissions for structures, and requests for funds or help with fundraising. The Greenwood Village for example, only needs internal planning permission for the temporary structures, while exhibition halls etc require planning permission from the South Downs National Park Authority as the site lies in an area of beautiful West Sussex countryside, just within the lee of the South Downs and the South Downs Way nearby.

Running costs

To run such a vast charitable enterprise costs a lot of money and, while grants ➤

from the National Lottery etc, have been forthcoming, what the museum needs is more 'footfall', resulting in more income to cover running costs. In fact, the whole site is free to visit, once you have paid the entrance fee. There is the excellent Limeburners café, plus an ice cream stall and good disabled access around the site. It makes a perfect day out for all the family.

Craft demonstrations

Depending on the day you visit you can expect to see the likes of besom broom-making, stone carving, pole lathe turning and even a pottery business. It's worth taking time to watch and ask questions and, if you are really keen to try, you may be able to sign up for a course or an individual lesson in a particular craft. I found all of the volunteers very friendly to talk to and keen to expound on their own particular area of expertise and knowledge.

Lasting impression

It did help that it was a warm, sunny day but it was extremely enjoyable and fascinating ambling around the museum site, being able to talk to volunteers, passing the time of day and learning ever more as I went around. I was accompanied by Colin Wells, who was a jovial host, on good terms with all the regulars we met and always having a bit of banter with them. You could always look at a museum working enterprise as being nothing more than history, but this is a 'still-living record' of how life was, unlike most museums where you're stuck indoors with only static displays.

Here, you can feel much more involved and even participate in some of the activities. Do put Amberley on your to-do list of fun days out. Visit the website to find out more, including special event days throughout the year. My thanks to Colin for being so welcoming and helpful on the day.
www.amberleymuseum.co.uk

THE AMBERLEY BODGER

A key reason for visiting the museum was to see Colin Wells, whose green wood enterprise is named as the above. There is an area nestling in a bowl in the quarry site called the Greenwood Village, a collection of semi-permanent wooden structures that are, I suppose you might say, the modern-day equivalent of bodgers' hovels. Colin's own workshop is quite large, with a pole lathe teaching area at one end, the inevitable kettle, now a water boiler for refreshments, a wood stove for the winter months, a string of lights and a good open-air view across the other stalls in the village. The entire floor is covered in shavings, which makes for a very comfortable surface to walk on, insulated from the ground underneath. I noted with humour that it presumably didn't get swept very often. Colin replied: 'The only time this lot reduces is in winter when we need more wood on the fire.' I rather like the idea that you can just pick up your floor covering and chuck it in the wood stove – efficient and economical too. Colin is an engaging character and, like us all, has had a very varied and interesting life, a large part of which involved working on the buses, rising from being a 'clippie' eventually to a senior revenue protection inspector at Southdown buses. This is an interesting coincidence as there is a whole garage of working vintage Southdown buses and coaches on the site.

On redundancy from the company, Colin went to work at Goodwood, which gave him the opportunity to test drive some mighty racing cars – this sounded like a dream job. Colin is a qualified adult education teacher, having taught at Worthing Northbrook and what is now Brinsbury Campus, West Sussex. Colin had decided to opt for a different way of life and take up green woodworking, now firmly embedded in his splendidly rustic workshop.

He gave me a brief lesson in pole lathe turning which I found was more of a

challenge than I had expected as I have only ever used a powered lathe, not a foot-powered treadle lathe and just two tools, a chisel and a gouge. He patiently explained the rather obvious to me: 'You only apply tool pressure on the downward stroke of the treadle, let the tool ride gently on the upstroke.' Ah, I get it now, more practice needed I think…

Colin's day courses are very popular. You get to learn how to prepare a turning blank from a billet of ash, then sit on the shave horse to rough-shape the blank with a drawknife.

Finally, after a reviving lunch, you get to turn a simple object on the pole lathe, such as a garden dibber. It means all students have something useful to take away after a satisfying and enjoyable day in Colin's al fresco workshop.

Special offer

You can have a one-plus-one (two people) half-price foundation one-day course at Colin's workshop. These are generally run on a Wednesday or Sunday, although other arrangements may be possible. There are other courses available – four-hour taster and one-day stool making. At the time of booking you must mention the magazine in order to qualify.

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email: polelathe@btconnect.com ■

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The Editor's toolbox – *Part I*

The trouble with toolboxes – the tools never fit properly, so the **Editor** decided to make his own

There are so many plastic toolboxes, caddies and storage systems available today. I don't decry them – I have rather a lot myself. I frequently have a look at the plethora of storage on the shelves of my nearest DIY superstore, wondering what would be most useful next, but...

If you have a decent set of hand tools, just chucking them into a black plastic void isn't satisfactory at all. Recently, I found myself in an antique emporium in Oswestry, Shropshire, while visiting my daughter Amber. There, lying on a table, was a tatty, black-painted pine toolbox. Not the usual large, upright type of yore, which had a drop-down front, too big and heavy to move around. No, this was flat and not over-large and with fittings inside to take specific tools such as a handsaw. It wasn't worth 12 of my pounds – its condition wasn't great and my tools wouldn't 'fit the fittings', so-to-speak.

So what if I came up with my own design? It couldn't be too big or too heavy, it would hold a set of good-quality tools, be robust and open up lying down, but have a handle at the front so it would turn upright just for carrying. Possible? Yes, I thought so.

PHOTOGRAPHS BY GMC/ANTHONY BAILEY

Now, I have the luxury of being able to choose from quite a lot of hand tools, as you might expect. I am a tool junkie and I particularly like vintage tools rather than brand new. You could follow my example by choosing your own tools or buy ones you would really like to have, finances permitting, and adjust the design accordingly. It will vary according to what work you wish to undertake, but this exercise is more about the subject of trying to choose less. Easier said than done.

Tool categories

By defining categories it helps understand what tools might be needed, keeping the right ones in and excluding the unnecessary ones, even if we really like them. This is, after all, a functional kit, ready to go as soon as the case is opened. Here are my basic categories that the choice must fit. They are unashamedly an 'old school' selection – kit I love and enjoy using.

The beautiful ebony and brass detail on this marking gauge win me over and it feels really smooth to hold. It has previous owners' punch marks

I'm a sucker for ebony and brass and quality. This try square is large enough for most tasks and accurate

This baby boat level has a good pedigree and is nicely turned out. I always keep a spirit level with me

This deceptively simple-looking Japanese knife is lethally sharp – perfect for marking out

This steel rule has dual metric and imperial scales and the flip-open click-lock doubles it length

Marking and measuring

Steel rule – I have this dual-scale flip and click open steel rule with brass ends. This is a must.

Large try square – I'm not sure where I found this big vintage model with ebony and brass stock and blued blade. Nice and solid though.

Engineer's square – For smaller marking-out tasks I prefer the precision and compactness of an all-steel square.

Sliding bevel – You can't mark repetitive angles without this or something like it.

Marking knife – A Japanese or similar type of marking knife has the edge over traditional English knives, which are thicker.

Medium-grade carpenter's pencil – Of course, you need one pencil at least.

Spirit level – This little baby boat level looks and feels nice, but if you're trying to get something to fit it's good to know you're on the level and it doesn't eat much space.

Hand saws

I was brought up on Sheffield-made dovetail, tenon and panel saws, but times have changed. So much so that I have opted for two Japanese pull saws – one a bendy, flush-cut saw for fine trimming work, and a larger do-anything saw with its fine teeth perfect for problem cuts. However, a traditional, brass-back dovetail saw does go in the kit and – a bit of a rarity – a Dictum, Germany, Turbo saw, push type with Japanese shark teeth, a fast panel-cutting saw with a rigid blade.

This flush-cut saw has no 'set' to the teeth, allowing fine trimming of work without scratching the surrounding surface

I really like the swept-side design and it is relatively light for its size. The adjustment mechanism is unique to Gage planes

Hand Planes

No.5 Jack plane – It could be any No.5 to be honest, but I really got to like the look and feel of this slimline Stanley Gage plane from the 1930s with its unique blade-setting mechanism. It will stand in for a No.4 smoother, which saves weight and space.

Block plane – This is a harder choice as not all block planes are the same – low angle or not? Well, I've opted for a chunky old Stanley with its two blade positions. I might change my choice when I finally set everything out in the case.

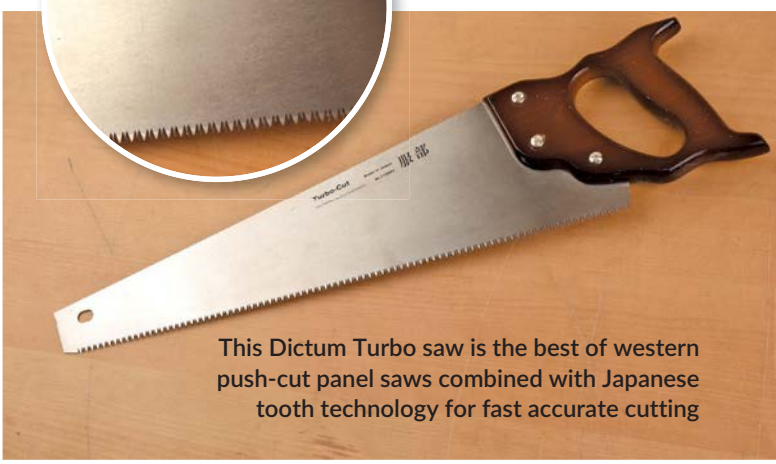
Squirrel-tail plane – This little baby is a must for restoration work. I have lost count of the number of times I have trimmed off boxwood stringing on the edges of a battered chest of drawers without disturbing the surrounding French polish.

Rebate plane – There's always those tenons and rebates to clean up and, wisely or not, I've opted for a bullnose model over a slimmer, longer version.

This bullnose Stanley rebate plane has a good, solid feel to it, perfect for trimming tenons etc

The squirrel-tail plane allows comfort and control and the 'tail' sits in the palm of your hand

This Japanese saw is very versatile and the fine kerf and control make it ideal for awkward cuts and trimming



This Dictum Turbo saw is the best of western push-cut panel saws combined with Japanese tooth technology for fast accurate cutting

This dinky wooden spokeshave needs care in sharpening and setting up but will cut well with practice

Chisels

Set of four bevel edge chisels – I love the look and feel of the Irwin Marples construction chisels. They have the same steel as other Irwin chisel so they are perfectly good for fine and coarse chisel work. In an ideal world I would have the full set but I can only allow myself four – but which sizes to choose?

I choose tools not just for functionality but because they look good too. These Marples chisels are the equal of any

Shaping

Incannel gouge – Not often needed but there are many options for cutting a tight, clean internal curve, so I need one of these.

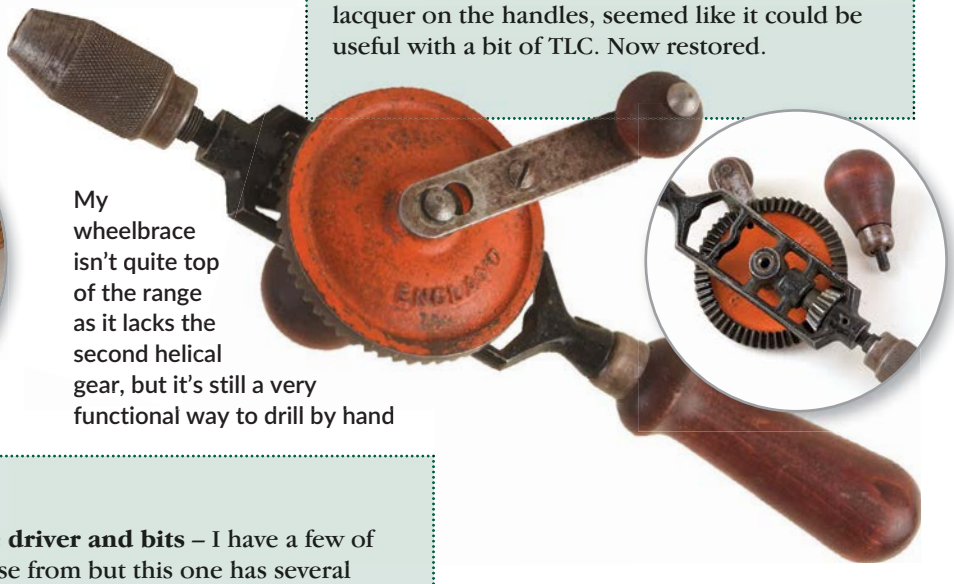
Curved bottom spokeshave – I'm not a fan of spokeshaves but they do have their uses. My final choice of a vintage boxwood model isn't just about loving old tools. It's small and lightweight – so it's in.

Half-round rasp – You can do a lot of damage to wood with one of these, depending on how coarse it is. Space is an issue and so is finesse, so I've chosen a fine, hand-stitched Swiss rasp. It wins on size and weight and gives a good level of finish.

An old Sheffield carbon steel gouge for those awkward internal curves. Good to see the manufacturer's markings

Drilling

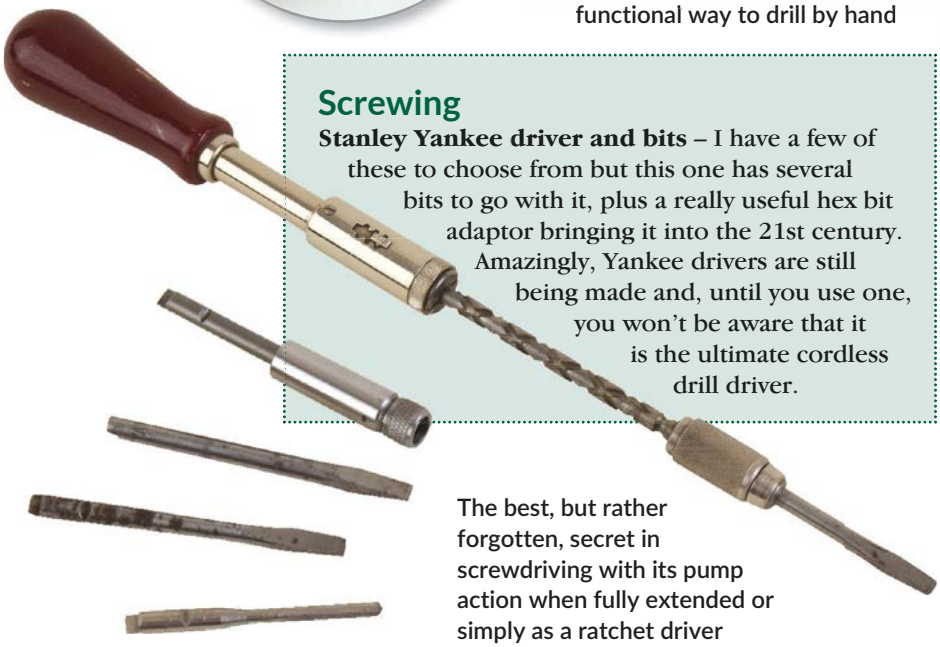
Coffee grinder-type hand drill and bits – Not sure about this, I'm used to using cordless drills like everyone else. However, this is a manual set of tools and this one, which had chipped-off lacquer on the handles, seemed like it could be useful with a bit of TLC. Now restored.



My wheelbrace isn't quite top of the range as it lacks the second helical gear, but it's still a very functional way to drill by hand

Screwing

Stanley Yankee driver and bits – I have a few of these to choose from but this one has several bits to go with it, plus a really useful hex bit adaptor bringing it into the 21st century. Amazingly, Yankee drivers are still being made and, until you use one, you won't be aware that it is the ultimate cordless drill driver.



The best, but rather forgotten, secret in screwdriving with its pump action when fully extended or simply as a ratchet driver

Phew! That's quite a lot in one case and weighty too. Am I being too ambitious? Quite possibly. The first thing is to lay it all out on a piece of board and just get a feel for layout. Fittings in the base and the lid – how about a middle lift-out board with more fittings? All doable I guess. Let's see how this progresses. The end aim is a reasonable degree of portability and to be a readily usable kit when set up. It's a bit like being a castaway on a desert island with minimal resources to work with. Nooooo! Please don't part me from all these lovely tools. ■

Coming next month in
Woodworking CRAFTS

PHOTOGRAPH COURTESY OF SHUTTERSTOCK

ISSUE 44 ON SALE 30 AUG

Feature: The Nelson Touch - Restoration of HMS Victory

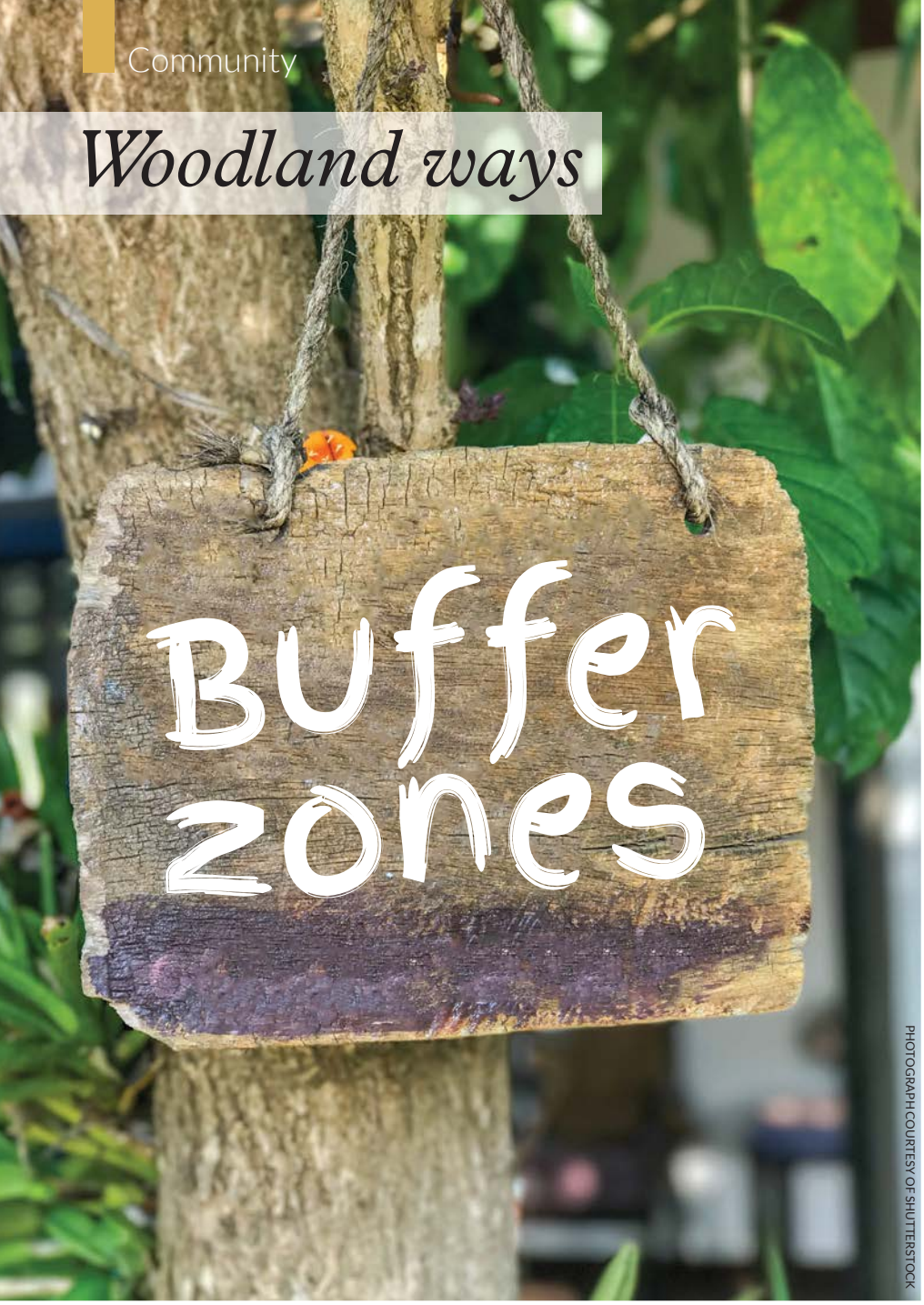
- Uckers board game
- The Editor's toolbox Part II
- Iroko storage chest

PHOTOGRAPH BY QUENTIN SMITH

PHOTOGRAPH BY JAMIE LAKE

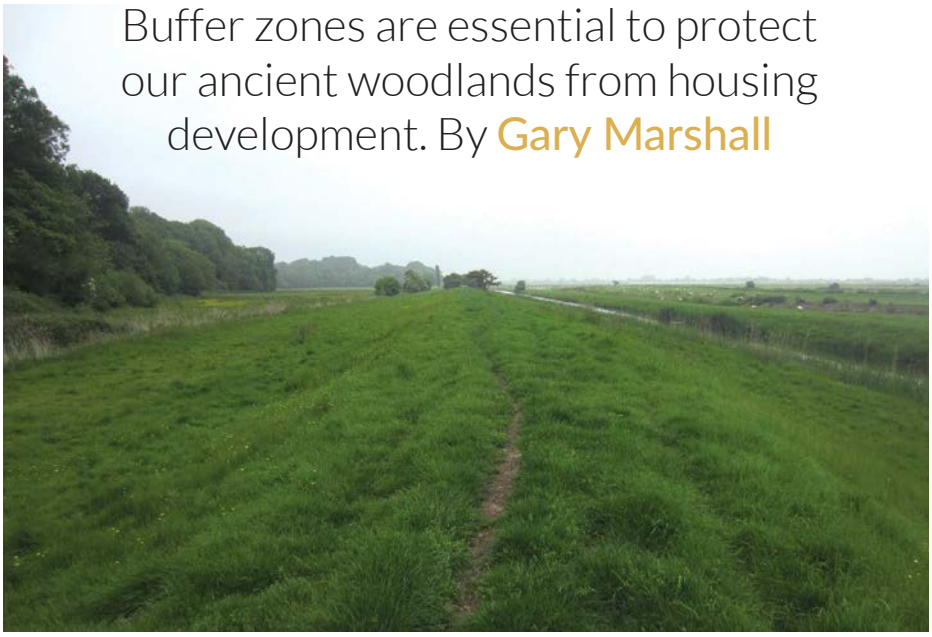
PLUS: *Woodland ways; Trees for life; Plans 4 you; Woodworking glossary and more...*

Woodland ways



PHOTOGRAPH COURTESY OF SHUTTERSTOCK

Buffer zones are essential to protect our ancient woodlands from housing development. By Gary Marshall



PHOTOGRAPHS BY GARY MARSHALL UNLESS OTHERWISE STATED

Buffer zone here protects wood from farming activity

When I was at agricultural college we talked of protecting nearby woods, hedges and precious habitats against spray drift by leaving appropriate buffer zones. Here, the issue of buffer zones for ancient woodlands to mitigate against damage from development is discussed.

Background

Most people accept that there is a pressing need for more and better housing in the UK. Looking around the area near where I live in East Sussex, there is an apparent building boom going on. The number of applications for large and medium-scale developments has increased in recent years. Important documents, including neighbourhood plans, are helping to ensure sensible expansion. Beware though – there are many corporate bodies and organisations keen on ignoring the wishes of local people and even local planning authorities. Our cherished woods and other wild and semi-wild spaces need proper protection. This is where buffer zones are so important – vital in the case of ancient woodland.

Development next to ancient woodland can cause irreparable damage to:

- Woodland soils – including microflora and fauna, fungi, structure and ground flora.
- Roots of both understorey and canopy trees.
- Woodland archaeology.
- Woodland wildlife.

It can also cause compaction and pollution and changes in hydrography.

On a wider scale, wildlife corridors and their associated neighbouring semi-natural habitats can be lost or broken.

Of course, while development is taking place there's extra dust, noise, traffic and light pollution.

When the development is completed there may be threats to wildlife from pets, trampling and damage by casual visitors, light pollution from new street lighting and houses – and adverse changes to the sense of place and character of an area. Maybe even fly-tipping and the introduction of invasive unwelcome species from garden waste or 'escapes'.

What can or is being done?

There are Forestry Commission – and thus government – guidelines, which are taken seriously by most planners

This ancient wood is next to a large development

Buffer zone protects new hedge from spray drift

and conscientious developers. These lay out various actions that should be taken to ensure protection of our ancient woodlands and veteran trees. I would argue that these should also be applied to other semi-natural habitats.

These include screening barriers, noise reduction and – as in the title of this article – leaving an appropriate buffer zone of semi-natural habitat between the development and the ancient woodland or tree. The buffer should be a minimum of 15m but can be more, depending on the size of development. In the case of veteran trees (these can be on the edge of an ancient wood, secondary wood or on their own), a buffer zone should be 15 times more than the spread of the tree – or 5m if that is greater.

That's good isn't it? Yes it is, in theory. What happens in the real world though? I have seen instances where developers have signed up to all these wonderful protecting measures, but then – unless held to account – proceed to ignore them. So keep your eyes and ears open and don't assume that because the developer's literature is green its instincts are also.

Breaches

If you spot breaches to conservation measures, let your local planning office know. If you don't get a result, copy in your MP. You could even let the developers know that the local press may be interested – they don't like bad publicity. Also, the Woodland Trust and your local Wildlife Trust may well be able to help.

To my knowledge these kind of actions have assisted where, for instance:

- The buffer zone was less than 15m – a larger tract of land was substituted further along the boundary (not ideal but better than nothing).
- Sewage and other run-off was damaging the ancient woodland soil – talk of the Environment Agency being notified soon changed sloppy practice.
- Spoil piles were slipping towards the wood – aerial photos that could have been spread across local papers changed the level of care among the earth movers.

The worst practices I've heard of are where developers have destroyed trees with tree protection orders on them, thinking of any fine as a 'small', justifiable expense.

My hope is that developers have been forced to be, or want to be, more enlightened than in the past. Also that the government, local authorities and the concerned public do not cave in to unreasonable development pressures that would destroy much of what still makes the UK a famously green place in which to live.

For further info go to: **www.gov.uk/guidance/ancient-woodland-and-veteran-trees-protection-surveys-licences** ■

Looking out on development land from ancient wood

Semi-natural vegetation in buffer zone

Barriers protecting buffer zone

PHOTOGRAPHS BY NEIL LAWTON

Garden planter revival

Beyond repair? Neil Lawton revives a garden planter

How do you decide when something is beyond repair? Usually it's pretty easy to ask if the cost in time and materials outweighs the cost of replacement then why bother? Things get a little more complicated, though, when we enter the realm of sentimental value, as in this case.

The planter was bought for a lady by her husband, who sadly died shortly after. The brief was to try to patch up the planter and get a few more years out of it, using as many original parts as possible. The original seemed to be constructed in teak, but with no access to this in quantity I decided to use reclaimed iroko as it should weather to a similar silver grey as the original.

1 After being emptied of soil and the last few intact screws removed, this is what was left. The barrow sides were too far gone but retained in the short term as templates for replacements.

2 The side rails/handles are the backbone of the construction so a start was made on these. With a straight-edged piece of wood as a guide, a top-bearing trimmer bit was used to rout away the rotten section on one side.

3 A piece of new wood was cut to suit the cut-away. The other rail, as can be seen, was too far gone.

4 Only the ends of this piece had enough sound wood left to use, so the middle section was cut away completely.

5 What looked OK from the outside wasn't, but there was just enough to get by.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6 A new piece was cut for the middle section, with the halving joint oriented to leave the most sound wood on the original pieces.

7 Though the teak was dry the iroko was still oily when cut. A quick wipe with white spirit, then a dampening with water, helps the foaming polyurethane glue form a better bond.

8 With the two rails laid side by side, the position of the mortises and other fixing points were marked on to the new piece. ➤

9 The new rail was then mortised to match the original.

10 Some of the smaller components, such as the wheel mounts, were in good condition, and just needed a clean up. These brackets, which supported the front of the barrow itself, needed replacing completely.

11 After using the originals to set the cut angles, they were again used as a template on the reclaimed table-top offcuts that were to replace them.

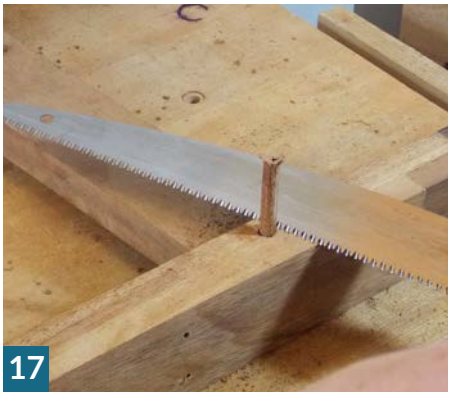
12 The wheel was in quite good condition, but where one section had worked loose it wouldn't clamp back tight, so the dowels were cut through to separate the individual parts.

13 New dowels were made by knocking a section of beech through an old imperial dowel plate I rescued from a skip. These would be used to reassemble the wheel after sanding clean.

14 The last bit of patching up. Some areas of rotten wood were replaced at the top of one of the legs where it supported the barrow side.

15 The bottom required remaking from scratch. Luckily, enough of the original survived to recreate the right measurements and angles.

16 The two main cross members had tenons cut to fit the sides.


17


18

17 These were then drilled and pegged underneath, as the originals.

18 An adjustable fence was used on the tablesaw to replicate the taper of two of the bottom boards.

19 With the wheel and legs refitted, the bottom boards were screwed into place with brass screws. A piece of wood was cut and marked to make sure the battens lined up and had the correct spacing.


19


20

20 Some pieces of already-jointed table top were cut and cleaned up through the thicknesser to make the new sides.

21 The tops were shaped and the rebates routed using the originals as templates.

22 The carcass was screwed together then the new front support brackets screwed in place.


21


22

23 The completed planter. Once weathered the woods should blend into a more uniform silver/grey.

24 The restoration of the planter was for sentimental reasons and I used the original wood wherever I could. Some sound wood had to be cut into for jointing etc, so I used a piece to make the lady a pen as a memento as well. ■


23


24

Did you know?
Pear trees can live up to 250 years and, because of this, the ancient Chinese believed the pear was a symbol of immortality.

Trees for life
Pear

Nothing could be sweeter than a ripened pear, but this much-appreciated fruit tree can yield fine timber too

Pear blossom

Pear tree bark

European pear (*Pyrus communis*) has produced a huge number of varieties of its own,but I think we can all work out that there are various sorts of pear fruit you can buy to eat. The number of pear tree varieties worldwide numbers approximately 3,000. Although the tree never grows to vast proportions, its often awkward trunk can still produce useful timber for certain kinds of woodwork.

The pear is native to coastal and mildly temperate regions from western Europe and north Africa and right across Asia. It is a medium-sized tree, reaching 10-17m (33-56ft) tall, often with a tall, narrow crown. A few species are shrubby.

The leaves are alternately arranged, simple, 2-12cm long, glossy green on some species, densely silvery-hairy in some others. The leaf shape varies from broad oval to narrow lanceolate. Most pears are deciduous, but one or two species in south east Asia are evergreen. Most are cold-hardy, withstanding temperatures between -25°C and -40°C in winter, except for the evergreen species, which only tolerate temperatures down to about -15°C.

The flowers are white, rarely tinted yellow or pink, 2-4cm diameter, and have five petals. Like that of the related apple, the pear fruit is a pome, in most wild species 1-4cm diameter, but in some cultivated forms it can grow up to 18cm long and 8cm broad. The shape varies in most species – we are familiar with the 'pear-shape' of the European pear.

Pears and apples cannot always be distinguished by the form of the fruit – some pears look very much like some apples, such as the nashi pear. One major difference is that the flesh of pear fruit contains stone cells called 'grit'.

History

Pear cultivation in cool, temperate climates extends back to antiquity and there is evidence of its use as a food since prehistoric times. Many traces of

PHOTOGRAPHS COURTESY OF SHUTTERSTOCK UNLESS OTHERWISE STATED

PHOTOGRAPH BY GMC/ANTHONY BAILEY

Typical colour and grain

A pear wood recorder

A sycamore and pear candle box

PHOTOGRAPH BY ALLEN BARRET

Uses

Pear is one of the preferred materials in the manufacture of high-quality woodwind instruments and furniture, and was used for making the carved blocks for woodcuts. It is also used for woodcarving, and as a firewood to produce aromatic smoke for smoking meat or tobacco. Pear wood is valued for kitchen spoons, scoops and stirrers, as it does not contaminate food with colour, flavour or smell, and resists warping and splintering despite repeated soaking and drying cycles. It is good for carving, brushbacks, umbrella handles, measuring instruments such as setsquares and T-squares, violin and guitar fingerboards and piano keys and decorative veneering. Pear wood is the favoured wood for architects' rulers because it does not warp. It is similar to the wood of its relative, the apple tree (*Malus domestica*) and used for many of the same purposes.

it have been found in prehistoric pile dwellings around Lake Zurich. The word 'pear', or its equivalent, occurs in all the Celtic languages, while in Slavic and other dialects, differing appellations still referring to the same thing are found.

The pear was also cultivated by the Romans, who ate the fruits raw or cooked just like apples. Pliny's *Natural History* recommended stewing them with honey and noted three dozen varieties. The Roman cookbook, *De Re Coquinaria,* has a recipe for a spiced, stewed-pear patina, or soufflé.

Court accounts of Henry III of England record pears shipped from La Rochelle-Normande and presented to the King by the Sheriffs of the City of London. The French names of pears grown in English medieval gardens suggest that their reputation at the least was French.

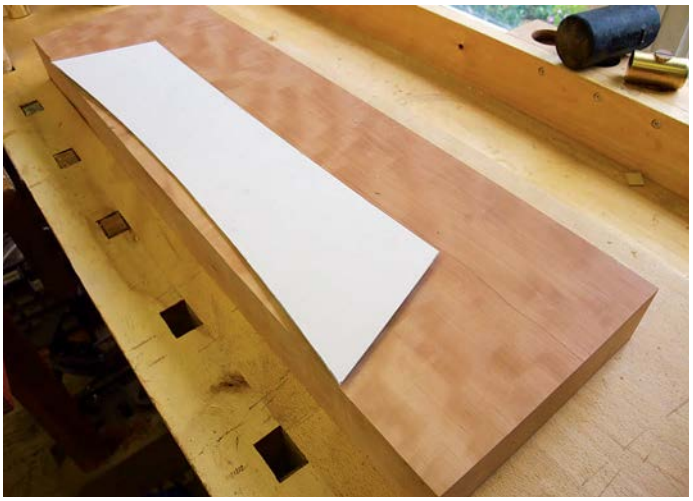
Grafting

The pear is normally propagated by grafting a selected variety on to a rootstock, which may be of a pear variety or quince. Quince rootstocks produce smaller trees, which is often desirable in commercial orchards or domestic gardens. For new varieties the flowers can be crossbred to preserve or combine desirable traits. The fruit of the pear is produced on spurs, which appear on shoots more than one year old.

Three species account for the vast majority of edible fruit production – the European pear (*Pyrus communis*, subsp. *communi*), cultivated mainly in Europe and North America; the Chinese white pear, bai li (*Pyrus bretschneideri*), and the nashi pear (*Pyrus pyrifolia*), also known as Asian pear or apple pear, both grown mainly in eastern Asia.

Other species are used as rootstocks for European and Asian pears and as ornamental trees. The Bradford pear (*Pyrus calleryana* 'Bradford') in particular has become widespread in North America, and is used only as an ornamental tree, as well as a blight-resistant rootstock for *Pyrus communis* fruit orchards. The willow-leaved pear (*Pyrus salicifolia*) is grown for its attractive, slender, densely silvery-hairy leaves. ➤

Whip and tongue graft on a pear tree



PHOTOGRAPH BY DAVID BARRON

A box template on a board of pear wood

Blossom of the weeping silver pear tree (*Pyrus salicifolia pendula*)

Abstract design with rose wood and pear wood

PHOTOGRAPH BY GER VERVOORT

A pear log for turning

PHOTOGRAPH BY GMC/ANTHONY BAILEY

Food

Pears are consumed fresh, canned, as juice, and dried. The juice can also be used in jellies and jams, usually in combination with other fruits, including berries. Fermented pear juice is called perry, or pear cider, and is made in a way that is similar to how cider is made from apples. The culinary or cooking pear is green but dry and hard, and only edible after several hours of cooking.

Harvest

Summer and autumn cultivars of *Pyrus communis*, being climacteric fruits, are gathered before they are fully ripe while they are still green, but snap off when lifted. In the case of the Passe Crassane, the favoured winter pear in France, the crop is traditionally gathered at three different times – the first a fortnight or more before it is ripe, the second a week or 10 days after that, and the third when fully ripe. The first gathered fruit is therefore eaten last, once it has ripened.

Popular mythology

A Partridge in a Pear Tree is the first gift in the festive repetition song *The Twelve Days Of Christmas*, although pear trees only appear in the English version and thus may be a mistranslation from the French carol. The pear tree was an object of particular veneration in the tree worship of the Nakh peoples of the North Caucasus. Pear and walnut trees were held to be the sacred abodes of beneficent spirits in pre-Islamic Chechen religion and, for this reason, it was forbidden to fell them.

Hollow form by Mark Baker

PHOTOGRAPH BY GMC/ANTHONY BAILEY

A pear tree in a meadow

Wildlife

The fruit of pear trees is eaten by birds, such as thrush and blackbird, and its flowers are a popular food source for bees. Caterpillars live in the foliage, which is a fantastic habitat, providing shelter and sustenance, during their transition into moths and butterflies.

Where is a pear?

Pear trees have been grown in gardens and orchards throughout much of the UK since 995 and many cultivars now exist. Naturalised or wild pear (*Pyrus pyraster*) trees can be found in hedges, woodland margins and old gardens, and on railway banks and waste ground. They spread easily by seed and by discarded cores. So keep a look out for them as they can appear in unexpected places… ■

BOOK REVIEWS

The Editor digs deep to find his latest book selection

Basements Complete – Expert advice from start to finish

Steve Cory

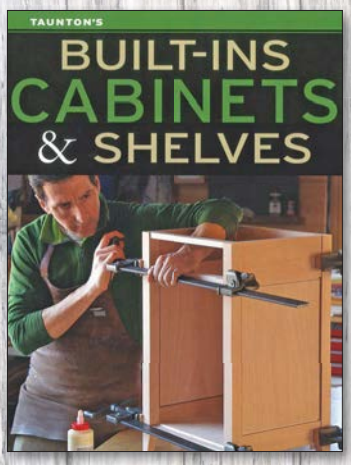
ISBN: 978-1-63186-846-7
PRICE: £21.99
Published by The Taunton Press

A basement can be a damp, dark, rather forbidding place. But does it need to be? I must confess an interest – our living room is what we always refer to as 'the cellar', below ground, but carpeted and comfortable, although it wasn't always this way. Well this book gives you a vast amount of information to enlighten and inform. It is American, so certain information such as that about electrics is not appropriate for the UK. But most of the content is useful and from experts who know how to turn an unpromising space into something entirely liveable and useful.

Various chapters cover topics such as using a basement as a living room, bedroom, entertainment or utility space, or perhaps as a bar or wine cellar. The book describes the anatomy of a basement and how to deal with the dreaded damp. Construction requirements and the order of works and working with sub-contractors come next. There is plenty of construction detail dealing with walls, floor and ceiling, plumbing and electrics. It even deals with tricky situations such as a curved wall and framing around obstructions. A must-have book if you really want to sort that cellar out.

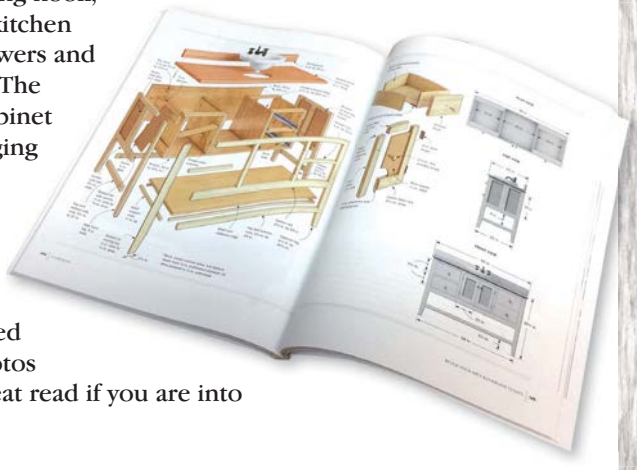
Built-Ins – Cabinets & shelves

Editors of Fine Homebuilding & Fine Woodworking



ISBN: 978-1-63186-912-9
PRICE: £18.99
Published by The Taunton Press

Are you wanting a smart piece of furniture? Maybe some shelves? They don't have to be dull and boring, but whatever you make can look good, be functional and a talking point as well. Brought to you by editors with expert knowledge, these projects give you something to learn from and create satisfying results. Often in our homes freestanding furniture isn't the answer, whereas the featured projects here could be your salvation. Learn how to maximise space and do it in style.



Various key issues, such as choosing the correct type of ply or MDF for carcassing and safe use of the tablesaw, lead on to chapters with really inspiring projects, such as a corner seating nook, the perfect pantry, building a kitchen island, a clever island with drawers and building storage into any bed. The next section has a variety of cabinet projects, such as a simple hanging cabinet, bathroom vanity unit and frame and panel cabinet. The fourth and last part has several different shelf and bookcase projects. The whole book is lavishly illustrated with plenty of step-by-step photos explaining the processes. A great read if you are into cabinetmaking.

Both books are available from:
www.gmcbooks.com
01273 488005

Ask the experts

ANTHONY BAILEY
Editor,
Woodworking Crafts magazine

Another selection of awkward questions for our experts to answer

AGONISING COLUMN

STAR QUESTION

We recently bought a Georgian townhouse but it needs quite a lot of work to do it up. One thing that has us puzzled us the portico at the front door, which is supported by two columns, one made of stone and the other made of wood. The stone one is in quite good order but the base and top of the other have rotted and it generally needs attention to get it back into a decent state. Should we replace it with stone or leave 'as is'?

Vicky Newland

Anthony replies: I'm sure it is a delightful home as Georgian properties have quite refined architectural details. Yours is obviously unique because the columns aren't the same, even if they look correct. We can only guess why they are different – whether they were made like that or altered later. However, as you are no doubt aware, your property will be a Grade II listed building, so you can't just replace a column and hope no one spots the difference. Then there is the matter of cost, including any associated design work. It is far better to repair the existing wooden column and be proud of having a rather unusual feature, a talking point – visitors can rap their knuckles on both to spot the difference. I've added a couple of photos of a rotted wooden column showing the base being cut away with a multi-tool and new segmented ring turnings being fitted in place. You need the right professional help to do both these operations, especially ring-turning on this scale.

PHOTOGRAPH BY GMC/ANTHONY BAILEY UNLESS OTHERWISE STATED

A downward cut with a multi-tool, stopping just short of the lead capping

Turned as a ring and split into four segments ready to bond into position

This hardwood gate has been coated with aluminium primer ready for painting

SHINY, SHINY

I was passing by a redeveloped Victorian outbuilding the other day, which was being turned into a residential property. The new French windows seemed like they were made of metal but, on a closer look, they were wood painted with some shiny paint. I asked the builder and he said it was used because it was hardwood and the primer was put on at the joinery works. We are having new hardwood windows at home. Should I ask the carpenter to use that sort of paint instead of ordinary primer?

Neil Bilton

Anthony replies: It tends to be the rule that pink primer is used for softwood and aluminium primer on hardwood. It is certainly superior if the wood is naturally oily or resinous, and it will act as a knotting paint. It is also good on weathered, scorched or smoke-damaged wood. A standard paint system of undercoat and top coat can then be used over the primer. If you try using it yourself do be aware that it has a solvent base, so you need to download and read the data sheet and safety sheet for that particular product first.

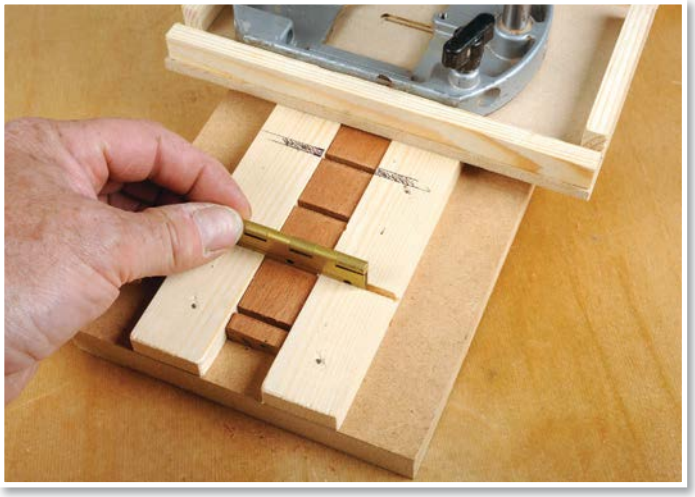
FIT TO BURN

I've recently cut down a massive Leylandii bush with thick trunks that I feel ought to be OK for burning in a woodstove. Is it worth the bother of cutting it all into logs though?

Chris Oulton

Anthony replies: Most things can be persuaded to burn but not all are suitable. In this case, the wood is perfectly OK but, being somewhat pine-like in quality, it is likely to spit on the fire. However, in a woodburner this doesn't matter as it should be run with the door shut. Cut the logs to your standard size that fits the woodburner, then stack and leave exposed to dry for six months or so. Don't worry too much if rain gets on it – it is more important that the sap dries out and air gets to the logs. Put under dry cover later on once the elements have worked their magic.

Thick hedge trunks will make quite usable fire logs when dried out



A simple router or biscuit jointer jig can be made up for creating repeat slots

FRIEZE!

Is there an easy way to make dentil moulding or frieze to go around the frame of a table? I'd like to add the detail but it seems a bit tricky getting exact spacing all the time when I've tried it.

Garry Ransley

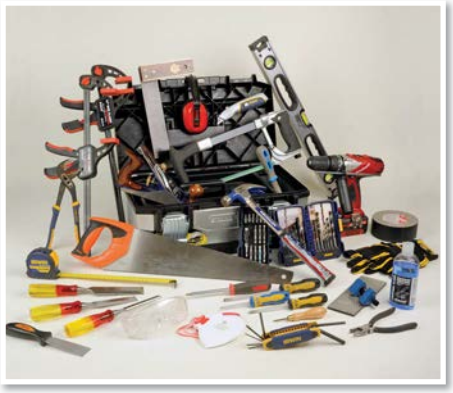
Anthony replies: Yes, there is. You do need a jig – this is the last version I used and you can make it wider to create a frieze width rather than just narrow dentil moulding. You can probably get the idea. A router sits in a tray that slides on the jig. Push the router across to make a slot then repeat using a biscuit or, in this case, a folded hinge to act as the registration device, so each successive slot is exactly spaced. I can send you a project article where it was used if that helps.

SKILL V OPERATOR

Is it possible to do woodworking the old-fashioned way using just hand tools, or do I 'need' power tools and machines? I've inherited, I suppose you might say, a lot of old hand tools from my late grandfather and I've fancied having a proper go at woodwork for some time.

Andy Summers

Anthony replies: The short answer is no – you don't need to use powered machines of any kind. But the downside is you need a higher level of skill, more physical expenditure of effort and limitations on what you can do. You mention inheriting old tools, but are they any good? Old doesn't necessarily they are in a usable state or particularly useful. My best suggestion is to read my article in this issue, *The editor's toolbox,* where I try to create a minimalist toolkit with reasons for each tool. Hopefully that will help inform your choices, and yes, I will still be using a cordless drill, biscuit jointer, router and guided track saw. That way I get the best of each way of working.



You can perform most woodworking tasks with carefully chosen hand tools

STAR QUESTION PRIZE

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

Green Man mask

Duane Cartwright carves a mask based on the traditional image of the Green Man

PHOTOGRAPHS BY DUANE CARTWRIGHT

This Green Man is loosely based on a mask, but could easily be carved as a shallow bas-relief. Or, using a thicker block of wood, it could also be carved as a full mask. I used American black cherry (*Prunus serotina*) for this project for its warm colour, plus it is one of my favourite woods to carve. Before you start to carve, you'll need to print out the design at the required size for the piece of wood you wish to use, then transfer the design to the piece of wood. For this, I used an artist's 6B carbon stick and rubbed it all over the back of the printed design. Then, using masking tape, I taped the printed design on to the piece of wood so I could trace over the design with a ballpoint pen, transferring the design to the wood. You could also use carbon paper or even glue the printed design on to the piece of wood.

As I mention later, I chose to sand the front of this project and leave the back tooled. However, the decision to sand a carving is a personal choice. Before sanding it's important to finish the carving to a state that it could be left tooled if chosen. Start at 150 grit and, going with the grain, sand through the grits until the sanding is complete, then brush down and apply a coat of sanding sealer.

Once the sealer is dry, check over the carving and touch up any areas that may have been missed. Once you are happy with the carving, cut back the sealer with 400 grit abrasive and apply your chosen finish.

Things you will need...

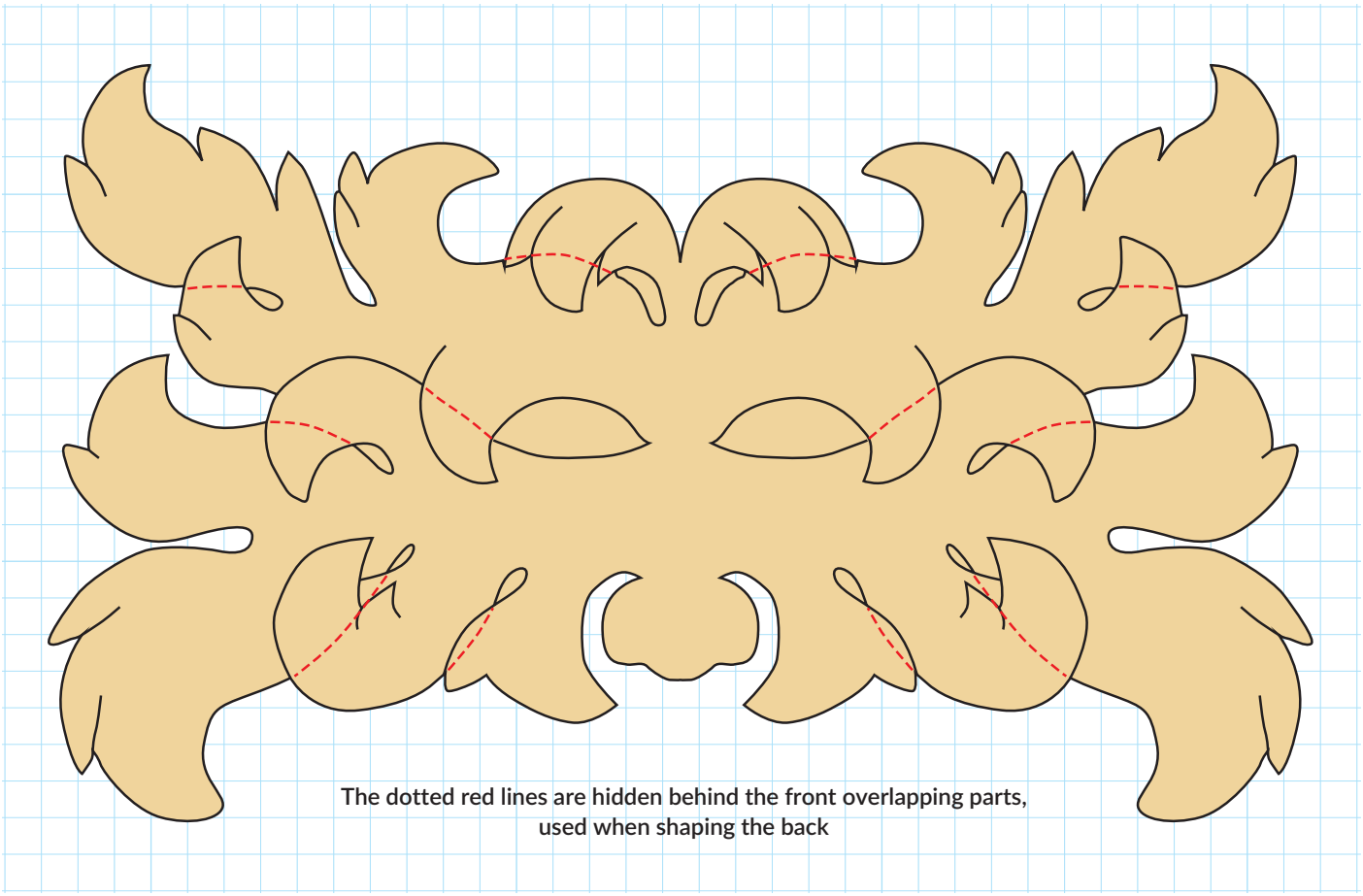
Tools:

- No.9 sweep gouge 5, 8, 14mm
- No.6 sweep gouge 8, 14mm
- No.4 sweep fishtail 10mm
- No.3 sweep gouge 8, 14mm
- No.7 sweep gouge 10mm
- No.11 sweep gouge 3mm
- Hooked skew
- 150 grit, 240 grit, 320 grit and 400 grit cloth-backed sandpaper
- Sanding sealer and friction polish
- Picture frame hook and small screw
- Bandsaw – a coping saw/jigsaw will do just as well
- Pillar drill – hand drill will do just as well

I've listed the carving tools I used as a guide but I recommend you use the carving tools you have that will make the required cuts as efficiently and cleanly as possible. The sweeps on my gouges here are all from different manufacturers.

Wood:

American black cherry (*Prunus serotina*): 290mm wide x 170mm high x 27mm thick



The dotted red lines are hidden behind the front overlapping parts, used when shaping the back

1 Once the design has been transferred on to the wood, start to drill out the outer leaf/lobe eyes and the pupils.

2 Use a bandsaw to cut out the profile. Draw a red line around the outside of the design – this will improve visibility while cutting out on the bandsaw.

3 For the heavy bolstering work, secure the project to your bench using the bench vice and bench dogs with some scrap wood for spacers between the bench dogs and the carving – the scrap wood protects the carving and the chisels. After the bolstering is done, mount the carving on to a peg board that is fitted to a ball vice, which gives you easier access to carve. However, you could carry on with the bench dogs if preferred. Before I started this carving, a friend asked me how I knew how deep each area was going to be carved. The answer is that I numbered the high and low spots, 1 being the highest areas and 5 being the lowest. With the carving secured, I used an 8mm No.9 sweep gouge and started marking in, separating the high areas and taking down the lower areas. ➤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4 Once you have marked in, use the No.8 and 14mm No.9 sweep gouges and carve down the lowest areas first, carving from the side of the nose and across the cheeks, shaping the leaves. Use deep gouges to bolster in. When carving down the lower areas, remember to keep checking the wood's thickness. As you get down to the required depths, round over and blend in the high areas. Turn the gouge over and round over the high spots.

5 If you carve down one side first you can use the markings on the other side as a reference and easily transfer them over. After the bulk of the shaping is done, move on to the nose. Start by carving across the bridge with a 5mm No.9 sweep and up from the bridge between the brow along the centreline.

6 Using a medium No.6 sweep gouge, shape the nose, first by sloping it back from the tip to the bridge, then down both sides giving it shape and blending it into the cheeks. Turn the gouge over and round over and finish shaping the nose.

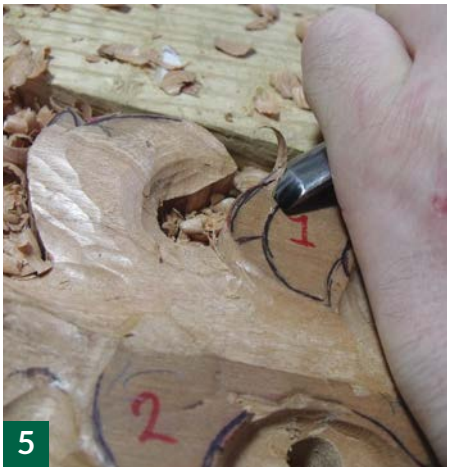
7 Redraw the detail of the leaf shapes using dividing callipers to transfer the measurements. Then cut in around the overlapping leaves and the curled leaves. Only cut in when you're sure you're not going to move that particular area.

8 Redraw the bottom part of the eyes, making sure the outer corners follow the red dotted lines. Use the best-fitting gouge for the sweep required and cut in.

9 Using a shallow fishtail gouge, cut back the eye just deep enough that the stop cut is prominent. Use a hooked skew to clean up.

10 After cutting in around the curled up areas, use a No.6 medium sweep gouge upside down to shape the curls. For the top curls, use a No.11, 3mm sweep and carve two grooves over the top of the curls. Round over the sides you have just carved, paying attention to grain direction.

11 Use a No.9 sweep gouge to undercut the overlapping curls. Undercut just enough to tidy up and create some shadow, keeping the flow of the leaves as they blend and overlap each other.



12 With the cutting in done and the curls carved, redraw the leaf eyes inside the curls and where the leaves overlap. Once happy with their placement, use a hand drill to drill through the eyes.

13 Using a hooked skew, carve in the drilled eyes where the leaves overlap each other. For the eyes that go into the curls, use the best-fitting gouge and cut in. When cutting in the eyes, only carve through enough to tidy up the front. Carve all the way through when you carve the back.

14 Redraw the detail in place and then use the No.11, 3mm sweep to separate the lobes from the rest of the leaf. Only carve halfway down each lobe and then level off the leaf up to the lobes.

15 Using a No.7 sweep medium gouge, carve the lobes at an angle to the rest of the leaf, leaving a clean gouge shape to each lobe.

16 Once the front is carved, mark out the back using the red dotted lines. Mark three circles on the back – these areas are thin so be careful not to carve there until you've finished carving the back.

17 Secure the mask to the bench by placing it on an old pillow and use cord wrapped around and through the bench dog holes and twist tight to hold the carving. Use a No.9 sweep gouge and mark out. Then, starting at the nose and moving out, carve down the back, following the leaf contours of the front. While carving the back, keep checking the thickness and try to keep an even thickness throughout the carving. Also remember that the curls need to round over from the back. When the back has been roughly taken down to the required depth, use a shallow No.3 sweep gouge to smooth out and tidy up.

18 Use a hooked skew to clean up the leaf eyes from the back. Go around the edges and clean up any saw marks or any other areas. After sanding the front through the grits and after cutting back, give the carving a coat of friction polish and buff it with a nylon bristle brush. Attach a picture hook to the back and screw into the thickest part of the wood. Use a small screw that will not go through to the front. ■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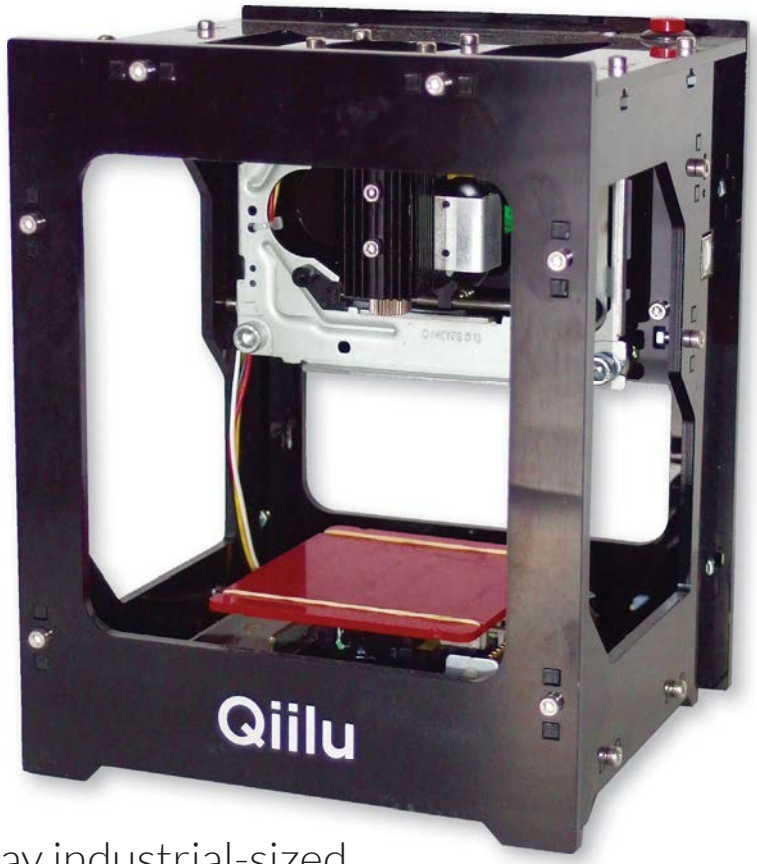
PRODUCT TEST:

Qiilu micro engraving machine – Model: DK-BL



PHOTOGRAPHS COURTESY OF AMBER BAILEY

Amber Bailey swaps her day-to-day industrial-sized laser cutters for one of more miniature proportions

Having swapped my fretsaw for slightly more modern technology, my day-to-day work life is spent running some of the largest and most expensive laser cutters money can buy. And when my partner was recently hunting around for the perfect gift for me, there was only one way to go. What do you get a girl who has everything? – More of the same. I am now a proud owner of a miniature desktop laser engraver and ready to put it to the test.

Specification

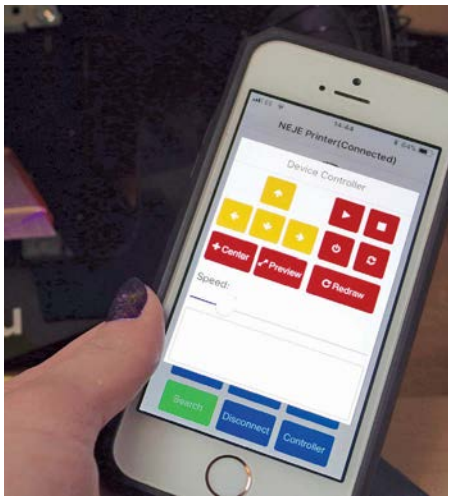
Running through USB and bluetooth, the Qiilu is a portable laser engraver weighing a mere 1.6kg and standing at 157x147x200mm. The machine is designed to work alongside an android phone, computer or iPhone. It retails at less than £100.

TEST Using a phone-based operating system

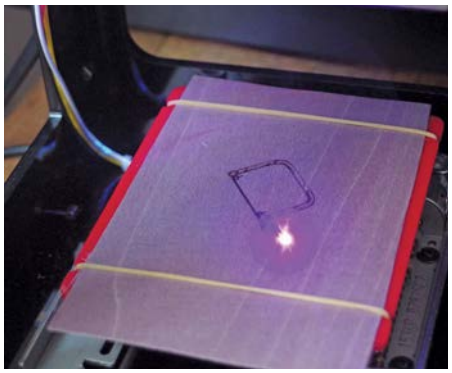
The free Neje Printer application is available to download, through this laser engraver can be connected via Bluetooth. Never was there a more simple laser operating system to use. An image can be selected from an album on your device or you can upload a photograph straight from your mobile phone camera. Once this is 'sent' to the engraver, the image position and speed of the etch can be adjusted on the control panel.

This is a very basic system without a lot of options to alter the settings but can easily be used without a lot of technical knowledge.

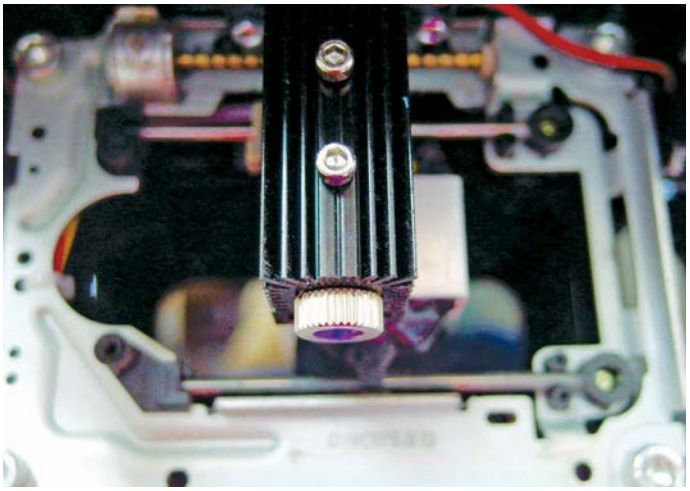
My chosen image imported into the Neje Printer app



Altering the speed will affect the strength of burning



As simple as 1,2,3



Close-up of the laser head

Experimenting with etching on to plastic and even on to the back of mirrored/foiled plastic

Etching on to various thicknesses of veneer

Quality

At only 1500mW, the laser is not powerful enough to cut through materials but can provide a sufficiently strong etch on to wood, paper, fabric and even some softer plastics. The laser bed only allows for an image of 550x550 pixels, but this does not in any way hinder the quality of the image produced.

For a more creative finish, coloured inks are available for application during and after the laser etching for a change from the black of the burning.

Verdict

Although slow, limited in size and only powerful enough to laser engrave on to certain materials, the etch quality is surprisingly remarkable. Not a viable option for a commercial workshop but ideal for hobbyists.

The laser is ready to use straight from the box and is the first time I have ever experienced a portable laser with a mobile phone-based operating system. ■

Health & safety

- It would be advisable to set up an extraction system against the production of toxic fumes while in use.

- For working with lasers you must use eyewear that conforms to EN207. It must be correct for the strength and wavelength of the laser emission even if you are only checking the beam setting. Check with an accredited supplier such as: www.lasermet.com

Suppliers

The NEJE official store can be found through www.gearbest.com

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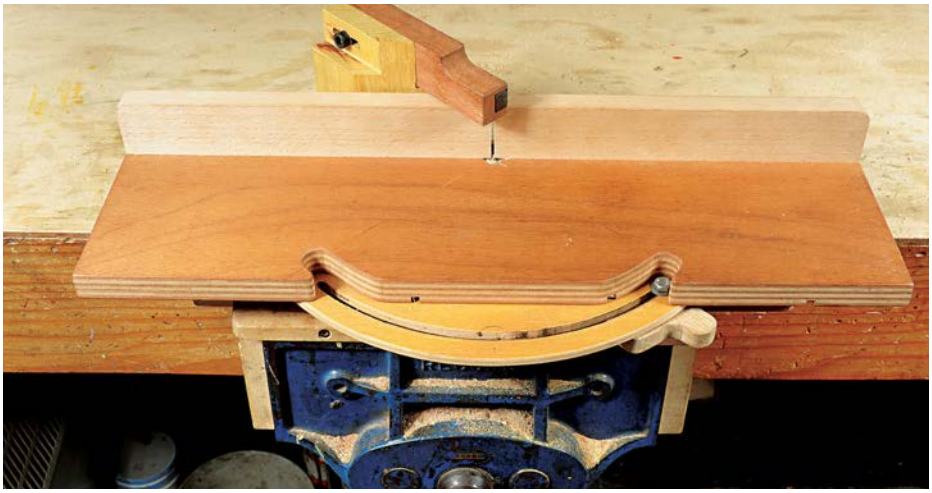
Combination mitre jig

The shop-made mitre jig works well with Japanese and Western saws



Set the magnetic guide to suit your angle

Advance or retract the magnetic guide to suit your saw

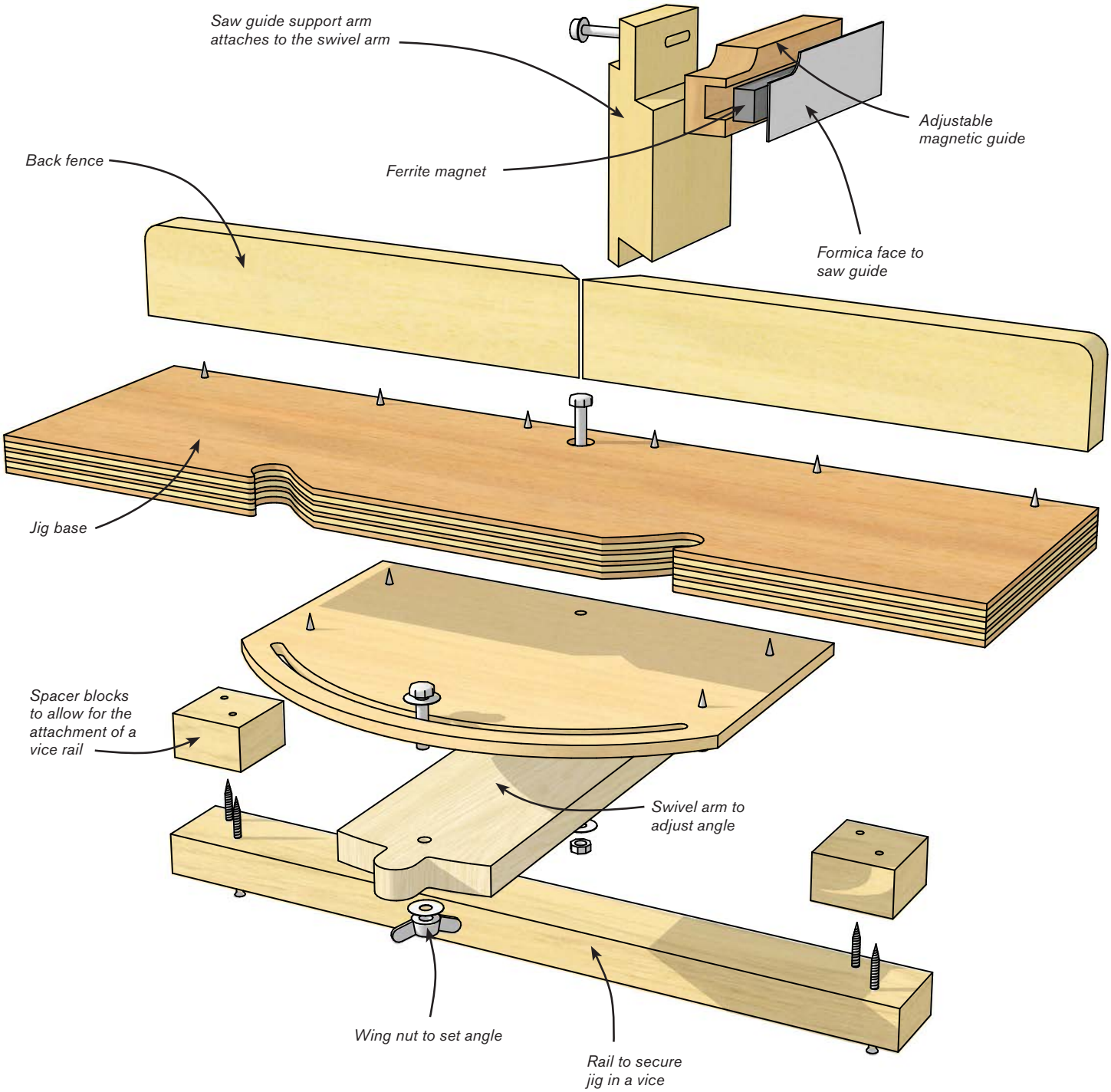
PHOTOGRAPHS BY GMC/ANTHONY BAILEY

When it comes to clean-cut mitres, a miss is as good as a mile. Here, **Colin Sullivan** makes a jig which ensures your joints come together with ease and precision every time

There are so many different ways to cut mitres in wood and so many aids to simplify the task that even the most seasoned professional can be left scratching their head at times, wondering which way to turn. On a good day you may have the skill to cut freehand along a marked line, but it takes regular practice to achieve good results consistently, and although using a saw is like riding a bike, you do still need to keep in shape if you're going to get the most out of the experience.

The answer for many woodworkers is a powered chopsaw, but for those preferring hand tools, a good-quality mitre saw such as the Nobex would make a good investment. You can pick them up quite cheaply and, with a little attention, they can be made to function like new. The blades are fine-toothed with a minimal kerf and deep to maintain contact with the guide rails until the cut is well established. There is a tendency with these devices to exert greater force on the forward stroke, especially when the blade is beginning to dull, causing the supporting framework and guides to distort and therefore produce inaccurate cuts.

Another method is the traditional mitre box that is typically made from a block of wood grooved out to fit the work and sawn with two 45° cuts. Variants are sometimes made from three separate components. These are fine for the first few cuts but wear loose after a little use and become inaccurate, so are not really up to the job of cabinetwork. ➤



East or west?

The benefits of Japanese saws are well proven, so when our editor asked me to design a mitre jig that could be adjusted for 45° and 90°, my immediate thoughts were to incorporate a pull saw with its obvious advantages. At the same time I came across some ferrite magnets lying around the house. One of my grandchildren had left them behind and I noticed how strong they were, so out to the workshop they went for future use. Placing these behind a piece of Formica, I realised this could be the way to guide a saw exactly where it needed to go. Ferrite magnets are the black ones, not unlike a piece of coal. They are readily available in all sorts of shapes, sizes and strengths at very little cost, cheaper than rare earth in some cases. We tend to think of mitres as being a pair of 45° angles to make up a right angle, but occasionally it is necessary to cut angles between 45° and 90°. In fact, 90° is not a given either, as a mitre can be the coming together of any angles that require a clean meeting point at the start and end of the join. The angles do not have to be equal if the components are of different thicknesses.

With all these requirements noted, I began by setting the magnets flush into a piece of wood and gluing Formica over them to see if the saw could slide against it. Once the glue had set and the block was trimmed round the edges, I found the saw held about right to the magnets and moved with a pull and push – east or west. Now I could make a prototype to work out the requirements for the final jig.

Fine tuning

The main concern, I soon realised, was that the magnets needed to be set low over the workpiece to guide the saw accurately. To facilitate this the magnetic arm on this jig can be adjusted to be over the work for cutting sections up to 30mm thick – or high – or moved back, clear of the fence to cut to a larger section.

Obviously it is up to you how big you make any part of this jig. What I have shown is the principle of a simple jig that can be made easily and, more importantly, will cut accurate mitres time and time again.

The baseboard needs to be 25mm birch ply or similar, so the swivel-bolt head can be recessed well below the surface clear of the saw when it is in use. A plastic bolt would be the answer if you have one. Make the back stop in one piece and screw it on from the underside – the cuts are made later. Make up the moving arm and the magnetic block, carefully centring the magnetic block on the swivel bolt.

The arc-shaped piece was cut with a router to take the locking bolt using a simple ply jig screwed to the router to make a 90° slot. The rest of the parts are shown on the drawing and they are easy to make. A thin-ply sacrificial board is used on the baseboard to avoid cutting into the base. A candle rubbed over the Formica magnetic block helps the saw move easily. This jig works with both tenon and pull saws, as the workpiece and magnet holder can be positioned in front of or behind the fence. It's quick and easy to use, ideal for small sections of wood and, above all, quiet.

A bar beneath the saw jig allows you to secure it into a vice

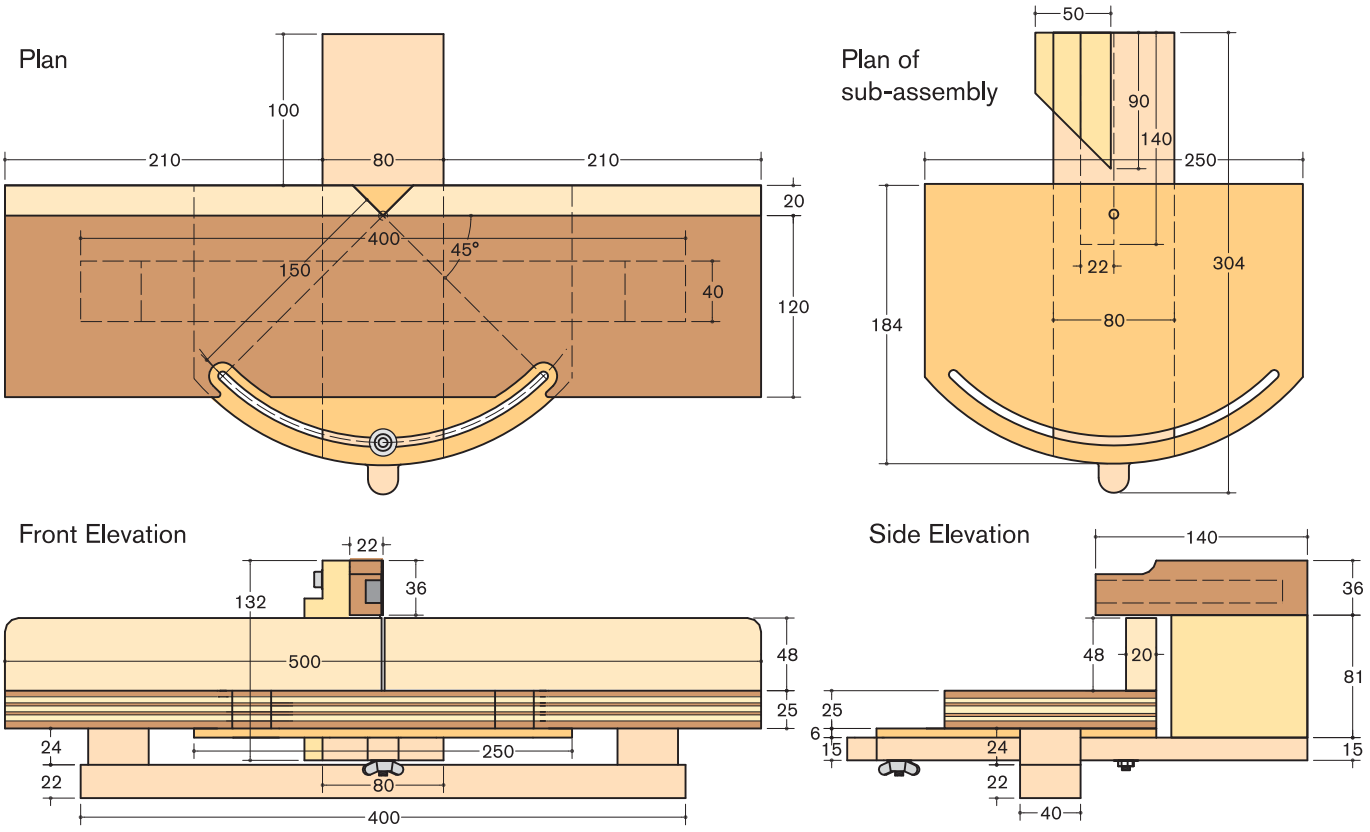
The magnets can be found at Magnet Expert – www.magnetexpert.co.uk. I used six ferrite magnets measuring 25 x 10 x 6mm. To hold the jig properly and firmly, make a rail on the underside that is clear of the arm and then just drop it into a vice. Now you are ready to test it out.

Any pull saw will work, providing you can get a reasonable length of movement – about 350mm should be fine. The work needs to be held tight up against the fence if you want to get the best results.

Once made it should last a good time and be useful for odd mitres, etc. There is no machine to set up – just take it down, pop it in the vice and get sawing. ■

Suppliers

Magnets: Magnet Expert
Web: www.magnetexpert.co.uk



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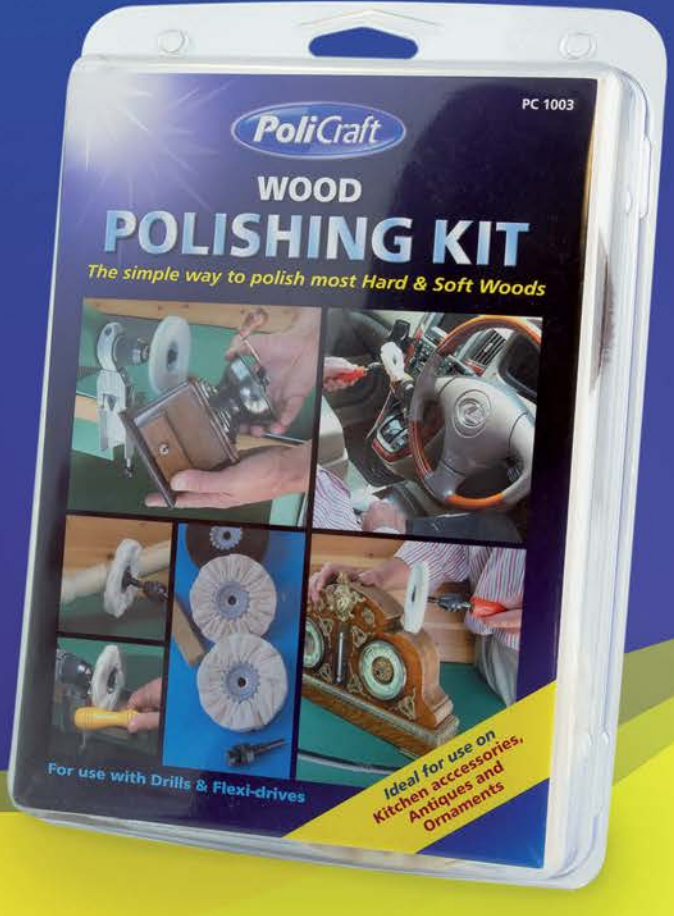

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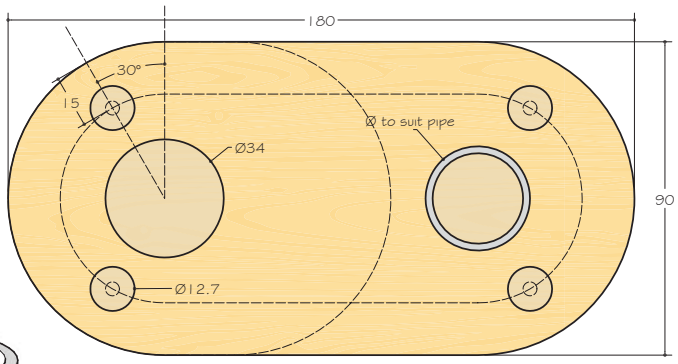
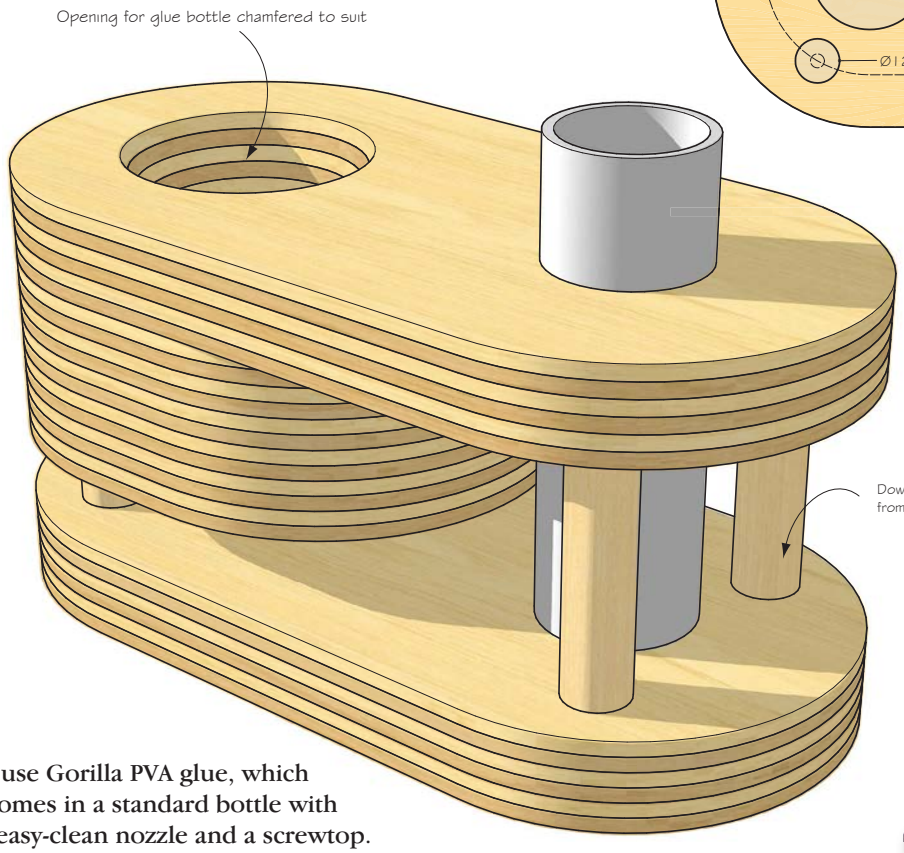
Glue central

If you're stuck for a way to prevent your glue bottles getting all gummed up, **Alex Burnett** has the answer



SECTION DETAILS



1 I use Gorilla PVA glue, which comes in a standard bottle with the easy-clean nozzle and a screwtop. Inevitably I finish up with a selection of bottles of varying dates/antiquities/quantities with the resultant decline in effectiveness. You will be aware the effectiveness and texture changes after about a year, particularly in this country where it can get very cold in the winter, which PVA glue doesn't like. So I decided to buy a fresh bottle of glue mid-spring this year to carry me through to next spring, when I'll buy another new bottle.

I write the year and month on the bottle. This is a step up for me as I just used to rotate around the four I had in the workshops, all getting equally grotty.

Having decided to get really efficient I then decided to build a home for the glue. I find that if I have somewhere for a tool to live it stands a better than 50% chance of being replaced there. Another consideration is that I hate having to find something to spread the glue, begrudge the time taken to produce a spatula, then resent throwing it away. Then I went into a coffee shop and the answer was there – wooden coffee stirrers, Awful for stirring coffee but great for spreading glue. I expect a little time chatting up the servers, plus 50p in their favourite charity box, will secure a handful to get you started on this project. After that a search of the internet will find 1000 for about £5, post free. Enough to see most of us retired types out.

2 This photo shows the seriously 'off' cuts of ply that I used. I try to work around holes and blemishes and, as mentioned later, I generally fill up holes and other parts needing hiding, so this isn't bad for one of my projects. It is 18mm ply and you can glue pieces together if needed to thicken it up.

3 Here is the top of the upper layer I used for mine – it is 90mm wide and 180mm long. Note the markings. They are important as they are drilled through and are used for marking the centres of the remainder of the holes and sockets needed for the construction process. You will need two this size. The four holes at the corners mark the locations for the

PHOTOGRAPHS BY ALEX BURNETT

sockets that take the columns. These support the top section, the larger holes along the centreline are for the glue pot and the plastic pipe that holds the glue spreaders.

Now the job proceeds in layers. Fasten the two long pieces together with two-sided carpet tape. Using the top as a marker, drill the four corner marks halfway through the bottom layer. For the column sockets use a 1.5mm drill, then another 1.5mm hole as the marker for the plastic pipe to go through the top layer and halfway through the bottom layer.

4 Using Forstner bits, drill the pipe hole through the top and halfway through the bottom layer to take the size of plastic pipe you have used to hold the glue spreaders. The pipe hole is on the left of the unit shown here.

Separate the two layers and drill the 12.7mm holes for the columns on the inside of the two pieces at the plastic pipe end. I drilled all the column sockets the thickness of the Forstner bit head.

Glue the two smaller pieces together and, when set, cut and sand them to shape. Use the top layer as a sanding guide. When complete glue to the top layer at the glue pot end.

5 Drill the remaining two marker holes for the columns through from the top and then open out on the underneath with the 12.7mm Forstner bit to the depth of the bit head. Using the Forstner bit, drill from the top right through the glue pot hole. Remember to get a clean hole drill only till the point on the Forstner bit shows through then drill from the other end.

6 I used my lathe to cut a tapered hole to suit the glue pot – not difficult, just keep your finger out of the way of the extended lid. I have the extended fingers attachments for my chuck, which make it very easy to hold. Keep checking till you get a good fit.

Safety Note

Make sure the glue holding the three layers of plywood is sound and secure.

I used a Veritas dowel cutter to produce the dowel I needed. This is rather like a giant pencil sharpener. You cut your wood to about 16mm square and, using a socket, attach it to the chuck of your drill. Then, while rotating the drill chuck, push the wood blank into the sharpener – a considerable amount of shavings issue from the side and a lovely dowel comes out the bottom. Hardwood is best – I used an offcut of beech.

Place the bottom on top of the top section and measure the distance between the column holes. Add 12.7mm to allow for the sockets and 19mm to provide spacing to suit you and cut the required lengths of column. Then, with a dab of glue in each socket, fit the dowels into the sockets. It might be required to assist with a hammer on a wooden block to seat them home. Check that the top is level and parallel with the bottom.

7 Sand everything to your liking. A 305mm sanding disk does a quick job of evening out the rounded shape I have used here. Prior to the painting I fill in all the holes and serious imperfections using car body filler which, as far as I can see, is virtually identical to most wood fillers but considerably cheaper. It does, however, come in much larger tins. A trick I found here is to use a small, smooth, tough, plastic chopping board, stolen from the kitchen (mine came from Lidl), and a plastering knife. It makes it easy to mix, apply and clean off the board on completion of the job. Another sanding is needed to smooth out the filler, then on with the paint.

8 I bought a tin of B&Q wood and metal paint that I liked the colour of and use it on all my projects. I like to paint the majority of the wooden items I make for the workshops, I find the paint keeps the devices looking cleaner and smarter. The finished job is now complete with glue spreaders. ■

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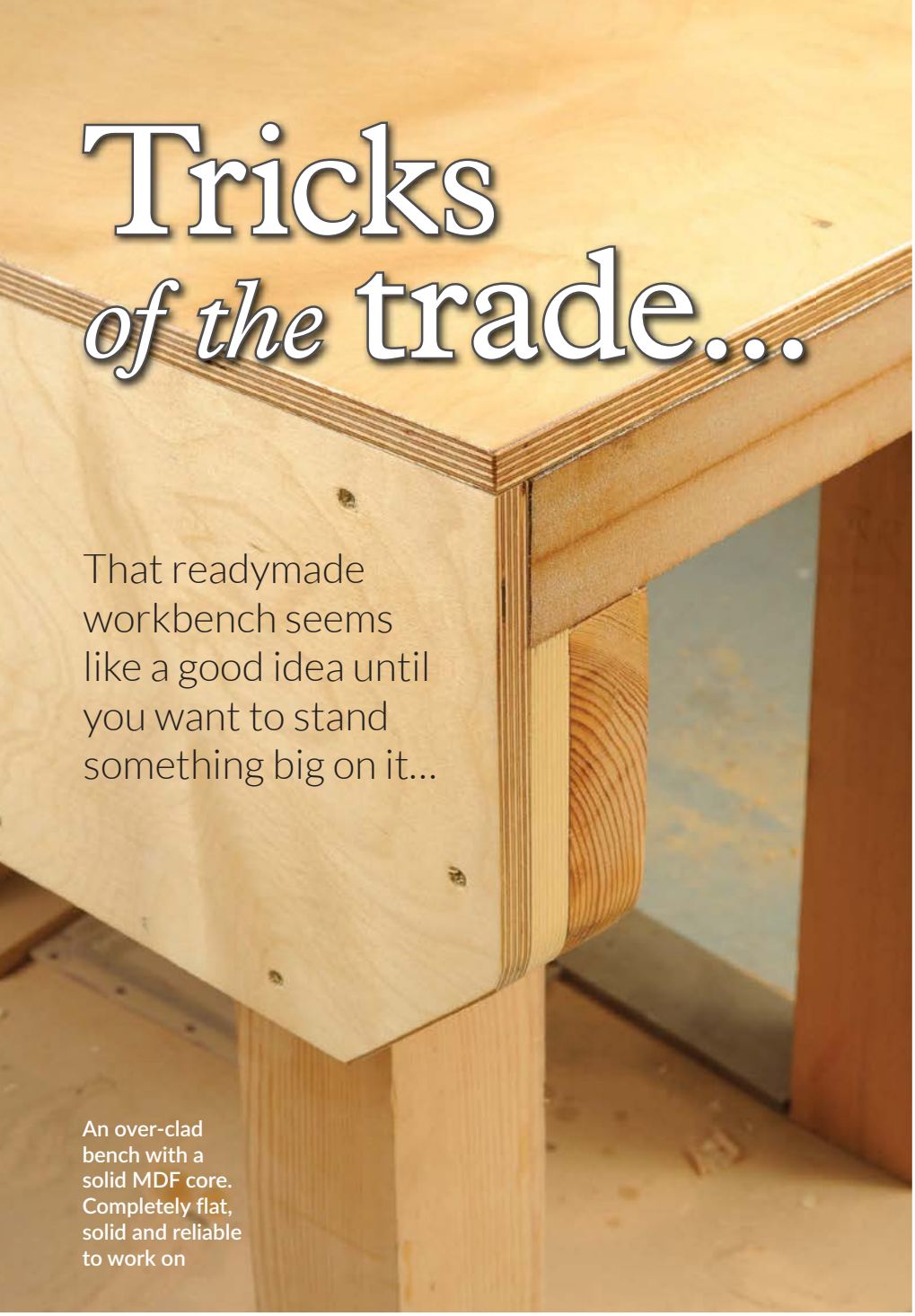
Tricks *of the* trade...

That readymade workbench seems like a good idea until you want to stand something big on it...



An over-clad bench with a solid MDF core. Completely flat, solid and reliable to work on

The trouble with a manufactured workbench is that they are often quite narrow from back to front, especially if they have a tool well. The only purpose of that is to fill up with a collection of tools, shavings, rags and other junk. Not how it should be used, but the fact is a bench top needs to be flat, with plenty of working and assembly area and no surface interruptions such as a tool well. It needs to be deep enough that a moderate-sized bit of furniture, such as a cupboard or a chair, will sit on it safely, so you can turn it round without incident and work on any part of it. Maybe it's better to swallow your pride and realise that you need a bigger, safer top to work on your prized bench.

You have choices. You could make a larger, relatively lightweight cover board, but you need to be able to fix it securely and it may well bend when you are working on it. Then again you could go the whole hog, make a very solid, thick top and mount it semi-permanently in place. It adds weight and you need to secure the bench to the wall for safety, but it gives you a completely reliably assembly surface. One sheet of 18mm-thick MDF or ply isn't really enough – two boards glued together will make for a much more reliable surface. The other option is to glue battens in place on either internal face of the tool well and make drop-in lids.

Keep tools where they belong – not on the bench but stowed on racks or shelves on the wall where they are easy to grab. Magnetic tool racks make this kind of storage even easier with many tools.

At last your bench is a flat, open expanse, perfect for project building. Just take the trouble to give it a couple of coats of water-based varnish to protect it and make it easier to remove wax and glue etc. ■

PHOTOGRAPHS BY GMC/ANTHONY BAILEY UNLESS OTHERWISE STATED

Gluing up two boards of MDF to create a flat expanse of worktop to make bench tasks much easier

PHOTOGRAPH BY MARK RIPLEY

The usual untidy tool well, mitigated by having a drop-in cover board for a better working area

Keep your tools off the bench completely. With magnetic racks it is easy to both take and place tools out of the way

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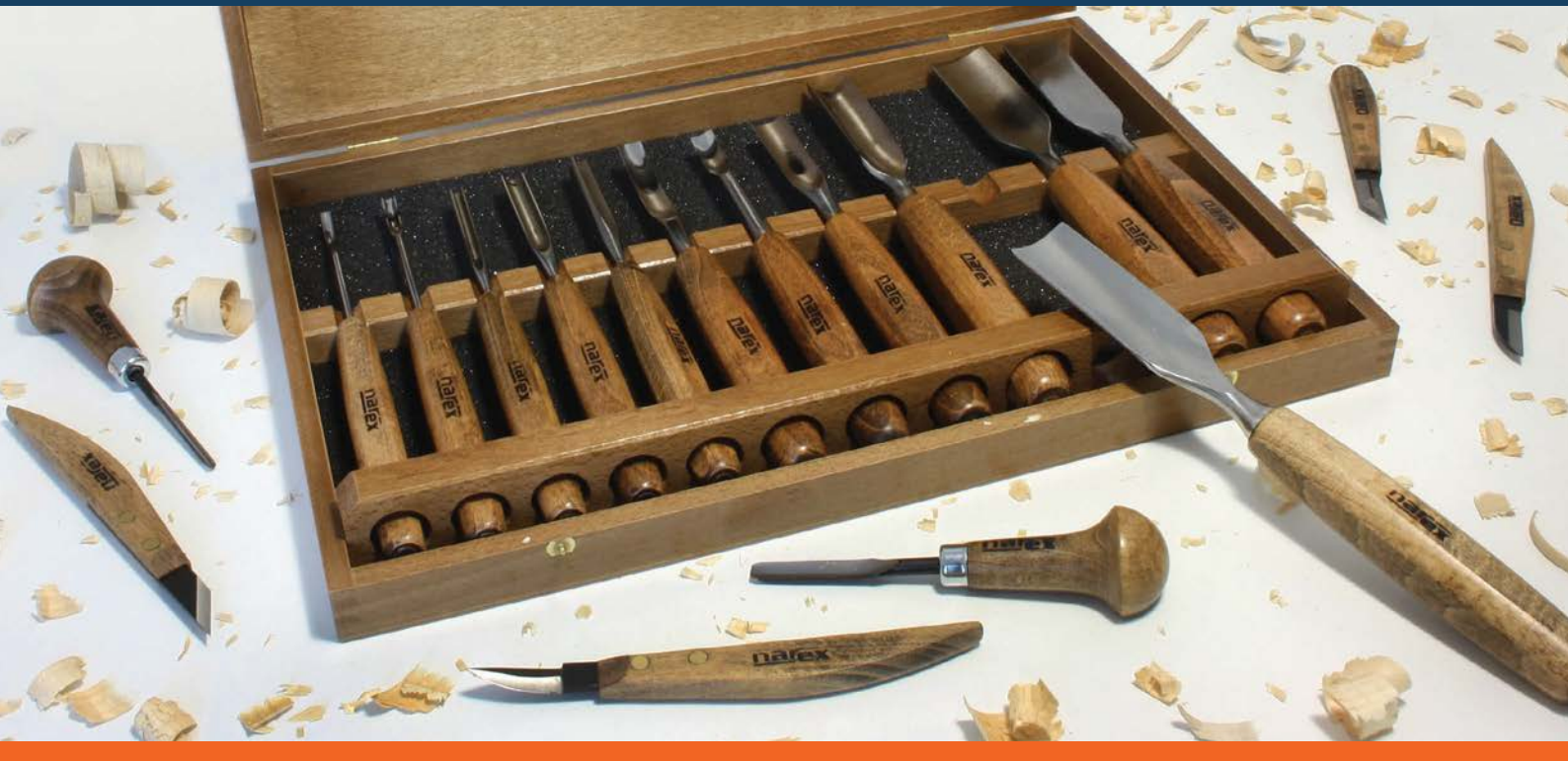

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This new carving drawknife is just one of the many new products from Narex.

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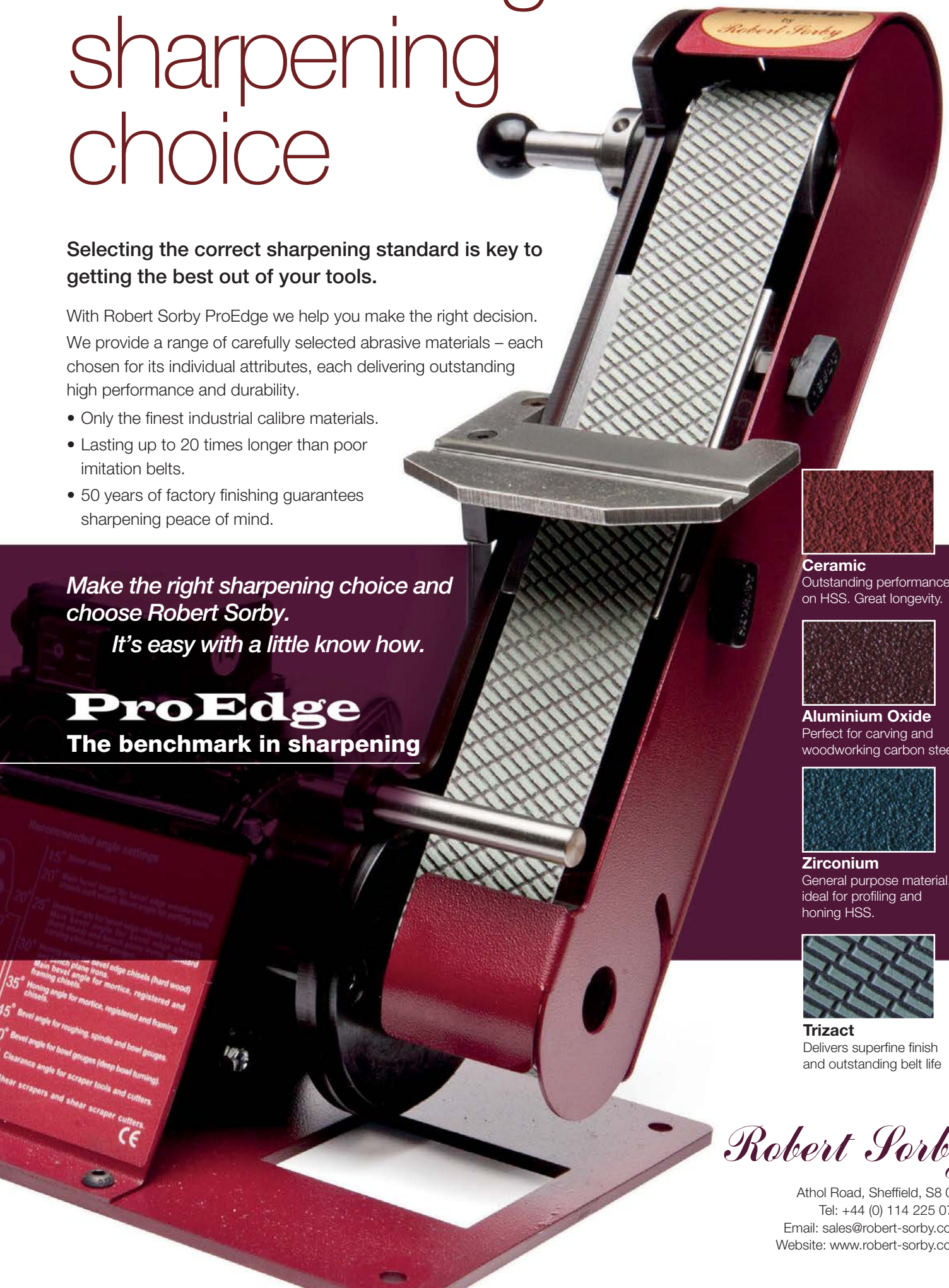

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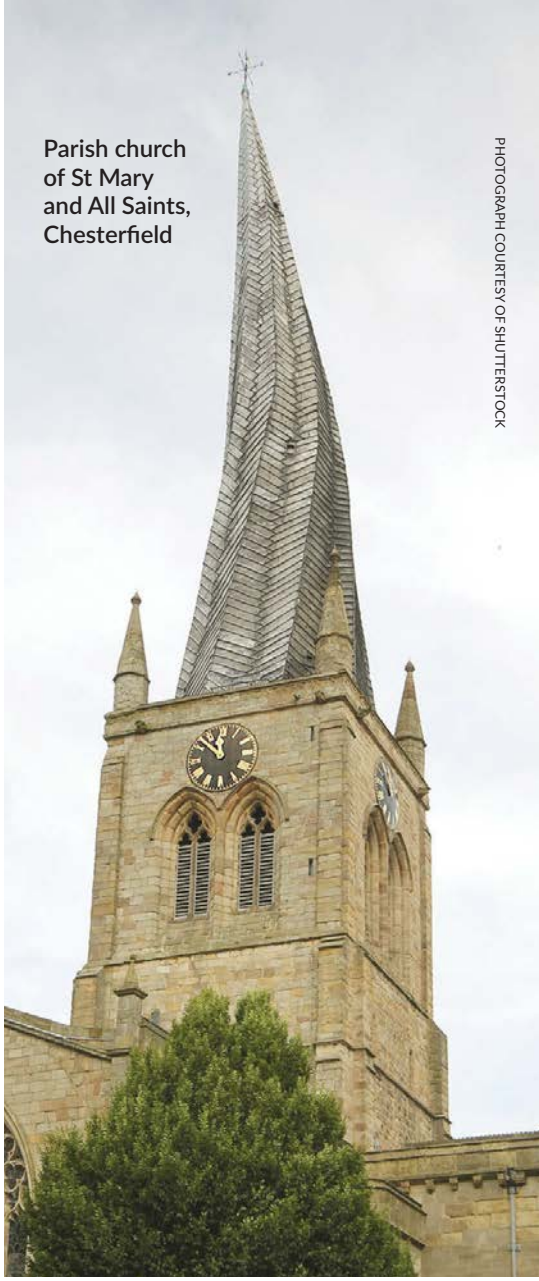
Focus on…

Twisted spires

St Jacobi protestant church, Stolzenau, Lower Saxony

PHOTOGRAPH COURTESY OF WIKIPEDIA COMMONS



Parish church of St Mary and All Saints, Chesterfield

PHOTOGRAPH COURTESY OF SHUTTERSTOCK

Bell towers with a twist are more common than you might think…

If you are old enough to remember with affection the BBC series *All Gas & Gaiters* then you will also probably remember that the spire of St Ogg's church was crooked (actually St Albans Cathedral, but with the twisted spire of St Mary and All Saints, Chesterfield, artfully grafted on to it). There is a fascination with the idea of a spire that doesn't conform to the norm. In fact, all over Europe there are quite a lot of spires with either an accidental or intentional twist or bend. Timber framing, being what it is, does make such a deliberate choice more interesting both in design and setting out, or, if it is by accident, then shoring with more timberwork usually keeps it safe. In England we can only claim seven such spires while France, for example, has no fewer than 70 spires which twist or bend.

There exists L'Association les Clochers Tors d'Europe (Association of Twisted Spires of Europe). To quote its website: 'It is created between the members with the present statutes an association governed by the law of 1 July 1901 and the decree of August 16, 1901, entitled The Steeples Tors Europe. It is the owners or their representatives, civil or religious buildings, with a contoured roof spiral, located in Europe.'

So there you have it, an association devoted to the enhancement of understanding and preservation of twisted spires across the continent. It also encourages tourism and you can go on tours of these slightly mad architectural monuments. We have three entries in the UK – Chesterfield, Cleobury Mortimer and Barnstaple – although there are a few more not listed. Whereas ours tend to be the result of rather capricious oak warping the way it really wants to go, many spires on the continent are the result not of warped timber but a seemingly warped mind intent on creating complex geometry that must have challenged the skills of carpenters at the time they were built. This is a fascinating subject worth researching by way of a holiday tour… ■

For more information about this rather bizarre subject visit:

www.clocherstors.com – L'Association les Clochers Tors d'Europe (Association of Twisted Spires of Europe)

www.greenadventurestravel.com/Features/crooked-spires.html

www.historicalcarpentry.com/fl-che-torse---twisted-steeple.html (this shows construction of twisted spires)

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