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The Woodworker & Woodturner

THE ORIGINAL & BEST SINCE 1901

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September 2017

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Welcome

What shall I make next? This is a question that many a woodworker will ask, and one that generally follows hard on the heels of a completed project (and often halfway through). While some of us would welcome the freedom of choice that an extensive program of home improvement sometimes denies us, if there is nothing that springs to mind then it's surely time for a little shot of inspiration.

This is usually to be found in the world outside the Front Door, but in times of extreme deprivation and/or sluggish imagination, there's nothing for it but to go on a road trip. Now don't worry, it's not entirely necessary to set off across Europe for three months in a vintage convertible, just somewhere out of town should do it, and preferably somewhere you've not been before or at least for a very long time.

In the old days, coming back refreshed from anywhere 'away' would invariably be ascribed to a change of air, but the key word really is change. Too much of the same can dull the senses and no one likes Jack when he's in this particular state. No, fresh fields and far (enough) away should do the trick, especially if there's a picnic involved or a stop at a welcoming roadhouse or two (and sorry if you're the driver here). Right from the start there'll be new things to be seen, and new people to be encountered with new tales to tell. Factor in a few more unknowns and there'll be stimulation of many kinds just shimmering in the air waiting to dust the shoulders of any lucky woodworker who is open-minded enough to receive it.

To help things along I make sure I've always got a tape measure and a notepad in my bag and this, along with the ubiquitous smartphone (with camera) means that opportunities for inspiration of the unexpected kind need never now be missed. Gone are the days of trying to sketch from memory or just shrugging the shoulders and accepting that the graceful proportions of a Georgian dresser will be lost forever; when it comes to recording information in 2017 we've never been better placed.

The Editor prepares for the open road and looks ahead to an unknown world

So, if you're feeling a bit jaded, why not head for the open road/station/airport and give your woodworking mind a treat. I'm poised myself to get away for a few days right now, and I know I'll be coming back with more than just a suntan.

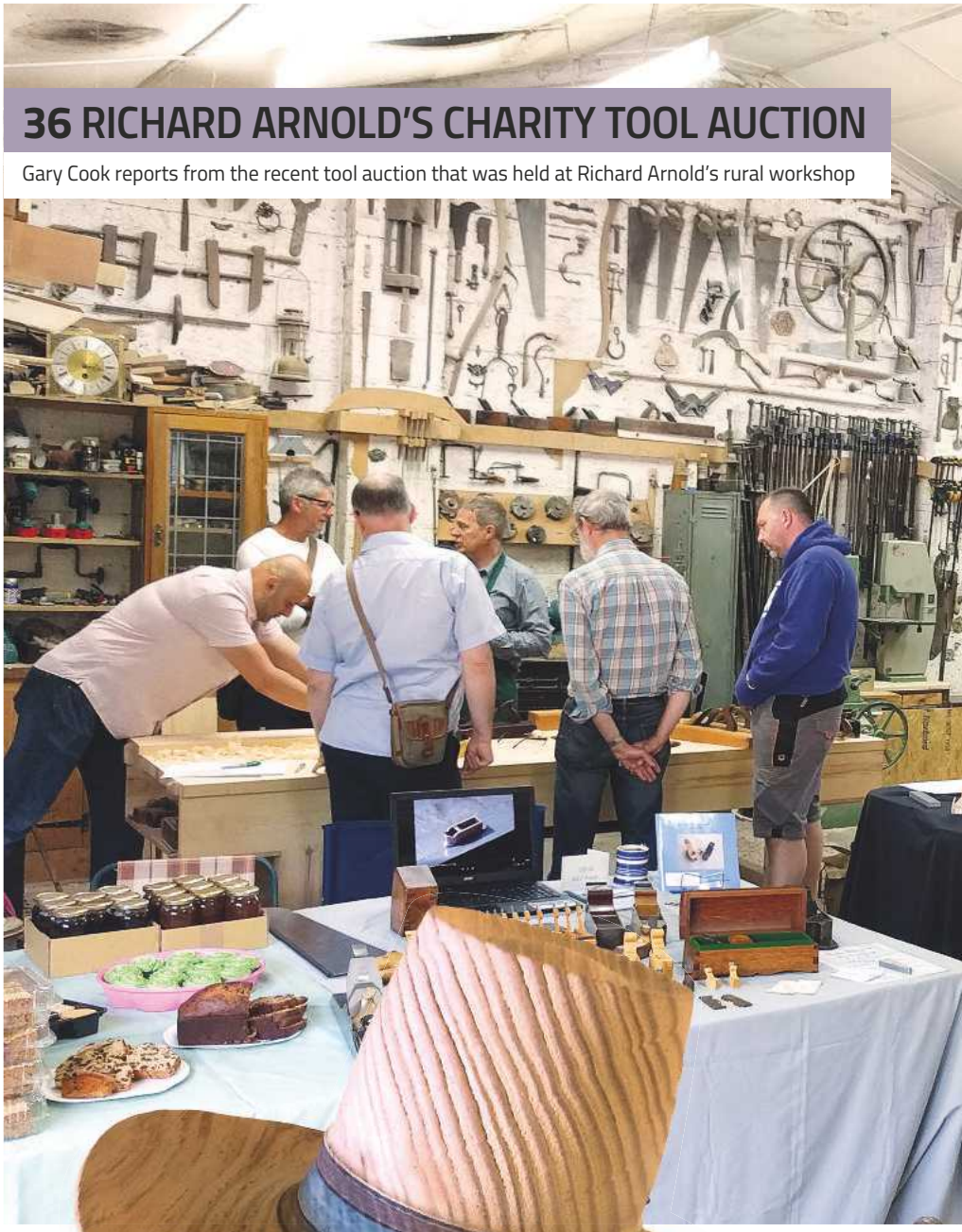
mark

You can contact Mark on **editor.ww@mytimemedia.com**

THIS MONTH THE EDITOR HAS BEEN:

Watching and waiting ▪ up to that there London ▪ fixing windows ▪ measuring up

The Woodworker & Woodturner
SEPTEMBER 2017



36 RICHARD ARNOLD'S CHARITY TOOL AUCTION

Gary Cook reports from the recent tool auction that was held at Richard Arnold's rural workshop

COMPETITION

TURNING

ON TEST

REGULARS

Machine Mart

NOW 66 SUPERSTORES NATIONWIDE

WHERE QUALITY COSTS LESS

Clarke TABLE SAWS

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

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

INCLUDES LEFT & RIGHT TABLE EXTENSION

CTS10D

MODEL	MOTOR	BLADE	EXC.VAT	INC.VAT
CTS800B	600W	200mm	£72.99	£87.59
CTS11	1500W	254mm	£149.98	£179.98
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

CS4-6D

£96.99 EX.VAT £116.39 INC.VAT

Clarke 6" BELT/ 9" DISC SANDER

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

CS6-9C

£239.00 EX.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 EX.VAT £155.98 INC.VAT

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

EVOLUTION FURY5-S TABLE SAW

NEW

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

£149.98 EX.VAT £179.98 INC.VAT

3 YEAR

Clarke WOODWORKING VICES

STANLEY Record

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

WV7

MODEL	MOUNTING	JAW (WIDTH/OPENING /DEPTH)mm	EXC.VAT	INC.VAT
Clarke CHT152	Bolted	150/152/61	£13.99	£16.79
Stanley Multi Angle	Clamped	72/60/40	£17.99	£21.59
Record TV75B	Clamped	75/50/32	£20.99	£25.19
Clarke WV7	Bolted	180/205/78	£27.99	£33.59

Clarke QUALITY CAST IRON STOVES

NEW

8kW

OVER 23 QUALITY STYLES ON DISPLAY

£219.00 EX.VAT £262.80 INC.VAT

FLUES, COWLS & ACCESSORIES IN STOCK

BARREL II

Clarke 1" BELT/ 5" DISC SANDER

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

£69.98 EX.VAT £83.98 INC.VAT

CBS1-5

Clarke DUST EXTRACTOR/ CHIP COLLECTORS

FROM ONLY £139.98 EX.VAT £167.98 INC.VAT

METABO ALSO AVAILABLE

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

MODEL	MOTOR	FLOW RATE	BAG CAP.	EXC.VAT	INC.VAT
CDE35B	750W	450 M3/h	56Ltrs	£139.98	£167.98
CDE7B	750W	850 M3/h	114Ltrs	£159.98	£191.98

Clarke CWVE1 DUST EXTRACTOR

- Portable vacuum extractor for keeping work areas clean & free from dust particles, shavings, etc.
- Quick release lid
- Air flow 183m³/hr
- 1100W input power
- Inc. filter cartridge, 4x inlet hose reducer adaptors & 4 dust bags

50 LITRE CAPACITY

NEW

£109.98 EX.VAT £131.98 INC.VAT

Clarke STAPLE/ NAIL GUNS

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

FROM ONLY £22.99 EX.VAT £27.59 INC.VAT

CONSN18LiB

SPARE NAILS / STAPLES IN STOCK

ELECTRIC AND CORDLESS MODELS IN STOCK

MODEL	TYPE	STAPLE/NAIL GAUGE	EXC. VAT	INC. VAT
CESNG1	Electric	22/18	£22.99	£27.59
CCT48	Cordless 4.8V Ni-MH	22/18	£29.98	£35.98
CESNG2	Electric	18/18	£39.98	£47.98
CONSN18LiB	Cordless 18V Lithium-Ion	18/18	£119.98	£143.98

Clarke MULTI FUNCTION TOOL WITH ACCESSORY KIT

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

£39.98 EX.VAT £47.98 INC.VAT

CMFT250

Clarke 4" BELT/ 8" DISC SANDER

- Includes two tables
- 550W 230V motor

£159.98 EX.VAT £191.98 INC.VAT

CS4-8

Clarke CROS3 450W RANDOM ORBITAL SANDER

£29.98 EX.VAT £35.98 INC.VAT

NEW

- Adjustable front handle improves control
- 7000-14000rpm

INC DUST BAG AND SELECTION OF 125MM DIAMETER SANDING DISCS

TURBO AIR COMPRESSORS

airmaster tiger

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

- Superb range ideal for DIY, hobby & semi-professional use
- '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 DISC SANDER (305MM)

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

£129.98 EX.VAT £155.98 INC.VAT

CDS300B

Clarke POWER PLANERS

CEP1

BLACK & DECKER

- 82mm cutting width

FROM ONLY £28.99 EX.VAT £34.79 INC.VAT

MODEL	MOTOR	DEPTH OF CUT	EXC.VAT	INC.VAT
Clarke CEP1	650W	2mm	£28.99	£34.79
Einhell TE-PL850	850W	3mm	£52.99	£63.59
B&D KW750K - GB	750W#	2mm	£57.99	£69.99

Clarke CPF13 ELECTRIC POWER FILE

- Variable belt speed
- Tilting head

*Black & Decker

FROM ONLY £49.98 EX.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 BELT SANDERS

makita

- Ideal for surface removal, sanding and finishing

ABRASIVE SANDING BELTS IN STOCK

BS1

FROM ONLY £36.99 EX.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	£94.99	£113.99

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

£144.99 EX.VAT £173.99 INC.VAT

Clarke SHEET SANDERS

CON300

- Ergonomic design for optimum comfort

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

MODEL	SHEET SIZE	MOTOR	EXC.VAT	INC.VAT
COS200	190X90mm	150W	£16.99	£20.39
CON300	230X115mm	330W	£34.99	£41.99

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

ROTARY PHASE CONVERTERS ALSO IN STOCK

PC60

FROM ONLY £229.00 EX.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 CORDLESS DRILL/ DRIVERS

Clarke CONTRACTOR

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

powered by Li-Ion

CON18Li

MODEL	VOLTS	BATTS	EXC. VAT	INC.VAT
CCD180	18V	1	£39.98	£47.98
CCD240	24V	1	£47.99	£57.59
CON18Ni	18V	2 x Ni-Cd	£69.98	£83.98
CON18Li	18V	2 x Li-Ion	£89.98	£107.98

Clarke CIRCULAR SAWS

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

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

CON185

*Includes laser guide

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

VAC KING WET & DRY VACUUM CLEANERS

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

FROM ONLY £49.98 EX.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	£99.98	£119.98

Clarke PORTABLE THICKNESSER

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

£219.00 EX.VAT £262.80 INC.VAT

CPT250

Clarke OSCILLATING BOBBIN SANDER

- Provides exceptional finishes for deep & wide work pieces, front edges & narrow inner curves
- Dust collection port
- Inc. 6 sanding sleeves/ bobbins

£139.98 EX.VAT £167.98 INC.VAT

COBS1

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 EX.VAT £35.98 INC.VAT

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

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

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

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

Clarke WHETSTONE SHARPENER (200MM)

NEW

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

ONLY £119.98 EX.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 EX.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	£209.98	£251.98
CPT1000	10"	120mm	£289.00	£346.80

Clarke OSCILLATING BELT & BOBBIN SANDER

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

COEBS1

£179.98 EX.VAT £215.98 INC.VAT

NEW

26469LH

Clarke SLIDING COMPOUND MITRE SAW

BEST SELLER

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

£139.98 EXC.VAT
£167.98 INC.VAT

CMS10S2

MODEL	BLADE DIA/BORE (mm)	MAX CUT DEPTH/CROSS	EXC.VAT	INC.VAT
CMS210 NEW	210/30	60/120	£59.98	£71.98
CMS10S2	254/30	78/340	£139.98	£167.98

Clarke CONTRACTOR BOSCH CON750 JIGSAWS

BEST SELLER

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

*DIY #Professional

MODEL	POWER (W)	DEPTH OF CUT (WOOD/STEEL)	EXC. VAT	INC VAT
Clarke CJS380*	420W	55/6mm	£15.99	£19.19
Clarke CON750#	750W	80/10mm	£28.99	£34.79
Bosch PST700E*	500W	70/4mm	£44.99	£53.99

Clarke BENCH BANDSAW

NEW

- Produces fast, precise mitre & longitudinal cuts • Cuts in all types of wood

£129.98 EXC.VAT
£155.98 INC.VAT

CBS190B

MODEL	MOTOR	THROAT SIZE	EXC.VAT	INC.VAT
CBS190B	350W	7.5"	£129.98	£155.98

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

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

CBS300

FROM ONLY £399.00 EXC.VAT £478.80 INC.VAT

MODELS ALSO FEATURE:

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

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

MITRE SAWS TC-SM2131

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

Laser Guide
‡ Sliding Compound

- Quality Range of Mitre saws and blades in stock

2 YEAR GUARANTEE

MODEL	BLADE DIA/BORE (mm)	MAX CUT DEPTH/CROSS	EXC. VAT	INC. VAT
Einhell TC-MS 2112	210/30	55/120mm	£59.98	£71.98
Einhell TC-SM2131#	210/30	62/310mm	£129.98	£155.98
Einhell SM2534‡	250/30	75/340mm	£159.98	£191.98

BISCUIT JOINTER TC-BJ900

NEW

2 YEAR GUARANTEE

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

£49.98 EXC.VAT
£59.98 INC.VAT

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 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 EX.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

Clarke SCROLL SAWS

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

CSS400C

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 WORK TABLE SUPPORTS (PAIR)

- 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

CWTS1

SIMPLY ADD YOUR OWN TOP

ONLY £28.99 EX.VAT £34.79 INC.VAT

BEST SELLER

Clarke ROUTERS

Clarke CONTRACTOR BOSCH

- Powerful heavy duty machines ideal for trade and DIY use

CR2 INCLUDES 15 PIECE KIT WORTH OVER £20

FROM ONLY £46.99 EX.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	£86.99	£104.39
CR2	2100	0-60	£124.99	£149.99

Clarke FOLDING MITRESAW STAND

CFMSS1

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

ONLY £66.99 EX.VAT £80.39 INC.VAT

IN STOCK – CONMW1 ONLY £131.98 INC VAT

Clarke 13" MINI WOOD LATHE

£149.98 EX.VAT £179.98 INC.VAT

CWL325V

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

Clarke DRILL PRESSES

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

FROM ONLY £66.99 EX.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	£139.98	£167.98
CDP202B	450 / 16	£185.00	£222.00
CDP10B	370 / 12	£198.99	£238.79
CDP352F	550 / 16	£229.00	£274.80
CDP502F1100	/ 12	£499.00	£598.80

Clarke DETAIL SANDERS

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

CDS-1V

FROM ONLY £19.98 EX.VAT £23.98 INC.VAT

MODEL	WATTS	EXC.VAT	INC.VAT
PS105	105W	£19.98	£23.98
CDS-1V	280W	£28.99	£34.79

ALL MODELS INC. SANDING SHEETS

Clarke 12" DOVETAIL JIG

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ANY OTHER BUSINESS

It's often hard to take in just how much new stuff comes to the market these days, and I sometimes wonder if there's room for everything the countless clever minds devise and develop. Fortunately the market is clear about what it likes, and quite a bit of it doesn't stay there for long; consumers soon vote with their contactless cash and anything that doesn't sell is quickly forgotten (have you ever found yourself in the position of being a big fan of a certain product and then seeing it disappear from the shelves as it has been judged a failure or replaced by an inferior substitute? Me too, it's very sad).

This month I've been looking in two directions: back in time with Simon Barley and his ongoing quest to track down vintage and antique saws (see book review), and forward to the present future (what I call technology that still seems impossible) with Bosch and their digital connectivity system (tool reviews). On the face of it, woodworking encompasses the whole of human time, which is quite a thought really, and all of us woodworkers are playing our part in keeping it so.

It would be great to hear readers' views on tools and technology, so if you or anyone you know has an interesting story or experience pertaining to these matters, it would be great to hear about it. Have you ever been surprised at just how good an unlikely looking and unpromising piece of kit turned out? For me it was the Square Hole Master, a mobile mortising attachment for the SDS drill made by Charnwood. I found it hugely useful but it seems to have faded away in recent years; if anyone can set me right on this please let me know.

Mark

NEW ACCESSORIES FOR BESSEY TOGGLE CLAMPS

BESSEY's self-adjusting toggle clamps are flexible and up to five times faster to operate when compared to conventional models, and the manufacturer has now found a way to bring these benefits to the multifunction table. Thanks to a special adaptor, it is now possible to use BESSEY toggle clamps on multifunction tables with 20mm hole diameters, such as the Festool MFT as well as the Sortimo WorkMo.

The new toggle clamp adaptor STC-SET-T20 can be used together with the larger versions of BESSEY toggle clamps that have horizontal baseplates and a borehole in the centre of the base. These include the horizontal toggle clamps STC-HH50 and STC-HH70, the vertical toggle clamp STC-VH50 and the push/pull clamp STC-IHH25.

The three-part accessory can be assembled in a few simple steps: first, the clamp lever is opened to 45° in order to insert the screw through the lever mechanism and the baseplate. The Allen key is then positioned and the locking post is threaded in from below; hand tighten and then complete tightening using the Allen key. With this adaptor, the clamp can be used on multifunction tables with a 20mm hole diameter and a surface thickness between 19mm (minimum) and 25mm (maximum). Finally, the toggle clamp is secured from below using the locking knob to firmly attach it to the table.

With this clever accessory you are now able to take advantage of the numerous benefits of BESSEY toggle clamps on multifunction tables.

For example, you now have the ability to clamp different workpiece thicknesses without adjusting the clamping screw manually and with practically the same clamping force. What's more, you can do this up to five times faster when compared to using conventional clamps. This time saving is made possible by the infinitely variable clamping width of up to 35mm on horizontal and vertical clamps and up to 13mm on a push/pull clamp. But that's not all: the clamping force of BESSEY toggle clamps can be adjusted to a maximum force of 2,500N without the use of tools to suit the workpiece at hand. When the clamp is used in conjunction with a flexible pressure plate with a removable protective cap, fragile materials such as veneered or lacquered surfaces can be clamped in a gentle manner.

The toggle clamp adaptor STC-SET-T20 costs around £10.56. All BESSEY toggle clamps that are suitable for use on multifunction tables can also be purchased together with an adaptor as a set. The horizontal clamp set STC-HH50-T20 and the vertical clamp set STC-VH50-T20 cost £35.92, the horizontal clamp set STC-HH70-T20 costs £36.66, and the push/pull clamp set STC-IHH25-T20 costs £37.28 (all prices are RRP and inc VAT).

DIARY – AUGUST

3–4*, **7–8**, **10–11** & **30–31** Beginners' woodturning (2 days)
12* Sharpening with Tormek
14–15 Wood machining (2 days)
15–16 & **22–23** Intro to the small lathe
22–23 Hollow forms – Nick Agar
22–25 Make a side table
24–25 Colouring & texturing – Nick Agar
30 Wood machining (1 day)
* Course held in Sittingbourne, Kent
Axminster Tools & Machinery
Unit 10 Weycroft Avenue
Axminster, Devon EX13 5PH
Tel: 08009 751 905
Web: www.axminster.co.uk

29–4 Sculptural woodcarving
West Dean College
West Dean, near Chichester
West Sussex PO18 0QZ
Tel: 01243 811 301
Web: www.westdean.org.uk

31–4 Making a dovetailed drawer
14–18 Skills week: sharpening & essential cabinetmaking hand skills
19–20 Sharpening & tuning hand tools
John Lloyd Fine Furniture
Bankside Farm, Ditchling Common
Burgess Hill, East Sussex RH15 0SJ
Tel: 01444 480 388
Web: www.johnlloydfinefurniture.co.uk

12 Hardware fitting day
21–26 Make your own workbench
Chris Tribe, The Cornmill, Railway Road
Ilkley, West Yorkshire LS29 8HT
Tel: 01943 602 836
Web: www.christribefurniturecourses.com

5–6 Dulcimer making/cigar box guitar
5–11 Windsor chairmaking
12 Spoon carving
12 & **13** Green woodworking experience
14 Sharpening day
Greenwood Days, Ferrers Centre
Staunton Harol LE65 1RU
Tel: 01332 864 529
Web: www.greenwooddays.co.uk

13, **19** & **20** DIY – drills in a day
The Goodlife Centre
122 Webber Street, London SE1 0QL
Tel: 0207 760 7613
Web: www.thegoodlifecentre.co.uk

The Woodworker Timber Suppliers Directory – SEPTEMBER 2017

Adhectic Ltd (Berkshire)
Tel: 01235 520 738
Web: www.adhectic.co.uk

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

John Davis Woodturning Centre (Hampshire)
Tel: 01264 811 070
Web: www.johndaviswoodturning.com

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

SEE PHIL IRONS IN ACTION WITH WOODCUT TOOLS

Good news for woodturning enthusiasts: Phil Irons will be demonstrating tools from Woodcut at all the Axminster stores over the next 12 months – see details below.

Phil is now well established on both the UK and international woodturning scene, but it was as a teenager that he first became interested in turning, when his father was given a child's treadle lathe, which he and his brothers played around on. Turning became a serious hobby in Phil's late 20s and early 30s while working in the travel industry, then in 1994 he made the decision to become a full-time turner. Today he has a thriving business, supplying several top galleries, but readily admits he has done his fair share of production turning.

Turning expertise

According to Phil, he gets most pleasure and satisfaction from turning hollow forms and lidded vessels, and has developed a range of surface decoration techniques. Phil also enjoys teaching and offers a number of courses at his workshop in Welford-on-Avon, Warwickshire. Courses range from beginners' hobby level classes to the more advanced master classes on the lathe.

New Zealand based company Woodcut Tools and Phil have a long association spanning over 25 years. Woodcut manufactures a unique range of woodturning products offering innovation, quality and value. The company is best known for its lathe-mounted Bowlsaver bowl coring system (original Bowlsaver and the MAX3), Tru-Grind sharpening jigs and Pro-Forme hollowing tools.

Demo dates

Phil will be demonstrating tools from Woodcut at all Axminster stores over the next 12 months:

2017
19 August – Warrington
30 September – Axminster
11 November – Basingstoke

2018
13 January – Nuneaton
10 March – North Shields
28 April – Cardiff
2 June – Sittingbourne
21 July – High Wycombe

All demos will run from 10am-4pm. This is a great opportunity to see a master of his craft at work; to find out more about Phil, visit his website: **www.philirons.com**.

FELDER GROUP UK LAUNCH NEW YOUTUBE CHANNEL

The brand-new YouTube channel from Felder Group UK features numerous videos that allow you to learn more about machines from the Hammer, Felder and Format-4 ranges. With new content added regularly, it will be a great channel to subscribe to while allowing you to stay up-to-date. Using the multiple playlists on the channel, you can find out what Felder customers think about the machinery they have purchased through their testimonial videos, watch various video demonstrations, which will assist you with service and maintenance on your machines, as well as practical videos that will help to provide you with more need-to-know information about woodworking. To view the channel, see **www.youtube.com** and search for '**FELDER-GROUP UK TV**', or visit **www.ukfelder.co.uk**.

Video demonstrating how to set up a bandsaw

Jackie Pritchard gives his honest view of the Felder combination machine

SHARPER DRILL BITS

This clever device from Multi-Sharp allows you to accurately grind correct tip angles and restore sharp-as-new cutting edges on HSS, centre-point wood, flat wood and masonry, including SDS-Plus on 3-13mm diameter drill bits.

The grinding jig has all the angles for correct tip geometry built in. It positions each type of bit over the wheels to give the correct tip and relief angles, and a unique cam action ensures correct tip rake and chisel edge.

The Drill Bit Sharpener extends drill bit life for years, and saves money as a result. The high quality aluminium oxide and silicon carbide wheels sharpen at least 150 HSS/wood bits and 75 masonry/SDS-Plus bits based on a 6.5mm diameter size – replacement wheels are available.

In terms of sharpening capability the jig re-edges and re-points a whole range of small tools, including carbide-tipped ones, making them easier to use while extending tool life. It is also useful as a mini bench grinder.

The tool fits any domestic power drill including cordless versions and is also supplied with full step-by-step instructions. Please note that this product is sent out in a strong plain box, which doubles up as useful storage for the product parts. Priced at £16.95 (plus £4 P&P), see **www.multi-sharp.com** to find out more.

YANDLES' AUTUMN WOODWORKING SHOW RETURNS

One of the country's favourite woodworking shows returns again this year – from 8–9 September – and promises the usual mix of demonstrations, trade stands, show offers and discounted timber from the dedicated Timber Self Selection Centre. One of the longest running events in the UK, the Yandles Autumn Woodworking Show is always a great day out and there's also free entry and parking to boot. More details can be found on the Yandles website; see **www.yandles.co.uk**.

CCD 2017

Photograph courtesy of www.craftcentral.org.uk

Taking place from 19–28 August, Celebration of Craftsmanship & Design has become the largest selling exhibition of high quality bespoke furniture in the country and every year it draws visitors and exhibitors from around the world. Various competitions will be taking place across the nine days, including The Alan Peters Award for Excellence, Best Use of British Timber Award, The WCFM Design Award and the free prize draw for visitors returns again this year along with a new craft&design Award. To view the full list of who will be exhibiting, see the dedicated exhibition website: **www.celebrationofcraftsmanship.com**.

NEW 30-PIECE ROUTER CUTTER STARTER SET

Trend has launched a ¼in shank cutter set aimed at those new to routing, consisting of 15 bearing-guided and 15 non-guided cutters. It can be used for a variety of woodworking applications on timbers and man-made timber-based boards.

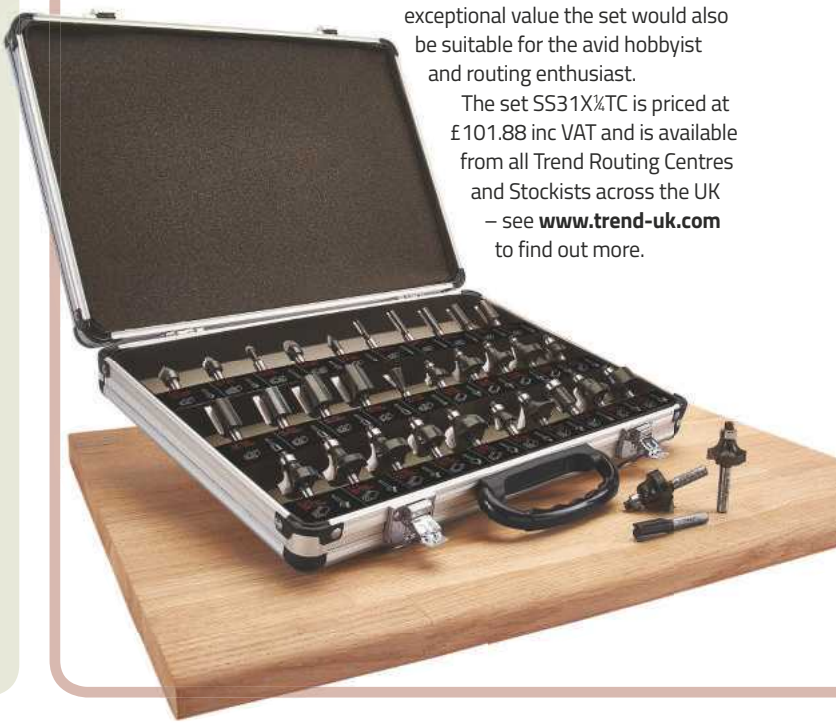
There are nine straight cutters for rebating, stopped and continuous groove applications alongside a bearing-guided rebating cutter and a bearing-guided edge trimmer.

For edge moulding the set includes four guided roundovers, four guided ovolos and a guided Roman ogee as well as two guided chamfers and two guided cove cutters. Additional cutters include two 'V' groove and two core box profiles for freehand engraving, sign making and decorative work.

A 104° dovetail cutter and classic panel cutter completes the set, with a sturdy aluminium storage case keeping everything safe and close to hand.

This comprehensive set will allow the new router user to experiment across a broad range of projects and achieve great results. Offering exceptional value the set would also be suitable for the avid hobbyist and routing enthusiast.

The set SS31X¼TC is priced at £101.88 inc VAT and is available from all Trend Routing Centres and Stockists across the UK – see **www.trend-uk.com** to find out more.



BWF LAUNCHES 2017 AWARDS

From hand-carving to the latest high-tech innovations, the British Woodworking Federation (BWF) Awards offer a showcase for the industry's best projects, products, processes and people. Joinery manufacturers, timber door, window and interiors companies, and woodworking experts across the UK are being encouraged to seek recognition through entering this year's Awards. Entry is free and open to all, including non-members of the BWF so long as they are from the joinery and woodworking sector. The deadline for entries is 5pm on Friday 8 September 2017.

The winners will be announced at the BWF's Annual Awards Dinner at Drapers' Hall, London on Friday 24 November. All shortlisted entrants will receive a free place at the event and will have their achievements promoted through a high profile marketing and social media campaign.

BWF Chief Executive Iain McIlwee began the call for entries: "The Awards have never been more important in raising the profile of British joinery – they give great projects, products and people the recognition they deserve, and help joinery businesses benchmark their progress against the very best of the industry. Many an experienced joiner would consider the carved and hand-finished oak staircase that won last year's Project of the Year to be something of a one-off, but it was simply the best of a number of breath-taking projects competing for the prize. The Awards extend further than showcase projects. Rising stars of the industry are celebrated, innovative product design rewarded and the Process Efficiency Award showcases where businesses have prospered from organisational change to become more profitable, sustainable and productive than ever."

Have you worked on an amazing wood project? Does your joinery business have any rising stars within the workforce? The BMF urges all UK woodworking businesses to spare a minute and think about what, or who, they might want to put forward as an entry.

The BWF Awards 2017 categories are as follows:

- The **Product Design in Wood** category recognises excellence in technical expertise, application and innovation in joinery product manufacture and design.
- The highly prestigious **Woodworking Project of the Year** recognises the very best in design, application or ability in joinery manufacture, and innovation in joinery projects.
- **Process Efficiency** – recognising lean processes, which have improved business performance, including maximising value for money, quality and speed of delivery.
- **Health & Safety Hero** – acknowledging an individual or collective effort, which has made a notable difference to the health and safety practices and culture of a business.
- **Apprentice of the Year** – celebrating apprentices who have really stood out from the crowd, whether through fantastic feats in their work or extraordinary commitment that adds value to a business.
- **Trainee of the Year** (sponsored by CITB) – also celebrates the work and commitment of those who have entered the joinery industry through alternative routes, including graduates, A-level students and in-house trainees.

Entries for this year's awards can be submitted online at **www.bwf.org.uk/choose-wood/awards**. Good luck!

MAKITA INTRODUCE IMPROVED M-CLASS DUST EXTRACTOR

Makita's 447M M-Class dust extractor has set high performance and reliability standards throughout the industry since its introduction, and the latest version of the M-Class extractor, the new VC4210M, bristles with new features while maintaining a highly competitive price point.

The new Makita VC4210M dust extractor has a flat top housing design, useful for depositing hand tools and accessories, and Makita Makpac cases can be attached using an optional accessory adaptor plate. Delivered with a 5m long, 32mm diameter suction tube, this versatile extractor has individual operating settings for hose diameters of 21, 27, 32, 36 and 38mm. Available in 110V and 240V modes there are three variants: 110V models with and without Power Take Off to drive integrated power tools and a 240V model with Power Take Off. When connected to a power tool, the extractor switches off automatically when the power tool is shut down. The motor input wattage is 1,000W for the 110V model and 1,200W for the 240V machine. The 110V model with Power Take Off will provide 1,750W for tool power and the 240V model, 1,800W.

Maximum airflow and filtration performance have been substantially increased with maximum air flow now 4.5m³/min. The latest Makita InfiniClean™ automatic filter cleaning system uses the strong airflow reversed regularly through each of the air filter routes to ensure the durable PTFE filter is kept clear. Access to this high-efficiency filter is through a new large hatchback port in the rear of the housing, enabling access to the filter without having to remove the motor head. An air flow sensor will bleep a warning if the filter becomes clogged, the tank is full or there is a restriction in the suction pipe.

Dust extraction is a health and safety 'must' and the new Makita VC4210 M-Class unit protects the working environment at an affordable price. To find out more, see **www.makitauk.com**.

HILTI DONATES OVER £5,000 WORTH OF TOOLS TO CHARITY

Hilti has recently donated over a dozen tools to WellChild's Helping Hands project team, including the world's first cordless combihammer. In total the tools will be used on eight projects across the UK in 2017, from St Austell to Stockport, and well into the future.

WellChild is a national charity, which works to ensure the best possible care for children with complex health needs and support for their families. Their Helping Hands scheme tackles essential home and garden makeovers, with the support of volunteer teams from local companies and organisations.

Project Leader, Lee Trunks, said: "This generous donation of Hilti tools to the WellChild Helping Hands programme will have a big impact on the work we do. Not only does it mean we have some reliable and robust tools to ensure the work can get done, but it will also help us to tackle more life-changing projects than ever before. The Helping Hands team and I are really looking forward to chopping, screwing and cutting our way through lots of projects with Hilti tools in the future."

T5 ROUTER PROMOTIONS

T5 PROMOTION

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Mobility, a versatile range of applications and precision – all this makes the new KAPEX KS 60 a unique sliding compound mitre saw. Evident in its low weight and ergonomic handles. Visible in its compact design, the LED spotlight and the bevel. Demonstrated by the groove function and two-sided inclination angle of 47 and 46 degrees, and represented by the overall concept – with one aim only: to inspire you from the very first cut.

For more information visit our website at www.**festool**.co.uk/KAPEX

FESTOOL
Tools for the toughest demands

What's new from D&M TOOLS

'THE' TOOL SPECIALISTS ● WWW.DM-TOOLS.CO.UK ● 0208 892 3813

METABO MT 400 QUICK 400W 240V MULTI TOOL

MANUFACTURER: Metabo
D&M GUIDE PRICE: £154.95

This new 240V multi tool from Metabo is indispensable for interior work such as cutting, sanding, scraping and grating of different materials. It's fast (11,000-18,500opm) and powerful (400W), thanks to the combination of a large oscillation angle of 3.2° and VTC electronics. It features the Metabo Quick tool change system for time-saving, convenient change of accessories and has a bit retainer for maximum accessory compatibility to OIS, Starlock and other accessories.

Extra bright double LED lights provide good visibility of the working area and the tool has a slim design and non-slip soft-grip surface for optimised handling. It features a suction adaptor allowing connecting an all-purpose vacuum cleaner to provide dust-free sanding.

The multi tool comes complete with the following accessories: 32mm HCS (wood) plunge saw blade; 85mm BiM (wood and metal) segment saw blade; 52mm HCS rigid scraper blade; 93mm hook-and-loop triangular sanding plate; five 80 grit 93mm hook-and-loop sanding sheets; five 120 grit 93mm hook-and-loop sanding sheets; suction adaptor; multi adaptor; tool box; and plastic carry case. See the video on our website.

KREG KWS 1000 MOBILE PROJECT CENTER WITH AUTOMAX BENCH CLAMP

MANUFACTURER: Kreg
D&M GUIDE PRICE: £174.95

The Kreg Mobile Project Center allows you to make any place your workspace, so you can work on projects whenever, wherever, and however you need to.

That's because the Mobile Project Center combines portability with versatility to create a workbench, sawhorse, clamping station, and assembly table, all in one. Plus, you can easily transport the Mobile Project Center to where you need to work, and then fold it up and stow it away when you're done.

The Clamp Trak and included Bench Clamp with Automaxx® auto-adjusting technology provide multiple ways to hold workpieces. The open tables can support up to 158kg, and have built-in storage trays, holsters for your drill, and more. A shelf underneath holds up to 11.3kg of supplies and tools out of the way but close at hand while you work.

In addition to being great for general project use, the Mobile Project Center is perfect for Kreg Joinery. Whether you're drilling pocket holes, clamping cases or face frames together, or preparing your project for final assembly, the Mobile Project Center makes Kreg Joinery even easier.

Victorian table made new

Tasked with another restoration job, this time **Peter Bishop** gets hands-on with a lovely wind-out mahogany extender

Now that I've retired (!!), I can pick and choose which jobs I take on in the workshop. There are some that I'd do anyway, like this project, which was an extending dining room table in need of some TLC. Belonging to some very good friends of ours, for a number of years it's been on the agenda for attention. Not particularly in fashion these days, that's unless you have a big room to take it, these wind-out tables are extremely well made and use good materials. I'd date this one to sometime in the latter Victorian era because it uses single width pieces of mahogany for the top. The style and original construction materials date from around this period as well. You'd pick up something similar, at auction, for a couple of hundred quid or so. They're worth this for the pieces of mahogany alone!

Please note that although many of these images show machines unguarded for clarity, you should ALWAYS ensure that when operating equipment the appropriate guards are in place.

1 I upended the table on my bench so that I could see what was going on

2 There were breaks, battens and bits of metal all over the frame

3 One spare leaf had some moulding missing

4 This leg showed excessive wear on the profile

5 This steel castor was only just holding on

6 Once this brass castor had been taken off, the eroded wood below was exposed

7 The old screw fixing holes had little real wood left

Initial inspection

The sub-frame is made up using a free moving, middle frame with guide strips that allow the table to extend. You then add the extra leaves to make it longer. The whole lot is then wound back together to make it sound and safe to use. Folklore has it that granny was standing on the table, fully extended, to paint the ceiling and it subsequently collapsed! When I turned the table over (**photo 1**), I could clearly see that several metal brackets and extra strengthening battens had been added. There was also a lot of metalwork, which, frankly, was best left alone (**photo 2**). One batten, across the winding entry hole, was obviously there to repair the rail that had been broken right through. Not pretty but, again, best left alone. Apart from a loose leg, mismatched castors, missing chunks, etc., the main problem was that the extending frame was all shot to pieces. The top was also stained, faded and marked. It was obvious that I'd simply have to work my way through the repairs until the table was sound and then re-stain and polish the whole thing.

Gluing & filling

With the castors off the mass of old screw holes, that had left little wood remaining in some cases, needed attention (**photo 7**). I used a two-part filler paste with hardener to fill the cavities (**photo 8**), leaving it proud of the old surface. The hardener with this stuff works quickly so after a few minutes I was able to trim off the main excess with a sharp chisel, and later on the surfaces were sanded off. This type of filler is great for these jobs; it can be sawn, planed and drilled once hard. One leg was hanging on like a loose tooth! The mortise & tenon joint into the end rail was totally loose. The side rail (**photo 10**), recessed and screwed on, was dropping off and the one pocket hole screw was nearly through the top of the leg (**photo 11**). A bit of glue and three longer screws sorted the side rail. Once the glue had cured, I made a new pocket hole

8 One of the first jobs I had to do was to fill up the old screw cavities

9 One leg was loose and held on with a bracket and one other screw

10 The side rail was fixed back onto the loose leg with longer screws and glue

11 Back in place this leg had a new, pocketed screw driven in to help hold it along with the re-glued mortise & tenoned rail

for a fresh screw through the top of the leg. The screw through this would add another, removable fixing, into the table top itself. Then, with plenty of PVA glue into the old mortise & tenon joint, the loose leg was attached to the end rail with sash clamps. The next day, with clamps removed, the leg assembly was then fitted to the underside of the table.

Mouldings

The moulded edge of the table top was made up with short-grain pieces (**photo 12**). This is so that the mouldings would shrink and expand along with each top section, rather than fight it as it would if the grain ran at right angles. It's always fun making up these mouldings because you have to shape them against the grain. I always make a longer run than I need; this way any imperfections in the shape can be trimmed off each end. With my new moulded pieces in hand I trimmed off, with square shoulders, the old to fit the new. A couple of short lengths were then cut to fit tightly and glue and cramps secured them (**photo 13**). Once the glue had gone off, I sanded the new to match the profile with the old. Some other pieces of moulding were loose on the other leaves, so I worked glue under each one and then cramped them up.

Sliding sub-frame assembly

I then took a look at the sliding sub-frame assembly; this was just screwed together so was not difficult to disassemble. On one side of the runner pieces the guide strips were sound; on the other two some were missing completely. They'd been nailed on and obviously this hadn't lasted. I chose some maple to make the replacement runners (**photo 15**). This, I thought, would be harder wearing. I could also make them a better fit so that the whole frame moved more smoothly. I cut and planed some pieces to size. These were glued in (**photo 16**) – no nails for me – and left to cure. The excess was later trimmed and the final fit checked. One had to have a small amount planed off to make it slide easily, and all would go back together once I'd I assembled the fully restored table.

Clean up

Apart from a few other minor repairs, I could now start the clean up. One leg needed to be sanded and reshaped a little. This one, the other three and the show wood rails, were all lightly sanded and then rubbed over with steel wool. The aim was to remove any old waxy or greasy surfaces ready for re-staining and polishing. The two leaves came next. Using the belt sander, with care (**photo 17**), I stripped off the finished surface right back to real wood – good job it was solid! The moulded edges were sanded back by hand and the top surface finished with 120 grit in my orbital sander. The two end assemblies were more cumbersome, but I got them sorted as well.

Staining & finishing

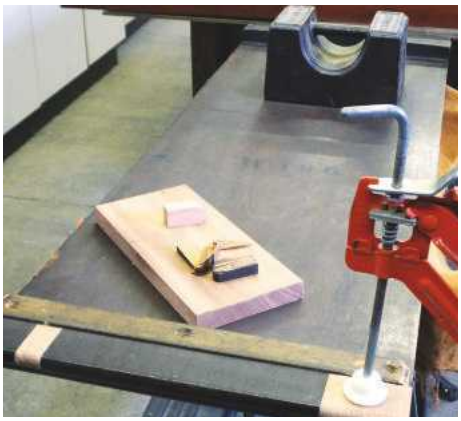
I was aiming to re-stain the top to a more uniform, darker mahogany colour. Hunting through my stock I found just the thing: Fiddes Old Brown Mahogany Naptha wood dye, which I applied with a brush and then wiped off with a lint-free cloth. I worked on the four top sections first and left them for a couple of days to really dry off. I then upended the two ends in order to access the sub-frame and stained all of these components. Now I just had to be patient! Too often, I've applied top coats onto stained surfaces when they've not really dried off. The consequences of this lack of restraint only means that the first sealing coat always takes longer to dry. So, with that in mind, I left all the stained surfaces for about three days.

To make the job good I decided to use Osmo Polyx Oil clear satin finish. This is great stuff that's easy to apply with a brush or lint-free cloth. Once the first coats are applied, it needs to be left until it feels crisp and dry. I cut this back with a coarse wire wool and applied the second coat. Once dry this was also cut back but with a medium steel wool. After the third coat, the surface was lightly rubbed with '0000' wire wool before waxing. The wax of choice was Fiddes Rich Mahogany. When well worked in, a smallish patch at a time, and rubbed off with successively cleaner rags, the finish is superb! I polished all bar the two main top sections before putting the table back together.

Reassembly

The new workshop is not quite as accessible as the old, and what I couldn't do was reassembled before moving it towards the door. There were too many obstacles in the way to lift a full-size project like this over. Because I was working in what was effectively an old farm building, I laid a series of dust sheets on the floor near the door. I'd swept and vacuumed this off to make sure there was no muck and dust around. The two partly assembled

12 A piece of short-grained moulding was made up to match and replace the missing sections on this leaf



13 Each replacement piece is glued on…

14 … then cleaned off to match ready for staining

15 Some of the runner strips were missing or made up of short lengths. New ones were made from maple

16 The new runner strips were glued into place

17 Using a belt sander, with care, the worst of the old surface finish was taken off

end sections were laid upside down on top of the sheets, but I now had to work out how it all went back together. Some pieces had marks showing where they went, but not all. It's a good job I took some images at the start otherwise it might not have been that easy. Anyway, after pondering and checking the images, it didn't take too long to sort it. The worst bit was refitting the screw mechanism: there were extra, old repair battens the retaining screws had hidden away. On my hands and knees I sorted it, but felt my age! I tried the winder and the mechanism worked; that bit of oil I'd put on really helped. Once the two ends were screwed up, the whole table was then turned over onto its new castors. Now assembled and working, the last two top pieces were waxed and polished and we were good to go.

Table delivery

The table had arrived in the back of my pal's trailer pulled behind his truck. With the new wax and polish job there was no way I'd return it in the same way. Another pal, the owner of the farm in which my workshop is now based, has a big van. He kindly lent me that so I could pack the table away and deliver it under full cover. On the agreed day the table was well wrapped and held secure in the back of the van and off we went (**photo 21**). On arrival we unloaded it under cover into a dry shed where a few lambs bleated hello at us. Because we were all in a bit of a rush the table was left for the younger members of the family to install later. A few days later, I was messaged to say all was fine and working well. I replied 'great' but no more ceiling painting while perched on the table, please! **ww**

18 The two, top end pieces were then stained

19 Turned upside down on the bench to stain the undercarriage

20 The last bit – fixing the winding gear in place

21 The van loaded up – all wrapped up and secured for the trip

The Woodworker & Woodturner

Drop us a line on paper or via screen and keyboard to add your voice to the woodworking crowd; you might be one of the lucky few who will manage to get their hands on a coveted *Woodworker* badge! You can write to us at ***The Woodworker,*** **MyTimeMedia Ltd, Suite 25, Eden House, Enterprise Way, Edenbridge, Kent TN8 6HF** or send an email to **editor.ww@mytimemedia.com**

★STAR LETTER

A marriage of wood

Dear Mark,

I was married in June and, as well as tying the knot, I wanted the occasion to be a celebration of my love of wood!

Discussing the options with Trish, my long-suffering fiancée, we decided that a good way would be to name each of the nine tables at the reception wedding breakfast after a different tree, using a spectacular example of the timber as a label.

Looking in my wood store, I selected nine examples of timber I could fashion into table labels. I wanted each label to show some rough unprocessed wood (with bark), as well as contrasting flat sanded and polished surfaces displaying the hidden beauty of the figured timber. So that guests could locate their tables easily, the name of the timber was routed, using a plunge router and letter templates, and the lettering was made to stand out by applying gold gilt cream.

In addition, I wanted to turn a 60mm diameter polished wooden coaster as a wedding souvenir in the place setting for each guest, with each coaster to match the corresponding timber label of the table. This meant turning, sanding and polishing nine coasters for each table, adding up to a grand total of 81 coasters!

After a lot of hard work I finished in time and the wedding was a very happy occasion. Afterwards there were no wooden coasters left over but several requests for additional ones!

Regards, **Tim Pettigrew**

An example of one of Tim and Trish's clever wood-themed wedding table decorations

Hi Tim,

Wow, that's great, and didn't those tables look good! That's a really nice idea and must appeal to the romantic in all of us. I'm sure that Trish genuinely appreciates your other love (even if she might roll her eyes from time to time).

Good on you and fair play for such a production line!

Mark

Saw maker identification – responses

Dear Editor,

Having seen the letter from a reader trying to identify the maker of his saw, just from the medallion on the side, may I point out two collections of such makers' marks: **www.lumberjocks.com/Brit/blog/38689** has a discussion on how these moved from British makers to the US, and the medallion in question looks to be included about halfway down, as belonging to A. Ashton and Sons.

There is also another collection of these marks at **www.lumberjocks.com/summerfi/blog/39861**, but the Ashton one is not included there.

Kind Regards, **Ian Shatwell**

Dear Mark,

The enquiry from Bill Croucher last month excited my interest as I recognised what I thought to be the stamp of a livery company – The Worshipful Company of Sawmakers – guaranteeing quality; a sort of early BS! I have several old saws and one new dovetail saw from ET Roberts & Lee with the same boss. The now owners of Roberts, Thomas Flinn & Co., show the same in illustrations on their website.

But it is not so and what the boss signifies is not clear. The use of the Imperial crown, lion and unicorn supporters and Garter motto suggest strongly that some Royal Warrant is involved, presumably for a Guild or Society; certainly a society of sawmakers was active in Sheffield from the late 18th century.

John Dickinson

Thanks to everyone who wrote in on this one. From my own investigations I believe that the use of this particular medallion based on the Royal coat of arms of the UK was widespread, and signified little other than the desire of the saw manufacturer to be seen as belonging to the best quality. In a similar way that other makers would append the word 'London' to a saw blade, the brass medallion set into a hardwood handle conferred instant desirability to a saw, and especially to the eyes of the overseas buyer.

Closer examination of an assortment of the 'Warranted Superior' and Royal crest mark will show variations in the design; the one originally submitted by Bill Croucher sports a stylised version of crossed arrows in its centre, a motif adapted from the arms of the City of Sheffield, and the likely place of this saw's manufacture. **Mark**

The medallion featured on Bill Croucher's saw – see *WW August* for the original letter

GET IN TOUCH! Don't forget, we're always keen to see your photos, so please don't hesitate to send them in if you've snapped something of interest recently. Email me on the usual address: **editor.ww@mytimemedia.com**

Please note that all digital photos need to be greater than **1MB** in size to guarantee sufficiently good reproduction for the printed page

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Hats off!

Calling upon past experiences and demonstrations at clubs, **Andrew Hall** shares the secrets behind the making of one of his small signature turned hats

I am often asked why I started making turned hats, and I have to admit that it was seeing the work of the king of hat turning, JoHannes Michelsen, that originally gave me the inspiration. Around 12 years ago, I remember reading a profile on JoHannes and how he made his hats: I was hooked. 12 years later and having turned numerous headwear, I am now writing an article on how to make a small signature turned hat. It's a great project to make and I still love what I do. I think that turning wet wood and seeing it change shape and dry a different colour is amazing; however, the downside is that some pieces will crack in the drying process, but such is life.

In this article I'll take you through the process of turning a small hat, calling upon past experiences and using photos from previous and the latest course I completed, in Castle Douglas with Galloway woodturners.

Once the course/masterclass is booked, I always send an email to the organiser with the timber and tool requirements so that the students can prepare for the training day ahead.

HAT SIZES (FOUR VARIATIONS IN TOTAL)

Full size	375 × 200mm blank size
Brim Width (BW)	87mm
Band Diameter (BD)	200mm
Body Depth (BOD)	125mm
Crown Diameter (CD)	150mm
Half size	250 × 150mm blank size
BW	75mm
BD	125mm
BOD	100mm
CD	90mm
Quarter size	175 × 125mm blank size
BW	50mm
BD	75mm
BOD	75mm
CD	56mm
Eighth size	75 × 75mm blank size
BW	50mm
BD	50mm
BOD	50mm
CD	40mm

The best materials to use are sycamore and beech. Cherry is very attractive but difficult to dry. The fresher the better for bending

Tools required for turning a small hat

STEP 1 The bowl blank you use should be held in place either using a faceplate or screw chuck

STEP 2 Start by mounting the bowl blank on the lathe and true up the surface using a 12.5mm bowl gouge

STEP 3 Continue the turning process until you are left with a cone shape

Materials required

Wet wood is required for this project – in fact, the wetter the better. If the hat can be turned within a week of felling then the translucency and the bending process will be far superior than if the material used had been felled for any length of time. For a small hat, you'll need a 200mm diameter × 125mm deep bowl blank. Sycamore is the kindest wood to work, especially in the drying process. Ash would be my second choice, followed by beech. Some of the fruitwoods can be superb but these are prone to cracking, and the wood to avoid, as it is the least successful, is yew. A definite no-no for the project would be to use a timber such as eucalyptus, as it has a mind of its own and bends and cracks all over during the drying process.

Tools required

For this project you'll need 12.5 and 10mm bowl gouges with a long swept-back grind; a 3mm parting tool; and a 10mm beading/parting tool is also useful ground at an angle of 6°, which will allow you to cut a lovely crisp spigot or tenon.

Tools to add to your armoury would be bow callipers; figure-of-eight or scissor callipers; a standard 50mm chuck and screw chuck will be needed to hold the material; and an atomiser bottle for spraying water will keep the wood wet during the turning process.

A light box constructed on the lathe and three good quality torches will be needed to top out the hat in the final process of turning. And lastly, an angle-poise light is required: I use the flexible lights available from Woodart Products. The owner, John, sells a small focus controlled cool light on a flexible shaft that is ideal for this purpose; see contact details in the 'Resources' sidebar at the end of the article. **ww**

STEP 4 The photo here shows a ring being removed from the hat blank. On a full-size hat the ring can be used to make a port hole mirror at a later stage, or when making a small hat, it can be used to make a picture/photo frame when it is dry and re-turned. Cutting a ring in a full-size hat would require a minimum of a 6mm parting tool and a small hat would require a 3mm parting tool to be used

STEP 5 You now need to insert the tool from the side in order to intersect the cut from the rear, then the ring will separate from the blank

STEP 6 If the blank is deep enough, two rings can be removed and the second one can be dried to make a stand

STEP 7 Here you can see how the hat is reduced after cutting the second ring. You need to make the proportions of the crown look correct in comparison to the size of the brim

STEP 8 Once the hat shape is completed, it needs to be sanded using cloth-backed or Abranet abrasive with water through the following grits: 120, 180 and 240. Don't use paper-backed or blue coloured abrasive as the paper disintegrates and the colour will leach out and onto the surface of the hat. I find Rynogrip hook-and-loop-backed abrasive to be the best, in either the pink, or cloth in the Ruby colour

STEP 9 Next, colour the band of the hat in using drawing pencils. I use the Derwent Sepia range – I find these the best to use as they are wax-based and don't bleed into the wood as water-based colours do

STEP 10 The spigot needs to be cut using a 10mm beading/parting tool. You must ensure you achieve a good crisp, clean cut, so that when the hat is reversed in order to turn the centre out, it is held securely in the chuck jaws

STEP 11 Once the hat is reversed, it's time to true up the surface using a 12.5mm swept-back bowl gouge in a draw cut, using the bottom third of the wing. The tool's flute needs to be set at the 10:30 position, if you were looking at a clock face, with the tool at an angle of 30° to the surface of the material

STEP 12 Using the scissor callipers and a light to keep a consistent wall thickness, my suggestion would be to maintain a 5-6mm thickness on your first hat and then go thinner after a number of practice turnings. The wood will still bend if it's wet and fresh enough at that thickness, and the light will still show through

STEP 13 Here you can see the hat being hollowed in the same way as a bowl would be turned. The tool is presented to the material at 30° to the surface, but this time the flute of the tool is positioned at 2 o'clock. Always use a push cut rather than a draw cut as you will run the risk of experiencing a dig in. Stepped cuts allow the material to be removed without too much movement and you need to ensure you keep wetting the wood with an atomiser bottle. Don't be tempted to pop your finger in to clean out the shavings – use a 25mm paintbrush to flick the shavings out, or compressed air if you have it available

STEP 14 Here you can see the turning is almost complete, but keep using the light and callipers to check the wall thickness. The light on the inside of the crown should be brighter than on the brim, as there is end-grain at every 180°

STEP 15 Sand the brim and inside of the hat using a range of abrasives with the water and always slow the speed down so it is one-third that of the turning speed; this helps to prevent heat generating with fiction. Keeping the hat wet is key to maintaining stability when turning thin, wet wood

STEP 16 Here you can see how the light is being used to check the wall thickness prior to the final topping out of the hat

STEP 17 Here the hat is held on a jam chuck with a bank of three LED torches inlaid into the chuck and rubber router mat, which help to hold the hat for the final cuts that are made using a 10mm swept-back bowl gouge

STEP 18 This photo shows the final cut that needs to be made to remove the centre crown of the hat

STEP 19 The latest group of students with their completed small hats. The next step is to apply elastic bands across the grain, which will help the brim to bend upwards

STEP 20 After a few days the hat will be dry and can be hand-sanded, starting back at 180 and then progressing through 240, 320, 400 and 600 grits. I generally finish them using Chestnut Products' lacquer. This photo also shows a selection of some of the other small hats I've turned, as well as a couple of small Corinthian helmets that have been coloured and textured

RESOURCES
Flexible lights
Web: **www.woodart-products.co.uk**

Derwent drawing pencils – Sepia range
Web: **www.derwentart.com**

To find out more about the courses offered by Andrew, see his website: **www.hallwoodhats.com**

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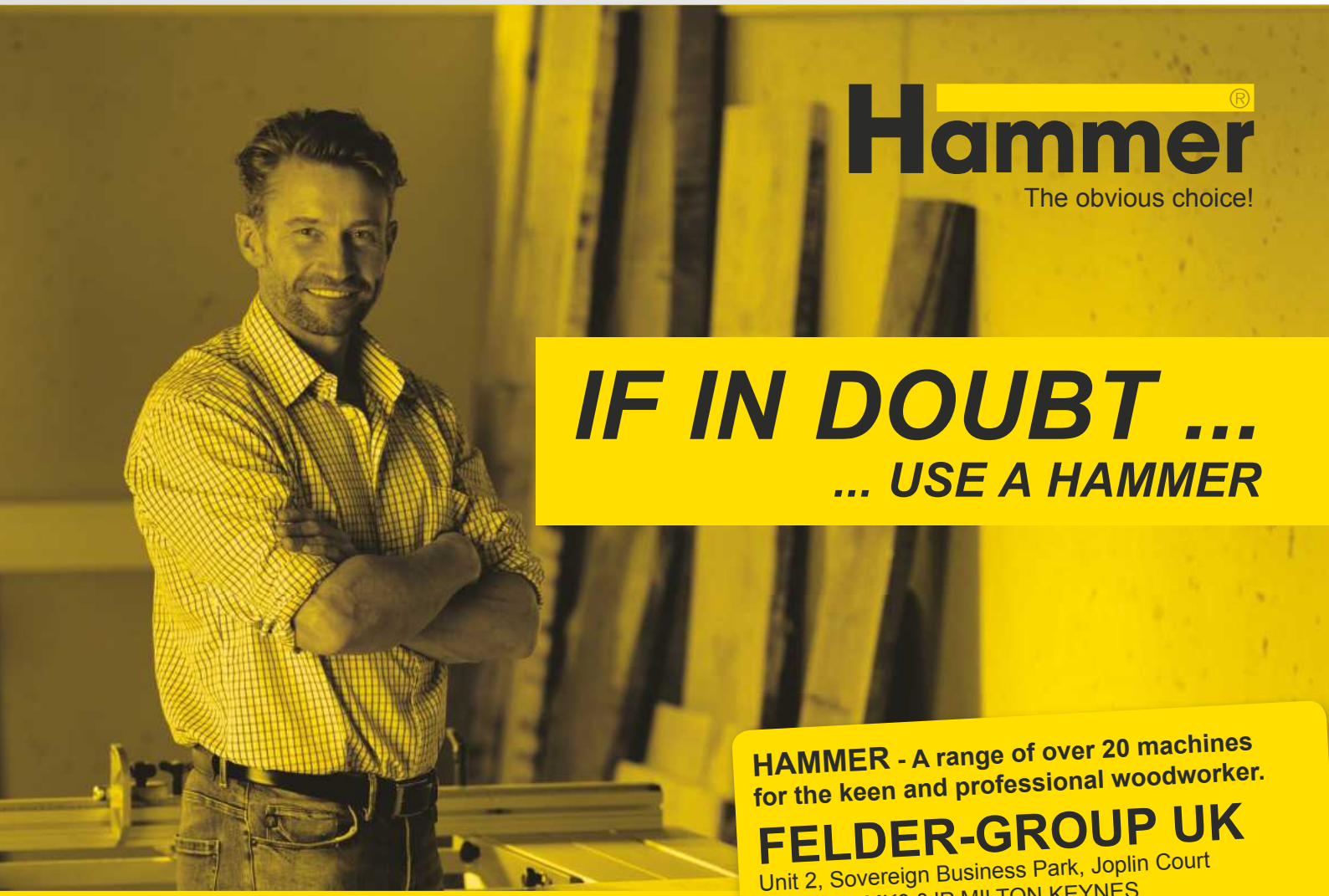

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Setting sail

The coracle, a small keel-less boat, has always been used as a means of fishing or transportation. Here, **John Greeves** takes us through the steps for making one that are used by **Mark Aplin** on his dedicated courses

The coracle is a small keel-less boat with a shallow draft, which is light enough to be carried by one person on their shoulders. The name comes from the Welsh word 'corwgl', which derives from 'corwg', meaning ship. Their main use has always been for fishing or for transportation. An ideal craft whose materials can be locally sourced, they are relatively easy to build and perform well in shallow water. They are extremely manoeuvrable and very portable. In the past they were used to catch salmon or sea trout, whereby a net was stretched between two coracles, which drifted on the tide or current.

Their long history stretches back thousands of years to the early Bronze Age and perhaps even further to the Ice Age. Caesar saw them in Britain and later used them in his expedition against Pompey to transport troops across the Segre when the bridge had been washed away. Coracle development isn't particular to the British Isles as many people think, as similar designed boats have been found in many places across the world, including India, Vietnam, Iraq and even Tibet.

Coracles in the past have often been constructed from a traditional design: a basketwork frame made from locally foraged wood and covered by a hide or other waterproof coating. Their shape and size differs around the world and in Britain itself where many variations can be found. In Britain, it's estimated that there are up to 18 unique designs that are often named after a specific river. Each is tailored to suit in order to meet the local conditions of the river – for example, the Teifi coracle is flat-bottomed to negotiate shallow rapids common on the river, whereas the Carmarthen coracle is rounder and deeper as it was used in tidal waters on the Tywi. Coracle design continues to evolve, with modern materials, tools and technologies changing the way they are built. Early coracles were made of willow rods in the round or those that were split and shaved flat. These were woven into a basket shape and covered with the skin of a cow or other animal. Some coracles are still built in this very traditional way with willow or hazel, though other woods such as ash are also used. Today's coracles often use sawn ash laths and have replaced the traditional hide with a modern waterproof covering, such as calico, which has been coated with pitch or bitumen paint. The use of fibreglass coracles produced in a mould and carbon fibre have also jolted the craft into the 21st century. Some designs have even been sheaved with an aluminium sheet. These modern coracles have responded well to changing needs of a leisured population, requiring little maintenance or repair, especially in rivers with falling water levels and where lightening the burden on a person's back can certainly pay dividends.

Developing a design

Mark Aplin is an experienced woodworker, canoeist and sailor. He has his own business, Overwater Boats, and runs boat building courses, including those for coracle building. Last year Mark became a partner in Solway Dory, a company specialising in sailing and paddling canoes. When Mark founded Overboats in 2010 in Cumbria, he was mainly running canoe

CORACLE CONSTRUCTION

Construction of a coracle measuring approximately 1.37m × 1.06m × 356mm deep

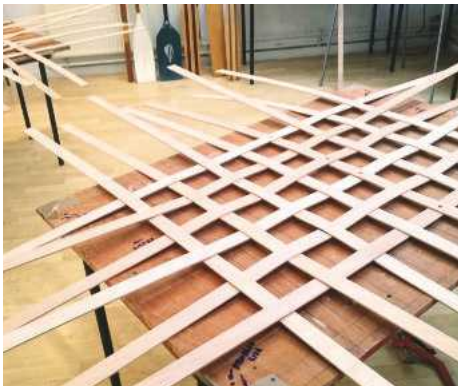
MATERIALS

- 2.4m green ash laths × 38mm wide × 6mm thick (approximately)
- Brass nails or ring shank nails
- A softwood seat approximately 150-200mm wide × 25mm thick × 1.06m long
- Copper boat nails/roves or substitute these for short stainless steel No.8 self-tapping screws
- Longer screws to go into the seat posts
- Polyurethane adhesive
- 3 softwood seat posts 356mm long × 38mm wide × 38mm deep
- 2 litres of bitumen paint
- Canvas approximately 2m × 1,800mm wide per coracle
- 8 × 38mm wood screws
- Abrasives

TOOLS

- Drill, drill bits and countersink
- Hammer
- Japanese saw
- Screwdriver
- A quantity of spring clamps
- File
- Plane
- A hand-operated staple gun/ stainless steel staples
- A number of G clamps
- Steamer
- Rove setting tool (optional)

1 Laminating the gunwale trim with the seat fixed across the jig



2 Laths woven from the hull

building and paddle making courses. He wanted to develop a practical course that could be run over a weekend and decided on coracle building. He didn't set out to replicate any of the regional practical designs, but wanted a design which was relatively simple to build and wasn't reliant on participants' previous woodworking skills.

THE JIG

Mark uses a jig, whose setup has a grid on it for positioning the laths. He also uses six bracket angles (bolted on), bow and stern, with two pairs left and right of these. These give guidance to the bending of the rim and allow a generically designed coracle to be built easily within a couple of days. For the more accomplished woodworker, a bracket angle at the bow and stern would probably suffice. For those without a bench, a sturdy table could be used as a jig.

Fixing the seat & rim – photo 1

The seat is bolted down to the jig, and at this point the coracle is upside down. The six bracket angles give guidance to bending the 2.4m green ash laths around to form the rim. The laths aren't long enough to go all the way around: a bow and a stern lath are needed. Each one starts halfway along the seat at one end and goes all the way around to the seat at the other end. Both the bow and stern laths do exactly the same thing. These are glued to the ends of the seat and then brass nails or ring shanked nails are hammered in.

Laminating & gluing a complete gunwale

The rim or gunwale is actually made by adding a further two laths around the rim, which are glued together with polyurethane adhesive. This is done sequentially, a little at a time, with the laminated material held in place by a series of spring clamps around the rim. Just as you would when using brickwork, the joints need to be offset. When laminated, some screws are then put through the seat section.

Four temporary posts hold the rim (gunwale) & weaving of the laths begins – photo 2

At the start of this stage the rim is set aside while the grid of laths for the hull is woven. The weaving of the hull follows a grid pattern, which is marked on the jig for guidance. Laths running fore and aft are known as stringers and those going from the side as the ribs. Mark's generic design uses a grid of eight ribs and five stringers, which are roughly spaced 100-125mm centred. When the grid is woven the corner posts are attached and the rim clamped to them, above the woven grid. The base of the hull is approximately 356mm deep.

Fixing seat supports to the seat – photo 3

There are three posts (stanchions), which act as seat supports. These extend from the grid of laths that are going to be the hull up to the seat, and are attached by screws from the top. The holes need to be carefully drilled and countersunk to align with these seat supports. Fixing the bottom of these seat supports to the hull grid can either be done now or later on in the process.

3 Completed rim fixed above the woven hull on temporary corner posts

4 Steaming the laths

5 Adjusting and checking alignment of the ribs and stringers

6 Trimming off the laths and stringers

Using a steamer to bend ribs & stringers into a temporary position – photo 4

An improvised steamer can be made by attaching piping to the end of a wallpaper stripper or using a steam generator. At this stage protective gloves need to be worn. The laths are steamed and bent into position and then clamped, one by one, to the rim or gunwale. It only takes a minute or two to soften each one.

Adding the bilge laths & four corner diagonal shorter laths

Two bilge stringers are woven between the ribs in the same way as the others are woven around each other. The bilge stringer runs in a curve from the top of the bow all the way down to the stern on each side. It's woven between the ribs in the same way the others are woven around each other. These don't go up to the gunwale but just terminate at a convenient point that can later be glued to another lath. Putting staples through the bilge end laths could damage the thin lath beneath it. The four temporary posts can now be removed from the construction. It's evident now that four corner laths need to be fitted to avoid large unsupported areas of the calico. These diagonals go outside the other laths when looking at the boat from underneath. Each end of the diagonal lath is squeezed between a junction of a cross way lath on the base; this junction is steamed first to allow easy access. The end of a corner lath is squeezed in and runs diagonally before it's steamed again and bent up to be attached to the rim with a spring clamp. Both the bow and stern diagonals that form these corners are equidistant from one another at the base.

Aligning & tidying up; gluing & stapling – photo 5

In the construction so far, the laths have been steamed and bent, then clamped temporarily. It's now time to go around to even them up and make each one as symmetrical as possible. Some attention can also be given to side bilge stringers as well; they don't actually meet in the middle but ensure both have the same sort of position along the sides. The laths around the rim can be glued

7 Cleaning up the rim gunwale

8 The completed frame before covering

9 Stretching the fabric

and stapled once everything is repositioned. Note in **photo 5** how the four staples form a square configuration at each fixing point. Their use will become obvious later on when the coracle is finally completed.

Cut off protruding ends – photos 6 & 7

A Japanese saw is used to trim the tops of the laths; this has a thin blade and is ideal for the job. To ensure everything is flush, the top of the rim is planed before it is carefully sanded down.

Cover in canvas & staple – photos 8 & 9

The canvas is laid on the work surface with the frame the right way up in the centre. The canvas is then brought up to the gunwale ensuring the excess is roughly equal, before the material is clamped into position, so the calico is tightly stretched across the frame. It is advisable to do a short section on either side and continue to clamp using spring clamps. It's best to start at the bow and work towards the stern making lots of small pleats, so a brush can be worked into them when applying bitumen. Starting from the bow and working towards the stern slightly reduces drag and increases the top speed of the coracle. The process is continued all the way around, and once complete, it is stapled all around the gunwale.

Cut off excess canvas & fold down

Excess canvas needs to be cut off to around 25-50mm that lies below the bottom edge of the gunwale, then it is folded down and stapled once more. This is then trimmed again so it can be covered by putting another lath as a gunwale all around so the canvas is thoroughly covered.

Adding the final outer rim – photo 10

The third gunwale that goes around the coracle can be fixed using copper nails and roves. The rib and stringer need to be drilled right through the centre of the square configuration of four staples. A nail then needs to be passed through to attach the rove using a setting tool. Alternatively, instead of putting a nail through and having to rivet, short No.8 stainless steel self-tapping screws can be used, drilling into the thickness where there is a rib.

Waterproofing & finishing – photo 11

The outside of the coracle can be painted using bitumen paint, requiring at least three coats to ensure it's water tight, then ensuring any pleats or stitches are treated well. Adequate time needs to be allowed to ensure the paint dries between each coat. A crude paddle could be made by using a broom handle and a piece of ply, but a more effective paddle would be one properly made or commercially bought. **ww**

10 Fixing the outer gunwale rim with boat nails and rove

11 Completed frame with paddles

CORACLE BUILDING COURSES

Mark Aplin runs his courses several times a year. Although he ensures everyone builds a coracle over a weekend, he's always keen to let his students try some coracle paddling for themselves. There's a careful sculling action to be learned, using a draw stroke over the front of the coracle. It seems everyone always enjoys the experience and soon picks up the technique very quickly, making it an appropriate ending to the course

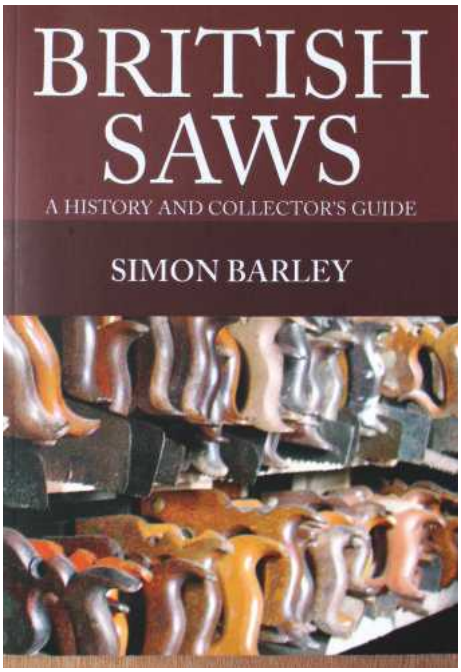
Overwater Boats
www.overwaterboats.co.uk

Coracle building course at Higham Hall
http://highamhall.com/course/build-your-own-coracle-2/

Solway Dory
www.solwaydory.co.uk

Coracle Society
www.coraclesociety.org.uk

For safety guidelines on coracle paddling, see the Coracle Society's website: **www.coraclesociety.org.uk/sites/default/files/coracle%20safety%20guidelines.pdf**



A fascinating introduction to British saws

Using a wide range of photographs, **Simon Barley** provides a rich and insightful collector's guide to British saws

I think it goes without saying that the average woodworker enjoys the sight and feel of some decent hand tools, and I expect we've all got one or two favourites that have a family history or are just vintage classics of their kind. Many people go in for collecting tools and, while they might make an attractive display or illustrate the origin and development of a particular tool, I think it's even better if you can still get some use out of them.

A fascinating introduction

Simon Barley has written a fascinating introduction to an enormous world of hardened steel, brass and hardwood, and details the growth of the saw making industry in Britain as it grew to become the biggest in the world. Saw making on a serious scale started in the 18th century, and followed the rise of the Industrial Revolution, with production peaking in the latter half of the Victorian era. There's some fascinating history of the early years, and plenty of illustrations and photos to support it. It's not until you read a book like this that you start to realise the enormity of the subject. Most of us like to think we know a fair bit about most things (and when it comes to woodworking matters well, even more so), but I for one am comfortable with declaring my relative ignorance on many aspects of the saw making story.

FURTHER INFORMATION
Price: **£14.99**
Published by: **Amberley Books**
Web: **www.amberley-books.com**

Generously illustrated

This is the sort of book which is a delight to leaf through, and it's generously illustrated with photos of a huge range of saws and archive publicity material from years past. There's plenty of information regarding saw identification, and lots of contact details for anyone who wants to conduct their own investigation into a specific brand or type of saw. I enjoyed learning about the development of the panel saw (more of a generic term that covered the standard saw with no reinforced 'back') and the different shapes of blade that came about to suit the varying requirements of a wide variety of trades. Henry Disston is a name known to most, an Englishman who set up saw making in Philadelphia and went on to produce some of the best saws in the world. He was also responsible for the 'skew back' design (slightly hollow top edge) in the 1870s, which negated the need for the decorative nib on the standard straight-backed equivalent.

The importance of decoration

Decoration played an important part in saw manufacture, as firms strove to make their saws look important and of the highest quality available. Blades were etched with elaborate logos and script in a flowing hand, and any number of embossed brass medallions adorned the shapeliest of hardwood handles. The medallions themselves are collectable, but not all of them were unique and distinctive to a particular company. Export versions varied from home supply, and larger retailers could get their company name appended to a saw, generally on the brass back of a tenon saw or similar.

What to look for when it comes to handle design

In summary

Since reading this book I will now be looking more closely at the rusty examples one often encounters beneath a trestle table at the boot fair. **MC**

Three great examples of hand saws

Each saw was designed with a different use in mind

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195 mm

100 mm

300 W

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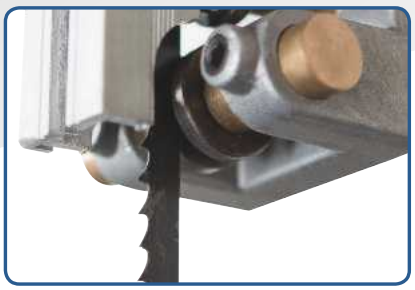

Triple roller precision blade guidance system. Fitted above and below table.

Balanced band wheels with rubber facing.

Offer includes mitre guide FOC.

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RICHARD ARNOLD'S CHARITY TOOL AUCTION

Inside Richard Arnold's expansive workshop, which is packed to the hilt with all manner of old tools

Gary Cook reports from the recent tool auction that was held at Richard Arnold's rural workshop

Although I'd been here before, I still managed to take several wrong turns before arriving at Richard Arnold's rural workshop. Richard, a well-known traditional joiner in Leicestershire, was once again hosting a charity tool auction and I was bringing along a box of tools I thought might help the cause.

Tool museum

Open to all with a love of woodworking tools, it's a fantastic day out and a great opportunity to raise some money for a good cause. The walls of Richard's workshop are adorned with so many tools it doubly functions as a tool museum. Some are clearly in use; others to gaze at and wonder what they were used for. His benches were also busy, with Richard giving demonstrations of new tools he'd just made and letting people try out those that others had brought along. Interestingly, Richard had some very nice wooden planes with offset handles in a few different sizes: they felt good in the hand, even though they looked very different to any I'd seen before.

There were some very rare moulding planes and one particularly huge cornice plane, with a rope on the front so a helper could assist in drawing the profile (**photo 1**).

There were so many great tools on show, as well as those brought along for sale. The show tables were heaving with brass, ebony, and all manner of interesting tools, including miniatures and a working, mechanical scrollsaw that attached to a bench. A particular favourite of mine was a superbly-engineered pattern maker's angle finder (**photo 2**), which could be configured to show a variety of different angles, just by releasing and tightening the various threaded nuts.

Plane makers

The plane maker Bill Carter was once again there showing his beautiful planes and giving advice to those who needed it, and there was also a chance to meet Olly Sparks (**photo 3**), a younger plane maker who works from a workshop just across the yard from Richard.

Olly's grasp of engineering solutions is clear from the start: he even makes the tools he needs to build his planes. Many of us looked dumbfounded as he showed us one of his latest creations with inset, square peened joints along the sole. It was nice to see a respect for the past and makers of old, but also to hear what can be achieved with the very latest modern techniques.

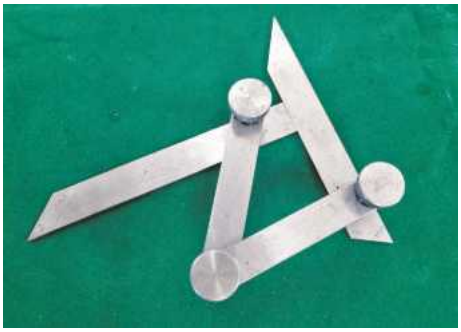
Rare tools

Shane Skelton from Skelton Saws was also in attendance and I tried out a couple of his impressive offerings. The saws tracked as well as my beloved little Groves, and I begrudgingly made a mental note that I should probably join his waiting list at some point.

After buying a Krenov book that had recently landed on the 'for sale' table, I ventured outside. More rare tools, including a French besaigue – basically a long iron bar with a mortise edge at one end and a slick at the other – which was primarily used for timber framing (**photo 4**). You might think the handle in the middle would take a wooden stave, but no, it's used in the hand, with most of the bar resting on the shoulder, or sometimes under the arm, which I have also seen. The weight of the whole bar lends some help when mortising or trimming, I suppose, but it's a tool that would come with a steep learning curve.

The workshops began to fill with more and more people and I went back to the car for the drive back to London. In all, the event raised nearly £5,000 for the Macmillan charity, which I'm sure will be gratefully received. **WW**

1 A huge cornice plane, with a rope on the front so a helper could assist in drawing the profile



2 Patternmaker's angle finder

3 A collection of planes by Olly Sparks

4 Andy T with the besaigue

FURTHER INFO

Gary's blog – **www.hackneytools.com** – concentrates primarily on quality woodworking tools from the 19th-20th centuries. He also tries to include information about the woodwork and carpentry trades from those times. You learn something every day, so do get in touch if you have information about hand tools and traditional work that others might find useful

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Post-war patience

This month we look at a striking advert from *The Woodworker* of June 1948, from renowned saw makers Spear & Jackson

This advertisement for Spear & Jackson from *The Woodworker* of June 1948 is fairly typical of the time. The striking design shows British advertising art at its best (the full page artwork wouldn't look out of place in a modest gallery), and clearly portrays the product as high-end and desirable. And looking back from the comfort and luxury of our own time, with 1,001 tools and work-aids at our disposal, it's hard to imagine just how desirable this saw – and others like it – really were.

Post-war reconstruction

Just two or three years after the war, pretty much everything was in short supply, except perhaps enthusiasm and a country-wide shared feeling of hope for the future. Even paper was scarce and the issues of our own magazine during this time were notable for a minimum of pages printed on the thinnest paper available for the job (compared to copies of *The Woodworker* from the first couple of years of conflict, the difference is quite dramatic).

At this time of post-war reconstruction, there was a huge amount to be rebuilt, and grand plans for new towns and settlements (particularly in the South East). Even though the big stuff took a while to get started, on the ground there was a frenzy of work to be done (much of it repair) and, with willing labour available, all that was missing were the tools to do it with. At this point Britain was still a major manufacturer in the world; plenty of other countries needed to be catered for and valuable revenue to be earned. The telling words on the advert here are 'Deliveries are tied to Britain's export drive' and spoke of queues and shortages. It's hard to imagine having to wait for something as simple as a saw, but these were exceptional times; at least everyone was in the same boat.

mark

DO GET IN TOUCH

If any readers have memories and photos of things they or their forebears made from *The Woodworker,* please get in touch as we'd love to see them. Just email me on the usual address: **editor.ww@mytimemedia.com** and we'll get them in the mag

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VIDEO

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Tool tidy up

Completing the latest in a series of beginner projects, **the Editor** finds the time to make this handy tool caddy, which provides a good chance to hone some essential skills

This was one of those jobs that I like to call an 'under the bench' project, the sort of thing you pick up whenever there's a lull in the normal rush of things or when you just fancy a change of work. Despite drawing it up myself, I was still surprised at how much work was involved, but then this is half the fun I always say.

Concept sketch & cutting list

Following standard practice, the job began with a concept sketch (**photo 1**) and was soon refined on the laptop, courtesy of the ever popular SketchUp program. Many readers will be familiar with this simple to use CAD tool (**photo 2**), and I can heartily recommend it to anyone who has yet to try their hand at computer-aided design – plus it's free to download and use. With everything drawn out and dimensioned, it was fairly simple to get the cutting list down on paper and make a start on some actual woodwork. I had a few bits of softwood knocking about that were crying out to be used; all were 14mm thick and of varying widths. A thickness of 12mm would probably have looked nicer, but for softwood this might be a bit on the weak and thin side. After joining a couple of pieces to get the width the job required, I cut everything to length and started setting it all out. The most important thing here is to mark all the components clearly, which will limit the risk of you making mistakes, as well as avoiding confusion later on (**photo 3**).

Finger joints

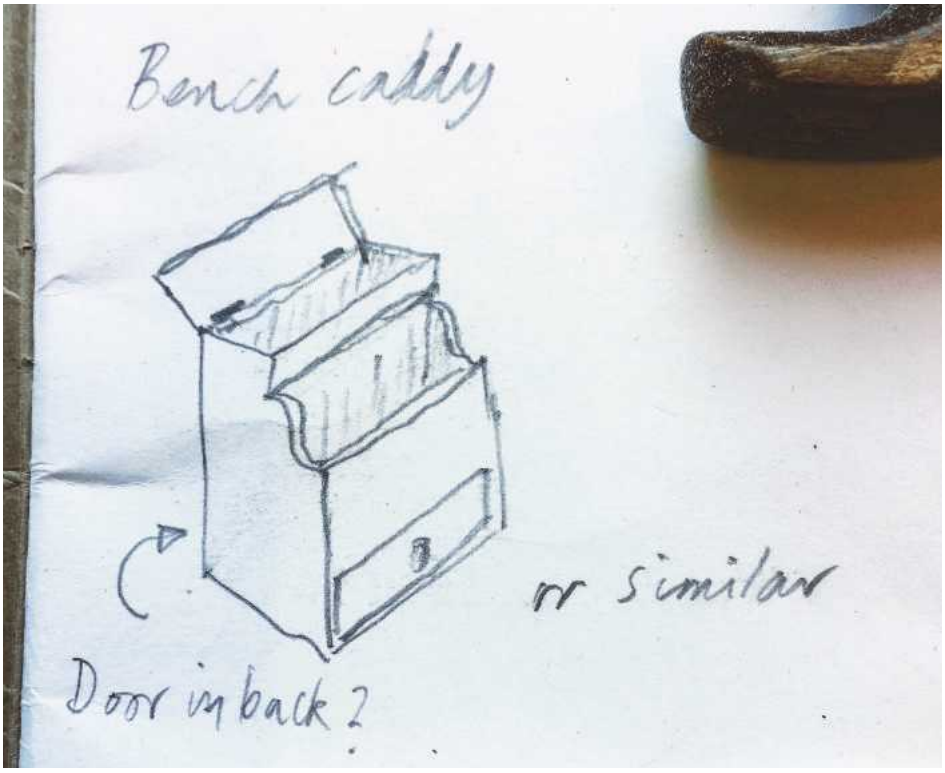
For this sort of small carcass I like to use a wide finger joint; it's simple to make, strong and fairly good looking. When it comes to marking out this type of joint (as well as dovetails), I've found it best to set a marking gauge to a tad more than the thickness of the board. This ensures that the joint faces finish proud of each other and makes for an easier and more effective clean up. With a bit of mathematical juggling, it's possible to achieve a balanced and even distribution of 'fingers', and for them to be in the right places for the design.

Routing housings & rebates

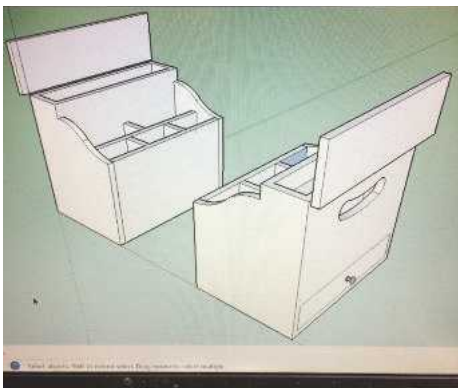
While it's easy enough to cut the whole job out by hand, if there's a bandsaw available it makes sense to use it (**photo 4**). With a bit of care it's possible to get a perfect fit straight from the saw, but there's usually one or two bits that need a slight paring to go together in that 'snug but not too tight' manner we all like (**photo 5**). The next job was to rout out the various housings and rebates for the three bottoms (top, middle and base). I had originally planned to make vertical housings on the sides for the front inner divider, but I'd cut the divider to the internal width already. I ended up putting a couple of mini Dominoes in to hold everything in place, but I guess a number '0' biscuit would have done the job too.

Dry assembly

Before I started the carcass glue up, there were a couple of things I had to do first. It's all too easy to get carried away and to just tear into a job, but for any project, a dry assembly is an absolute



1 The initial 'back of an envelope' concept sketch



2 A CAD drawing really helps with construction and can be fully and accurately dimensioned

3 Make your marking out as clear and accurate as possible

must (**photo 8**). And while you're at it, you might as well clean up the inside faces of all the components while they're readily accessible; it's something you'll never be sorry you spent the time on. So, with everything checked and prepared, it's time to collect your clamps together (**photo 9**), dampen a rag, select your adhesive of choice and off you go. I personally use the slowest white glue available for any carcass that's even remotely complicated; quick setting glues should be left for only the simplest of jobs.

Clean up

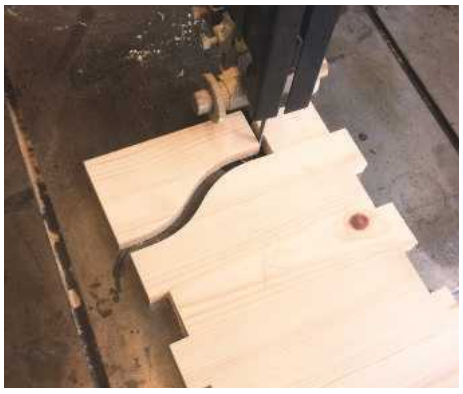
Reaching for the joiner's friend, aka the belt sander, the clean up was a simple if noisy affair. I finished off with a 120 disc on the random orbital, saving the 180 for the final and pre-finish clean up. There's a small drawer in the back of this little unit and, considering the nature of the piece (i.e. not heirloom quality), I felt that 6mm birch ply would be ideal for the sides and back and 4mm for the drawer bottom. The drawer front was softwood to match the rest of the job, and tiny dovetails would be the best and most suitable way to effect a robust construction. After cutting and fitting the tails I routed a 4mm groove for the bottom, taking care to stop it so that it wouldn't come through and show on the drawer faces. There are times when it really pays to sit back and think about a job, and my earlier decision not to glue the caddy base in proved to be a good one when it came to the fitting of the drawer. Not only was I able to fit each drawer component with accuracy and ease, but once the drawer had been glued up and assembled, I was guaranteed to get a good fit in the housing by simply sliding it into place and easing it into the exact shape of the carcass. Once dry, the drawer was cleaned up, the caddy base fixed on and all was very nice indeed.

Cutting the handhold

Well, it was for about a couple of minutes until I realised I'd forgotten to cut the handhold in the back before assembly and when the job would have been much easier. Never mind, we like a challenge, don't we? After marking out a suitable curved hole shape, I drilled the two ends with a hole cutter (to minimise breakout now that I could only work from the face side), and then set about jigsawing the rest out (**photo 13**). Care was needed here to make small cuts and

4 The bandsaw remains the easiest way to cut this type of joint

5 Some slight paring may be required to achieve the perfect fit



6 After forming the joints, the curves can be attended to

7 Some careful router work produced the necessary grooves and rebates in all the components

8 The dry assembly is one of the most important parts of a job

9 The caddy is clamped up, but there's always room for one more

10 The various components of the drawer, cut and grooved

11 The drawer, once constructed

12 A very good fit for the drawer was aided by the access provided by the bottomless carcass

to avoid having a big lump of offcut trapped inside the carcass back; the top and middle bottoms had effectively made this area a sealed box.

Hinges & dividers

After a bit of a run around trying to get some half decent 50mm hinges, I ended up routing them in as the restricted area of the top tray looked like it would hamper the usual saw and chisel work. By fixing the upper leaves of the hinges a little way in from the back edge of the top, I ensured that the top itself wouldn't fold back in a vulnerable manner, but would stay fairly vertical and hopefully not get snapped off in everyday usage.

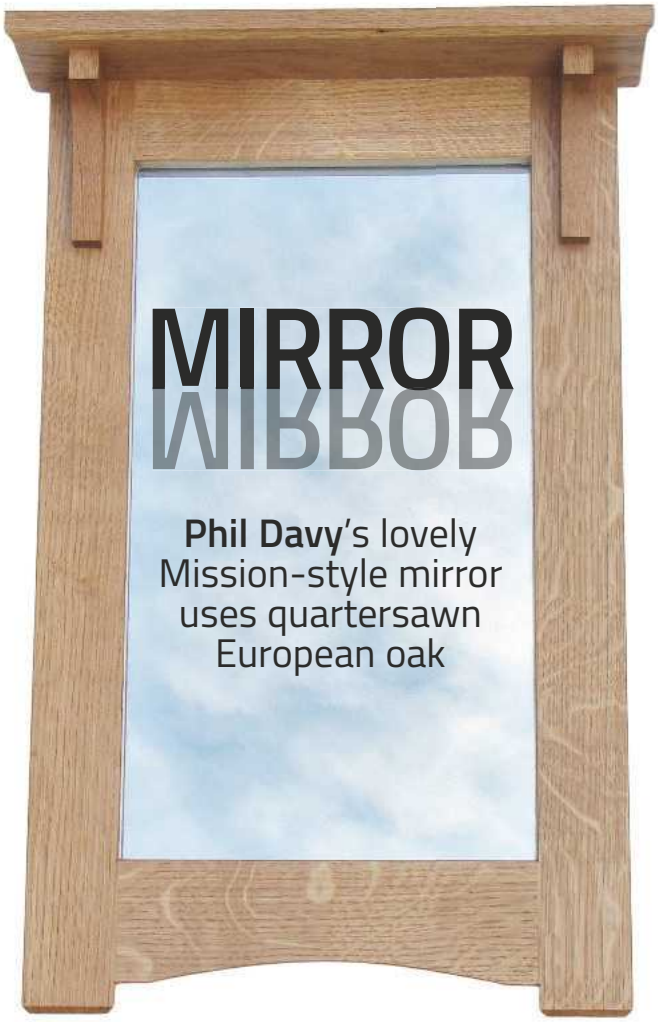
Earlier on I had planed some inner dividers to fit between the front, middle and compartment back as per the CAD drawing, but after seeing them in place I found I was less than happy with what I'd done. I tried to love them, but after a couple of days I followed my true feelings, picked up the big hammer (and a softwood drift) and knocked them out. They were soon replaced by two new ones with top curves to match the sides and I for one am very pleased with my chosen course of action.

Adding feet

With the job virtually completed, I still felt that there was something missing, and that something was a set of feet. I toyed with the idea of brackets, but opted instead for a simple circular cut-out to resemble a bun foot. These were created by using the blanks popped out of a 45mm hole cutter on the drill press and simply screwing them into place. A final clean up of curves and edges left the caddy ready for a simple oil finishing. The finished dimensions of the carcass came out at 300 × 200 × 250mm high, with the lid and feet bringing it up a bit higher. **WW**

13 With the handle holes drilled, it's fairly straightforward to form the final shape. Note initial halving cut on the waste

14 The hinge recesses were routed out with the very handy Bosch palm router



Phil Davy's lovely Mission-style mirror uses quartersawn European oak

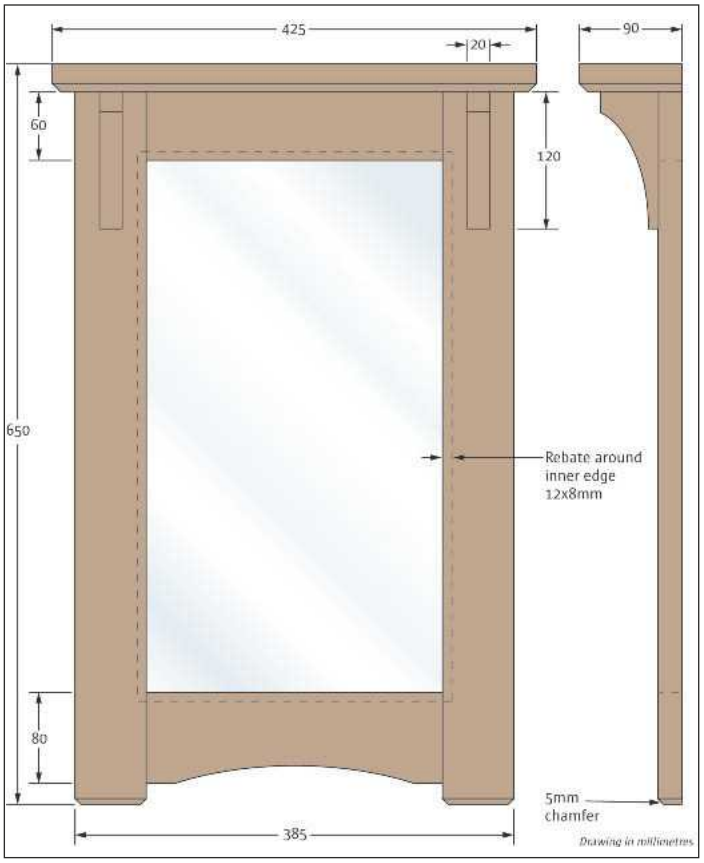


Fig.1 Mission mirror dimensions

To accompany the coat rack I recently built (see *WW* Aug), it made sense to make a hall mirror in the Mission style, especially as they would both end up in the same part of the house. American Mission furniture generally featured highly figured oak, and for this project I managed to source some rather nice quartersawn European timber. Sometimes you come across such a board when sorting through a stack at the timber yard; often it's a case of being in the right place at the right time.

You can, of course, make the frame any size you like, though normally I would have based dimensions around the Golden Section, the classic ratio for rectangles. This time, though, I'd spotted some mirror offcuts at my local glazier for a fiver a time and decided to make the frame to fit the glass. At 6mm-thick the mirror isn't exactly lightweight, but to save weight you could use 4mm-thick glass. You may need to add a backing panel of thin ply or MDF if you do.

For a simple hardwood frame there are several joints that are suitable, depending on your expertise and tools available. Traditional stub mortise and tenons are strong and straightforward, though not nearly so easy to cut in oak as in softwood. Bridle joints would work well and you could drawbore the tenons, adding pins from a contrasting wood to highlight the feature. I avoided biscuits simply because the top rail is too narrow for the No.20 size. Use smaller No.10 size biscuits and there's not really enough strength in the joints. Short on time and with a heavy piece of glass to support, I decided pocket hole screws would be most appropriate. Traditionalists may see this method as cheating somewhat, but once the mirror is on the wall, who'll know? All you need to concentrate on is trimming both top and bottom rails dead square so the joints go together tightly.

The mirror is embedded in silicone adhesive around the inner rebate. Make sure you use a specific mirror glue for this task and wait for it to cure overnight before fitting the frame to the wall. Even when cured, the adhesive remains elastic, so if there's movement in the wood the glass will not be affected. For concealed fixings I routed keyhole slots in the rear of both stiles. After drilling a 13mm clearance hole for the screw head, rout a 6mm straight slot to the same depth, which in this case is 15mm. Then swap to a dovetail cutter, plunge to the depth of the clearance hole and advance it along the slot. Make sure you reverse the procedure and only release the router plunge once the bit has reached the screw hole again. Because of the weight of the completed frame I used size 5.0 screws to hang it on the wall. **ww**

TOOLS YOU'LL NEED

- Marking tools
- Block and bench planes
- Shooting board
- Drill and bits
- Drill stand
- Router and bits
- Straightedge
- Sander
- Jigsaw
- Pocket hole jig

1 Mark out and saw the rails and stiles, allowing 6mm extra in width for planing components to size

2 Check the fence is square, then plane all face sides and edges. Thickness stiles and rails to 20mm

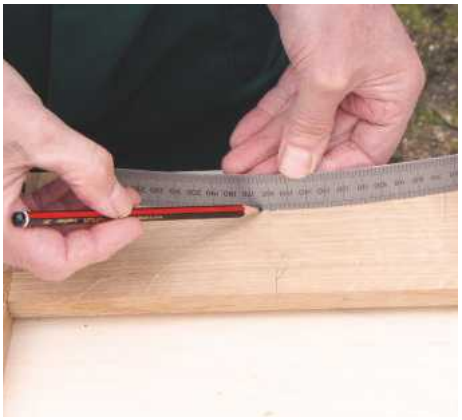
3 Trim the two rails square using a finely-set bench plane in conjunction with a shooting board

4 Laying out the components will help you decide how figure and grain patterns are displayed to their best

5 Using a pocket hole jig, drill both ends of the top and bottom rails for the fixing screws

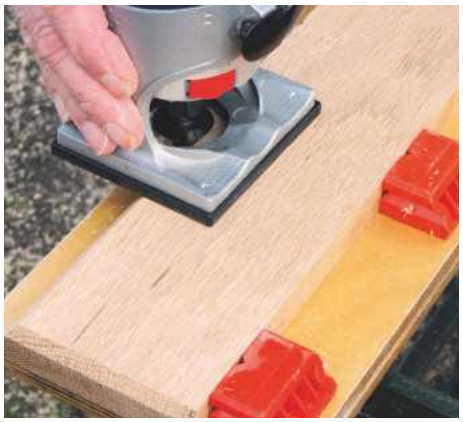
6 It's easiest to cut the 8mm deep rebates for the glass with a router mounted in a table

7 Using a chisel, square off the rounded ends of the rebates routed along both stiles



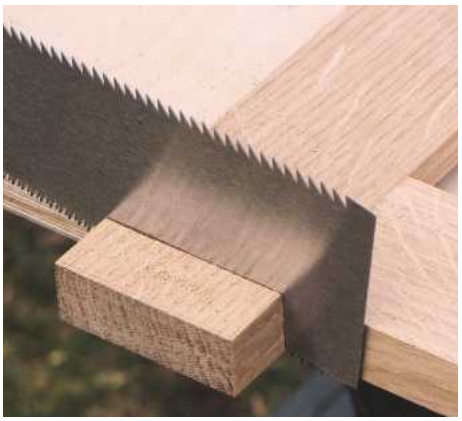
8 Draw a curve on the bottom rail by springing a steel rule between two offcuts cramped in place

9 Saw the curve just on the waste side of the line and clean it up on a sanding drum



10 Rout 5mm chamfers around the lower ends of the stiles and along the top shelf

11 Brush on PVA glue, cramp to a flat surface and screw the rails and stiles together

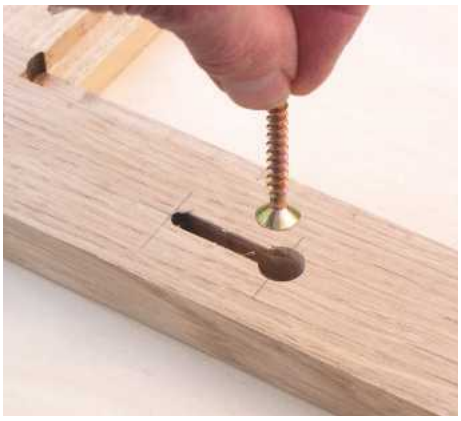


12 Once the glue has dried, saw off protruding horns and trim flush with a bench plane

13 You can now true up the surface of the frame, checking for grain direction. If the wood tears, use a cabinet scraper

14 Check stiles and rails are flat with a straightedge, then sand the frame

15 Mark the position of the shelf. This can either be pocket-screwed or biscuited to the frame



16 Drill 13mm clearance holes for the screw heads, and then rout 6mm dovetail slots alongside these

17 If jointing with pocket screws, glue plugs into the recesses. When dry, saw the plugs flush

18 You can then apply glue to the top of the frame and cramp the shelf in place. Fix with pocket screws or biscuits

19 Cut a pair of matching support brackets and tidy up their curves on the sanding drum

20 Glue the brackets to the stiles, checking that each one is central. Masking tape reduces glue clean-up

21 The shelf is screwed to the brackets. Drill and counterbore holes, inserting plugs after fixing

22 You are then ready to dampen the oak and lightly re-sand the surface. Finish with two coats of oil, followed by wax

23 Apply a thick bead of mirror fixing silicone around the glass rebate. Don't skimp on this

24 Lower the glass into the rebate and gently apply pressure all the way around the edge

25 The completed Mission mirror should look something like this

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Photographs by Rick Wheaton

From tree to bench PART 1

Rick Wheaton shares the story of how he and a group of volunteers made an amazing green-timber outdoor sculpture/bench seat using froes, wedges, side axes, mauls and beetles. Over the next three issues the entire process will be described, from splitting the 1.5 tonne trunk to installation overlooking the River Dart

Visitors to the South West may know that the Sharpham Estate – close by the pretty south Devon town of Totnes – puts its name to some of the finest British wines and cheeses money can buy. Perhaps less well known is that the Sharpham Trust actually planted the vines decades ago, and first made their famous cheeses on the kitchen table of Sharpham House. Strong links still remain – between Estate and Trust – with perhaps the strongest being their shared location among one of the most magnificent woodlands in Britain, the setting for the Trust's meditation and wellness retreats, many of which overlook the beautiful River Dart.

The River Dart as seen from Sharpham Woods

Enthusiastic volunteers

A while ago Sharpham's 550 acres echoed to the thundering crash of a full-grown English oak: it groaned its last, and fell in a storm. Not wanting this tree to simply rot away, the estate management turned to local green woodworking expert Peter Lanyon, and recruited a team of enthusiastic volunteers. I was lucky enough to get on board, and under Peter's guidance we used some of this timber to make an imposing and unique communal seat that would soon command one of the Estate's many superb views. We were a motley bunch – our ages ranging from 16 to 76 – and there was an interesting spread of talents: a student worked alongside a graphic designer; and a retired management consultant rubbed shoulders with a young woman who ran a body-art studio.

Traditional methods

Peter has specialised in making furniture and household goods from coppiced – i.e. green – timber for many years, and there's little he doesn't know about this ancient and fascinating craft. His philosophy is one of minimum intervention, imposing as little as possible on the materials, and allowing the timber's gentle curves to remain as nature intended.

We used traditional methods of splitting timber into manageable baulks with mallets, froes and wedges, finishing off with side axes and drawknives. All Peter's edged tools are razor-sharp, and I'm not using that description loosely: early in my first day I clumsily picked up a drawknife, instantly getting a cut that sent me dashing to the first aid box! His metal tools are all sheathed, and we were instructed to sheath every edge when not in use, and I – for one – didn't need to ask why.

Our first job was to split the mighty log into the seven baulks that were needed to make the tall uprights – a daunting task accomplished by a massive team effort. We used heavy steel wedges, enormous hardwood wedges (called 'gluts'), even larger wooden mallets (called 'mauls' or 'beetles') and we launched the occasional attack with a froe.

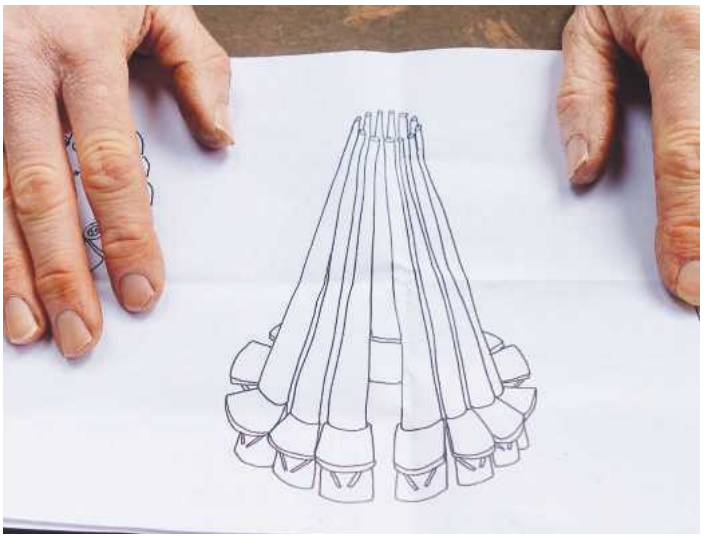
The log split in two

Up to this time, I'd never used – or even seen – a froe, and in case any *WW* readers might be equally puzzled, it's basically a cleaving blade with a long handle. The blade and handle are at 90°, just like an axe, but the working edge is much longer, and faces away from the handle. This edge is deliberately not sharp; it's designed to separate the fibres of wood rather than cutting them, and when used properly it will – hopefully – open up a gap large enough to insert a wedge.

In use, the blade is held against the end-grain, and then given a smack with a maul – the point at which my own efforts often resulted in an embarrassing rebound. Depending on the grain, and the hardness of the wood, it's often better to tap the froe gently until it's winkled its way into the fibres. All gentle thoughts need to be abandoned now, as the blade is hammered in as far as it will go. Then the long handle comes into use, and when it's twisted hard, a split or crack can sometimes be encouraged to open up. The hope is that there's enough of a split to insert a wedge – the signal for more hammering, more wedges, and so on.

Usually the sharp point of a steel wedge is used first, and this can be followed by fatter hardwood wedges and much more hammering – it's a slow, laborious and sometimes frustrating process. **WW**

Various tools from top and left to right: beetle, glut, maul, side axe, froe, steel wedge and drawknife



Hands spreading out Peter's sketch on a wooden table

A froe being hammered into end-grain

A baulk being opened up with froe and wedges

FURTHER INFORMATION

Sharpham Trust
www.sharphamtrust.org

Peter Lanyon Furniture
www.peterlanyonfurniture.co.uk

NEXT MONTH

In part 2, Rick reports on how the outside work area was set up, and shaping of the pieces could then begin

Become better at undercutting turned bowls

Colin Simpson turns, textures and paints a simple bowl, while also offering some great tips on helping to overcome the difficulties associated with undercutting using a bowl gouge

This month's project may look like a simple bowl that I've textured and applied metal reactive paint to, and it is – to a point. But many turners have difficulty in undercutting bowls using a bowl gouge; the tight inside radius can cause problems. This project explains the issues and helps to resolve them.

Mounting & truing the blank

I started with a 180mm diameter blank of ash about 95mm deep. This size of blank rarely requires a faceplate, so I mounted it on my screw chuck (**photo 1**). When you use a screw chuck, do make sure the blank is screwed tight up against the jaws of the chuck (**photo 2**). If there is a gap between the wood and the chuck jaws, then the blank is likely to wobble.

Use a swept-back bowl gouge to true up the edge of the blank and then start shaping the outside using a pull cut (**photo 3**). Cut a chucking spigot on the bottom and dovetail it using a skew chisel (**photo 4**). Remember to make a pop mark with the corner of the skew in the very centre of the chucking point; this enables realignment when the blank is reverse chucked to remove the spigot.

Shaping & finishing the outside

Finish shaping the outside of the bowl using a combination of pull and push cuts (**photo 5**). My blank had some pith on the outside edge, which must have meant that a small branch had been cut off at some point in the tree's life, and there was a small crack radiating from this pith. Normally I do not like to fill cracks like this, but since I intended to paint the outside of the bowl this crack would be hidden, so I rubbed some fine wood dust into the crack and ran some thin CA adhesive into it (**photo 6**).

Next, make some finishing cuts on the outside of the bowl. These can either be bevel supported cuts or shear scrapes like the cut shown in **photo 7**. In both cases the handle is lowered until the cutting edge is about 45° to the surface of the wood. To shear scrape, put the bevel onto the wood and then roll the tool gently until just the cutting edge is touching the wood. Take light, gentle cuts and aim to achieve very fine spiral shavings (**photo 8**) and remember to keep the handle low so that the cutting edge stays at 45° to the wood. Since the rim of this bowl is narrower than part of the outside, in order to cut with the grain, it is necessary to make these finishing cuts in both directions towards the widest part (**photo 9**).

Texturing & painting the exterior

Photo 10 shows my mini Arbortech in an angle grinder. This is what I used to texture the outside of my bowl (**photo 11**). On this occasion, I used

1 These machine screw chucks require an 8mm hole to be drilled in the blank

2 Make sure the blank is located firmly against the base of the screw chuck

3 Start shaping the outside of the bowl using a bowl gouge

4 Cut a suitable spigot for your chuck

the Arbortech at centre height with the cutting disc slightly higher than the rest of the grinder. Use very light passes when using this process because there is a great tendency for the wood to tear-out, particularly on side-grain. A couple of light passes gave me the result I wanted (**photo 12**). You can see in this photo that there is a lot of tear-out, so I cleaned this up using a grey nylon abrasive disc in a power drill (**photo 13**). You could also clean up this tear-out by going over the surface with a blowtorch.

Photo 14 shows the metal reactive paints I use. They are made by Modern Masters and I bought mine online at **www.goldleafsupplies.co.uk**. These paints are water-based and contain real metal particles. Unsealed, the paints will tarnish naturally over time, but to speed up the process, use the patina ageing solution. I used the oxidising iron paint and the rust activator for this bowl. Firstly, give the bowl two coats of primer allowing the first to dry before applying the second (**photo 15**). When the primer is dry, apply two coats of the iron paint, again, allowing the first to dry before applying the second (**photo 16**). This time, however, it is vital to apply the rust activator before the second coat dries. I used an old toothbrush to spatter the chemical on, but a small spray bottle would be just as good (**photo 17**). Notice that I have taped up my chuck and covered the bed of the lathe as this chemical will also rust the metal. Leave the piece to dry

5 Continue to shape the outside

6 As you can see here, I filled a small split with dust and CA adhesive

7 Final shaping and finishing is carried out using the wing of a swept-back bowl gouge

8 Try to achieve fine, spiral shavings

9 Always cut from small diameters to larger on the outside of a side-grain bowl

10 My mini Arbortech in an angle grinder that I use for texturing

11 Brush the blade lightly against the revolving wood…

12 … to achieve a texture like this

13 You can then clean up the surface using a nylon rotary abrasive

14 A selection of the Modern Masters metal reactive paints and varnish

15 The instructions suggest using two coats of primer…

overnight and you should come back in the morning to see the metal paint attractively rusted in places.

Hollowing & undercutting the bowl

Remove the bowl from the screw chuck and reverse it onto the chucking spigot. Begin hollowing in the normal way, starting near the middle and making scooping cuts with the bowl gouge (**photo 18**). However, as this bowl is narrower at the rim, we cannot hollow it evenly using just scooping cuts. Take a look at **photo 19**: the gouge is right over on its side and the handle is right over the bed bars. The bevel behind the tip of the tool is parallel with the curve of the outside of the bowl. The direction of the cut will be in the direction of this bevel, so in this instance I will undercut the inside of the bowl; however, I can only use this cut to undercut the side wall. When I get to the inside corner I will need to swing the handle of the gouge through an arc of about 90°. This causes me two problems: firstly, because the bevel angle is about 45° and the inside corner is a tight radius, there is a great chance that I will come off the bevel – or just the heel of the bevel and the cutting edge are touching the wood – making the tool difficult to control, and secondly, because the bevel of the tool is quite long, I can't swing the handle far enough to keep bevel contact before the shaft of the tool hits the inside rim (**photo 20**).

To overcome this, you need to shorten the bevel. Take a look at **photo 21**. At the top of the image is my standard fingernail profile bowl gouge. The gouge at the bottom does not have its wings ground back and the angle of the bevel, coloured blue, is about 80°. I have also ground away the heel of this bevel, coloured purple, to prevent it bruising the wood as it goes around a tight radius. I use this tool on the inside of the bowl, picking up the cut at the inside corner and taking the cut to the centre. **Photo 22** shows the tool in use with full bevel contact and you can see that the rim of the bowl is not interfering with the shaft of the tool.

The combination of these two gouges enables me to achieve a very nice finish on the inside of an undercut bowl. You could, of course, resort to scraping the inside using a round-nosed scraper (**photo 23**) but this would not give you such a fine finish. You also need to take care not to scrape the side wall and the bottom of the bowl at the same time. These two areas are revolving at different speeds and a dig-in is likely if you allow two different parts of the bowl to touch the scraper at the same time. Look again at **photo 23** and you will notice that my round-nosed scraper is ground eccentrically. This is a more versatile grind as it enables me to scrape many different radii with the one tool.

Final steps

With the inside finished, all that's left to do is power sand (**photo 24**) and apply sanding sealer and wax to the inside (**photo 25**). Finally, reverse chuck the bowl onto a suitable dolly, bring the tailstock up to the pop mark in the spigot and turn away the chucking point (**photo 26**). **WW**

16 ... followed by two coats of metal reactive paint

17 Spatter or spray on the reactive chemical before the second coat dries

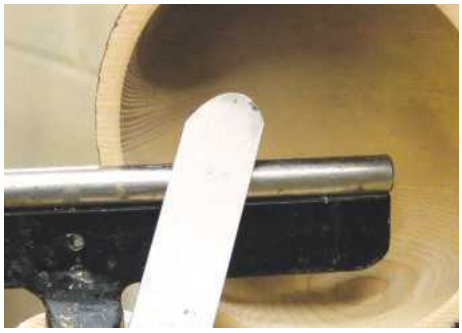
18 Initial hollowing is carried out as normal...

19 ... but when you near the rim, the tool has to be swung right over the lathe to allow the bevel to follow the outside profile

20 Here you can see the rim of the bowl interfering with the shaft of the tool

21 Shortening the bevel on the bottom tool...

22 ... allows full bevel support without the shaft hitting the rim of the bowl



23 Of course, you could scrape the inside of the bowl...

24 Power sand the inside to 400 grit...

25 ... and apply sanding sealer and wax

26 Finally, reverse chuck the piece and remove the chucking point

27 The completed textured bowl with rusty effect

Jackie Pritchard

Jackie is a retired chartered accountant who is currently studying woodworking at Chichester college, his goal is to be able to make fine furniture for his family to remember him by, something they can say *"Jackie made that and it's very good".*

To achieve this, Jackie needed to develop skills he didn't have, hence college, and then to purchase solid, reliable woodworking machines that would fit into a home workshop in very close proximity to other homes.

In October last year Jackie was visiting the W16 woodworking exhibition at the NEC in Birmingham on a college INSET day where he purchased a Hammer C3-31 comfort combination machine, a Hammer N3800 bandsaw and a Felder AF 12 mobile dust extraction unit. Jackie said *"I came across this beauty (C3-31) at the show and it has huge capability in such a small footprint, everything I want is on this machine.*

My only concern was, can I do it quietly enough but after owning it and using it for 3 or 4 weeks when my neighbour came round to see if for the first time, he asked when I was going to start using it."

Going on to say *"The AF 12 is the star of the show, it's an enabler, I couldn't work without it and because all you can hear from it is a dim hum it has saved me 10s of thousands of pounds not having to sound proof my workshop."*

Talking about the service he received from **FELDER GROUP UK** Jackie said *"it has been first class, from the sales representative to the engineers whenever I have had a question they have come back to me immediately. I have fallen in love with wood, I have fallen in love with woodworking and I am very, very happy with what I got."*

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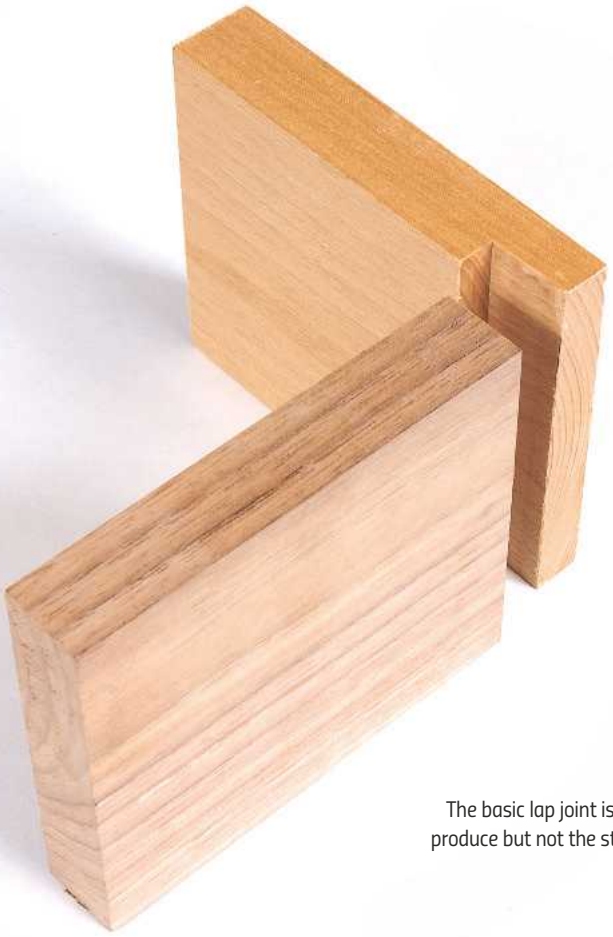
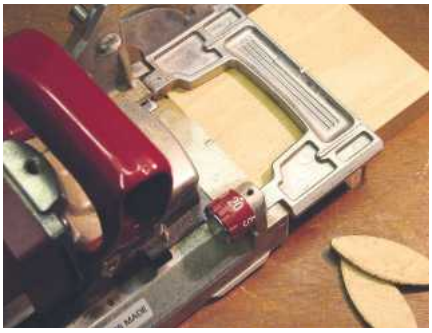


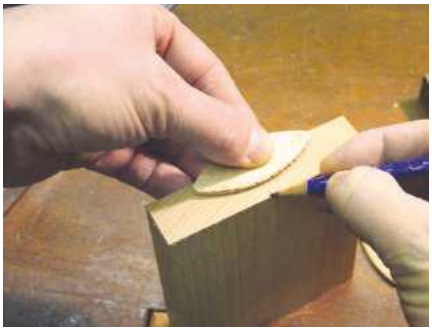
The basic lap joint is easy to produce but not the strongest

BISCUIT JOINT

Improving on a plain butt joint is easy if you have a biscuit jointer, and the results are quite durable, though there's a minimum limit to the size of stock that you can join with biscuits.



Biscuit joints are quick and efficient to make



Marking the centre point for the biscuit cut

When it comes to cabinetmaking, creating joints between pieces of solid timber presents more of a challenge than when using man-made materials. The knack, as we've said elsewhere, comes from the need to joint the timber securely enough not only to support the loads that it's asked to carry, but also to resist the forces created by seasonal movement. On the plus side, the work that this involves is offset by both the satisfactions of working with solid timber, and the opportunity to create joints that can be decorative as well as functional. Let's have a look at a handful of the jointing options available to you.

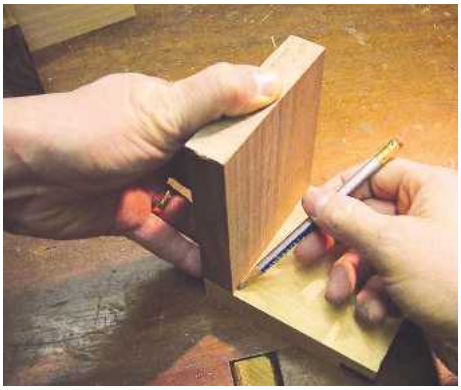
Butt & lap joints

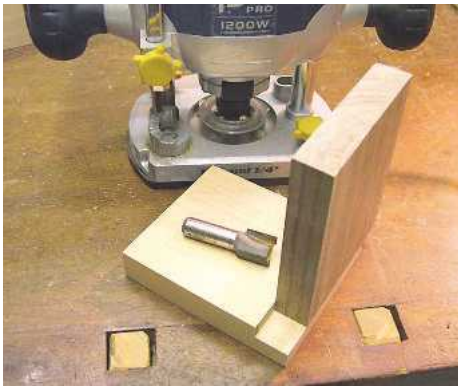
Without the additional support of dowels, screws or biscuits (see opposite), a simple glued butt joint at the corner of a carcass would almost certainly come apart with time, mainly because for glue to work, you need to join long-grain to long-grain, as when edge-jointing boards. Where the glue joint is end-grain to long-grain, as where two boards meet in the corner of a carcass, it is intrinsically weak. The lap joint, meanwhile, is a butt joint by another name, though it has the important advantage of a shoulder, which helps to align the joint during assembly, to create clean and accurate corners, and which will carry loads applied in shear, which is to say perpendicular to it. The lap joint also yields a relatively large gluing area.

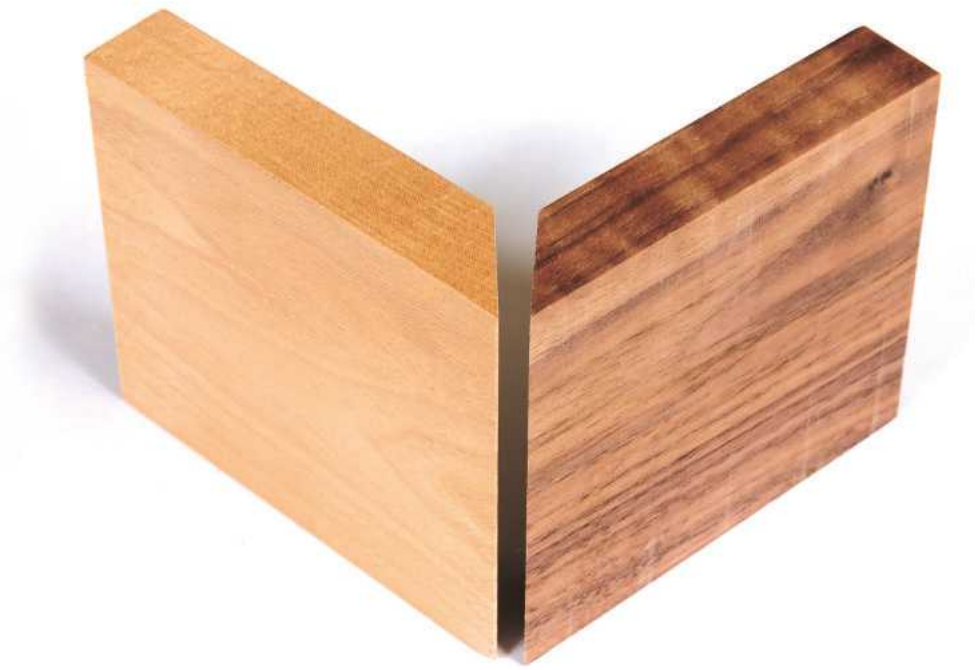
The lap joint is invaluable in joinery when an accurate inner dimension is required – for door linings, say – whose lap jointed corners are braced by the ply boards glued within the frame. In larger carcass work, however, the lap joint's shortcoming is its lack of locking properties, which means that a secondary fixing – a dowel, screw, biscuit, or what have you – is required to supplement the glue.

That said, the lap joint is very simple to make: you need only a square, a ruler, chisels and a tenon saw, and perhaps a marking gauge for ease and extra accuracy.

Start by cutting the shoulder square across the workpiece with a tenon saw and then pare it back with a chisel. Providing that you can measure and saw accurately, the joint should come out square; the challenge comes in paring the notch really flat so that the joint is really tight.







Mitre joint

Though it's really nothing more than a butt joint at a rakish angle, the mitre joint has much more style: it's neat to the point of invisibility, leaving no end-grain on show, and allowing the grain of the timber or the line of a moulding to run around a corner uninterrupted.

There are, however, two unfortunate drawbacks to using this joint. The first is that mitres are notoriously difficult to get absolutely flat at the correct angle, especially if you're working over any length. This can cause problems if the pieces are coming together in a frame because any discrepancy will throw the whole thing out.

Narrower boards can be cut on a mitre saw, but for wide boards the best option is a saw table or a radial arm saw. Either way, the joint will probably require some cleaning up with a plane.

The second drawback is that, when it comes to gluing up, you're trying to join end-grain to end-grain, which is next to useless in terms of strength. The only real solution is to reinforce the mitre, either with a spline all the way down its meeting faces, or with keys cut across the joint. A thoroughly modern way to reinforce the joint, though, would be to cut it using a router and a mitre lock joint cutter, which not only mitres the pieces to be joined but also cuts a tongue & groove in the mating faces.

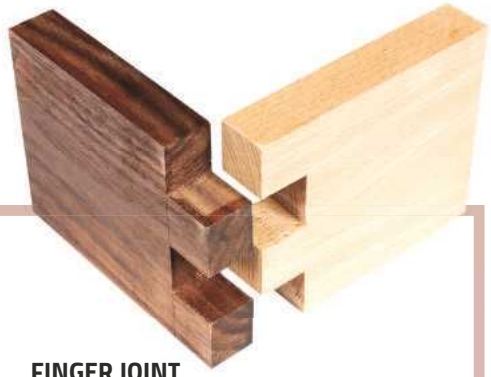
The mitre joint – a butt joint at a rakish angle!

DOWEL JOINT

You can improve on the shortcomings of the butt and lap joints by using dowels. The result is a joint that's not particularly pretty, but which is strong (providing that you use plenty of dowels), and whose relative simplicity means that it's a quick alternative to more complex solutions.

Though we say 'quick', the mating parts still need to be cut square and drilled accurately if it's to work, of course. Accordingly, you'll have the most success if you fit your table saw with a high-quality blade with a minimum of 48 teeth, and you use a dowel jig or Joint Genie to set the dowel holes.

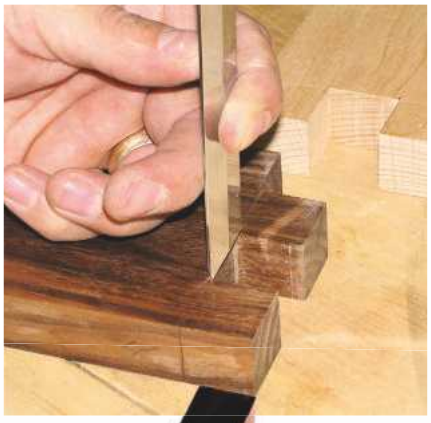
Dowels are stronger than biscuit joints, but trickier. Here the drill must be kept perfectly square



FINGER JOINT

Rather than adding dowels or biscuits to your joint to make it stronger, the finger joint does this for you by providing a large gluing area with plenty of long-grain contact.

Some would say, of course, that it's the poor man's dovetail, and whether or not that's true, they do involve quite a lot of work to cut by hand, and require a good degree of accuracy if they're to look good – something with which jigs and routers can help. Even then, some detractors would say that the finger joint still lacks the appeal of a dovetail's pins and tails.



Bare-faced housing

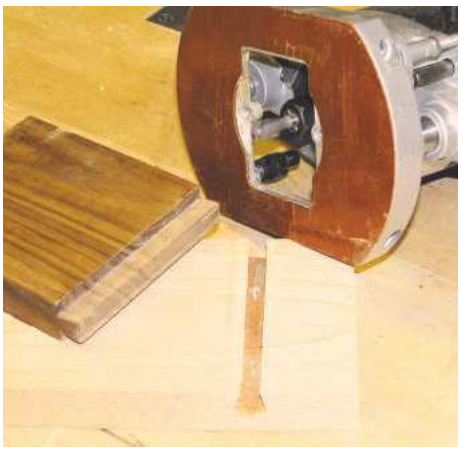
A lap joint, of course, is essentially half a housing joint, of which species the bare-faced housing joint shown here is only one example.

While the gluing area doesn't offer any long-grain-to-long-grain contact, the two shoulders of the housing provide a solid location for the adjoining piece in terms of its resistance to shear loading, though the weak link then becomes the short-grain. Once again, however, because the housing joint has no interlocking properties, it is weak in tension – the sort of force that would pull a shelf out of its housing in a carcass side, for example.

The bare-faced housing joint is a straightforward joint to cut, though it requires some initial setting out. Working by hand, all you need is a square, tenon saw, chisels, and a marking gauge; power tools may make things quicker if the number of joints you're making justifies the set-up time. **ww**

THROUGH DOVETAIL

Regarded by many as the king of joints, the dovetail is not only decorative but strong, too. It is, however, a joint that requires both skill and time to make by hand. Otherwise, there are plenty of jigs for machine-cutting this joint, including the Leigh – **www.axminster.co.uk** – and the Incra – **www.incra.com** – dovetail jigs. When well made, the dovetail offers exceptional strength: the wedging action of the tails provides a positive mechanical interlock between the adjoining timbers so that no additional fixings are needed; glue is enough to hold the joint fast. Moreover, to many woodworkers, us included, the dovetail is a thing of beauty.



SLIDING DOVETAIL

The interlocking nature of the sliding dovetail makes this a very strong, self-locking joint. If used to fit shelves into a carcass, it will effectively tie together the sides of furniture and stop them bowing, and by tapering the joint, it can be made to tighten itself as it's assembled. The sliding dovetail does, however, have a literal weak point when used at the corners of a carcass, where the short-grain in the socketed part is vulnerable to strain.

To function, the joint has to be very accurate, which makes working them by hand quite tricky. One approach would be to cut the tail first by knifing the shoulders, and then cutting down the line with a tenon saw, perhaps with a batten cramped in place to stop drift, and then clean up the tail with a chisel.

To trench the sides, meanwhile, a batten would again help to guide the saw while you remove the bulk of the waste before fine-tuning with a chisel. Alternatively, if the batten were angled, you could make an angled cut from the start.

However, this is a joint that's really suited to power tools, especially on wider boards: using a router for the slot, and a router table for the tail will give the required consistency to ensure the joint slides together smoothly. **ww**

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THE PIVOTAL MOMENT

Don't let badly fitted hinges ruin your work, says designer-maker **Chris Tribe**, who reveals his fine furniture maker's technique for us here

Badly fitted hardware can spoil the look of an otherwise well-made piece of furniture. How often have you opened a beautifully made cabinet door and been disappointed to see sloppily fitted hinges or locks? The positioning of hinges can also have an impact on the overall appearance of the piece – if they are set equally into stile and frame they break the elegant line of the door.

Being able to achieve neatly fitting hinges is more important, then, than you might think.

Joiner's methods

Traditionally joiners fit hinges so that the leaves are set equally into both the stile and frame. The recessing helps to support the door on the hinge,

2 Another traditional method is to set the hinge's leaves equally into both stile and frame. Surely there's a 'third way'? Read on...

1 A traditional method is to recess the hinge entirely into the door stile, but the recess has to be chamfered to avoid binding and it has to rely entirely on the screws for support

rather than relying on the screws alone. However the hinges span the join between door and frame, breaking the line of the join (**photo 2**), which probably isn't all that important in joinery.

Another traditional joiner's approach is to recess the hinge entirely into the door stile. This moves the hinge over to give a clean line between door and frame; also, moving the pivot point means the door is less likely to catch with the frame edge on the opening side.

However, the deep hinge recess has to be chamfered to avoid binding, which looks rather untidy and, as it is not recessed in the frame, it is relying entirely on the screws for support (**photo 1**), which isn't ideal.

The following method of fitting hinges gives the best of both worlds and is often seen on fine furniture.

A finer approach

The door should first be planed to fit – a gap of 1 to 1.5mm all round is reasonable. Start by fitting the hinges into the doors and deciding on the position of the hinge; in line with the inside edges of the rails is usually appropriate for the top and bottom hinges. Offer the hinges up in the chosen positions and mark lightly with a pencil (**photo 3**). Lightly square the pencil lines across the door edge and face (**photo 4**). Set a marking gauge to the width of the hinge to the centre of the hinge pin, less 0.5mm (**photo 5**), and gauge between the two pencil lines.

Set the marking gauge to the thickness of the hinge, again less 0.5mm, and mark the thickness between the pencil lines. It is worth using two marking gauges for this operation to avoid having to reset and is insurance against the inaccuracy this can involve. Reposition the hinge and mark by pricking with a scalpel or marking knife (**photo 6**) then square round using a marking knife – accuracy is paramount here.

The position of the hinge should first be marked in pencil to indicate where the gauge line should extend, otherwise you may be left with overshot gauge lines. Some people prefer to use a cutting gauge for this operation as it leaves a cleaner line than an ordinary marking gauge, but you'll need to ensure that the flat edge of the gauge blade is facing out.

Cutting the recess

Next you need to cut the hinge recess; it will slope from the full depth of the gauge line at the front to the thickness of the hinge plate at the back. Using a tenon, dovetail or Japanese saw, make a series of cuts into the waste, being careful not to overshoot (**photo 7**); saw slightly shy of the knife lines. Chop down with a sharp chisel to further break up the waste (**photo 8**) and then pare away. A very sharp chisel gives more control here; it is important not to overshoot and cut away the back of the recess. Breaking up the waste with saw and chisel assists with this and holding the chisel between forefinger and thumb with the forefinger against the wood, as illustrated, gives fine control. Do not try to chisel directly to the bottom gauge line: creep up on it and only engage the chisel with the line when there is the merest smidgeon to remove (**photo 9**).

3 Place the hinges in position and lightly mark out using a pencil...

4 ... then, again lightly, square the pencil lines across the door edge and face

5 Setting a marking gauge to the width of the hinge to the centre of the hinge pin, gauge between the pencil lines

7 Make a series of cuts into the waste using a saw, sawing slightly shy of the knife lines

8 Break up the waste with a sharp chisel and then pare away

6 Repositioning the hinge, prick with a scalpel or marking knife then mark around

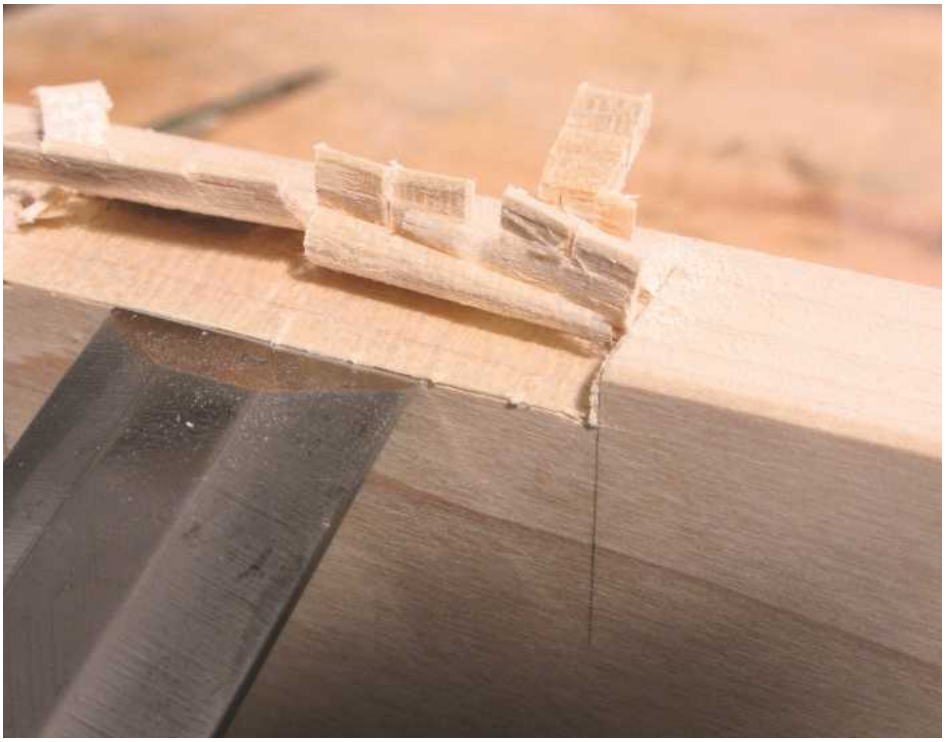
Similarly, with the line at the back of the recess, pare up to it then turn the chisel and locate it in the gauge line and chop down only when there is a small amount of waste left (**photo 10**). Finally, locate the chisel in the knife lines at either end and remove the sliver left by the saw (**photo 11**).

This creeping up and only cutting to the line when there is just a sliver left is a basic rule of all paring operations; if you try to pare away large pieces, there is a danger that the slope of the top of the chisel will push it beyond the gauge line.

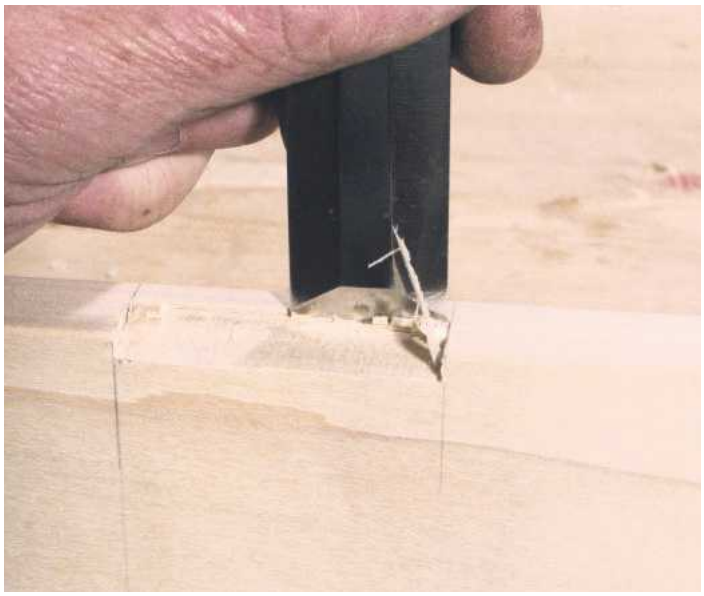
Perfect fit

You should now have a clean accurate recess for the hinge flap in the door edge. Offer up the hinge and carefully trim the edges if it does not fit. Check particularly the seating of the edge of the hinge flap against the back of the recess. If all is well, secure the hinge with one screw. Positioning the screw is critical as if it is not central, the hinge can be pushed away from the back edge of the recess. Use an awl or point to make the centre of the hole, then pilot drill. Alternatively, use a self-centring drill.

The door can now be offered up to the frame with the flaps open and the hinge positions marked. It has to be lifted so that there is an equal gap at the top and bottom of the door. A steel rule works about right if the gap is 1mm. Mark the hinge positions on the edge of the frame using a scalpel or marking knife (**photo 12**). Lightly square the marks across the frame edge with a pencil (**photo 13**), then mark the width of the recess between the pencil lines



9 With paring out the recess, creeping up on the bottom gauge line is the best approach



10 Take the same approach with the line at the back of the recess, chopping down only when a smidgeon remains

11 The last task is to locate the chisel in the knife lines and remove the sliver left by the saw

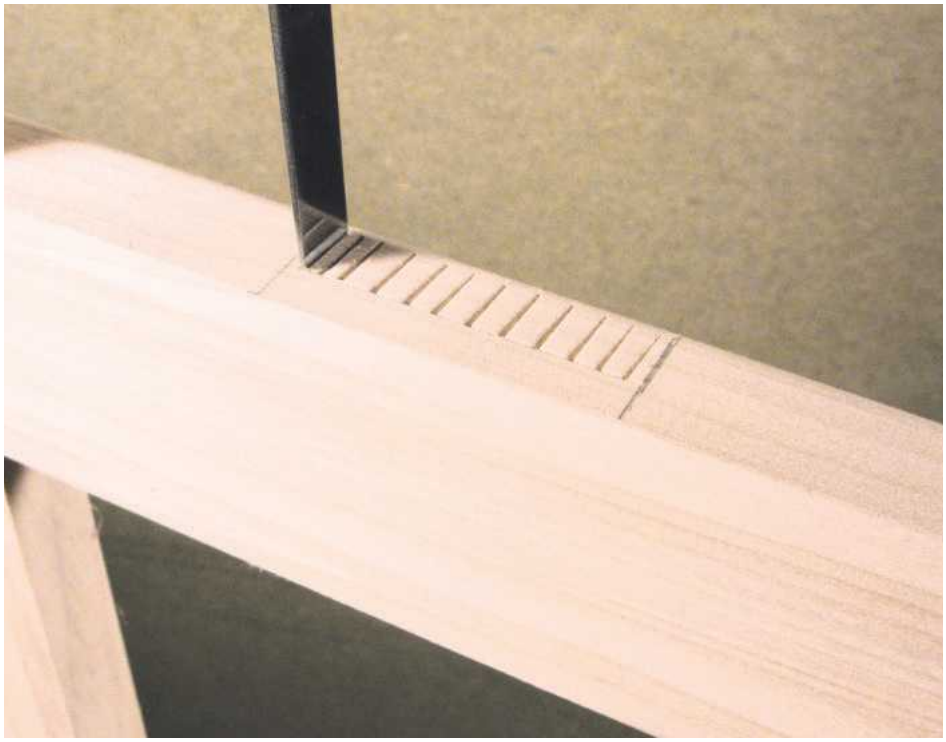
with the marking gauge as it was set for the door recess (**photo 14**). You can then square across the previously marked hinge positions with a scalpel or marking knife.

The recess in the frame will taper from nothing at the front to the thickness of the flap at the back. The waste should first be chopped vertically with the edge of the chisel just touching the gauge line, stopping just short of the knife lines (**photo 15**). Then pare at an angle stopping just short of the gauge line to create the sloping from front to back (**photo 16**). When you have pared to the flap thickness, turn the chisel vertically and carefully chop down the back line. Chopping the slivers from the end knife lines completes the recess (**photo 17**) and the hinge can be checked for fit (**photo 18**).

12 Use a scalpel or marking knife to mark the hinge positions on the edge of the frame

13 Lightly square the marks across the frame using a pencil...

14 ... and then mark the width of the recess between the pencil lines with the marking gauge



15 Chop the waste out vertically with the edge of the chisel just touching the gauge line

Screwing together

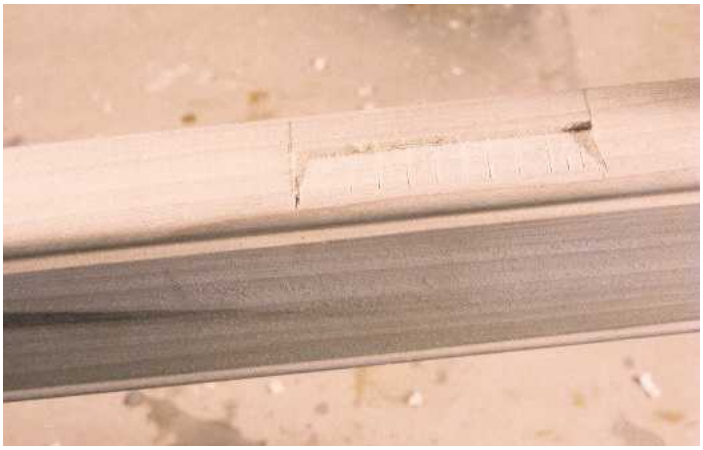
The door can now be offered up to check for fit. If there is any problem, think carefully before you ease either of the recesses – try to ensure that the position of the door is not changed vertically so the gap top and bottom is kept equal.

Secure the hinges with, again, one screw per flap and check the position and opening of the door. Particularly ensure the gap is equal all round and that it closes into position equally top and bottom on the opening side: if the door or frame are slightly twisted this may be an issue. You can try a bit of limited correction by recessing further back the hinge diagonally opposite the corner that is inset.

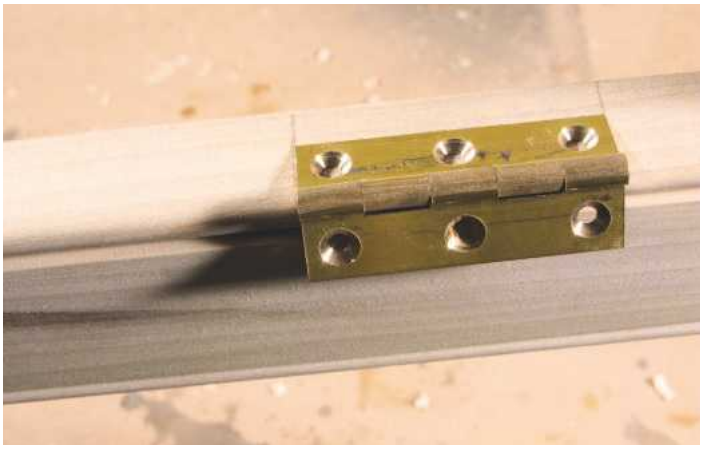
When you are happy with the door position, fit the rest of the screws. Lining up the position of the screw slots is a nice touch. The reason why the hinges are secured with only one screw initially is to allow the later screws to be used for final positioning.

The hinge should be sitting in the stile of the door and not breaking up the line of the door. In the example the hinge could have been recessed into the frame bead, but I think it looks better if all the vertical lines are uninterrupted (**photo 19**). **ww**

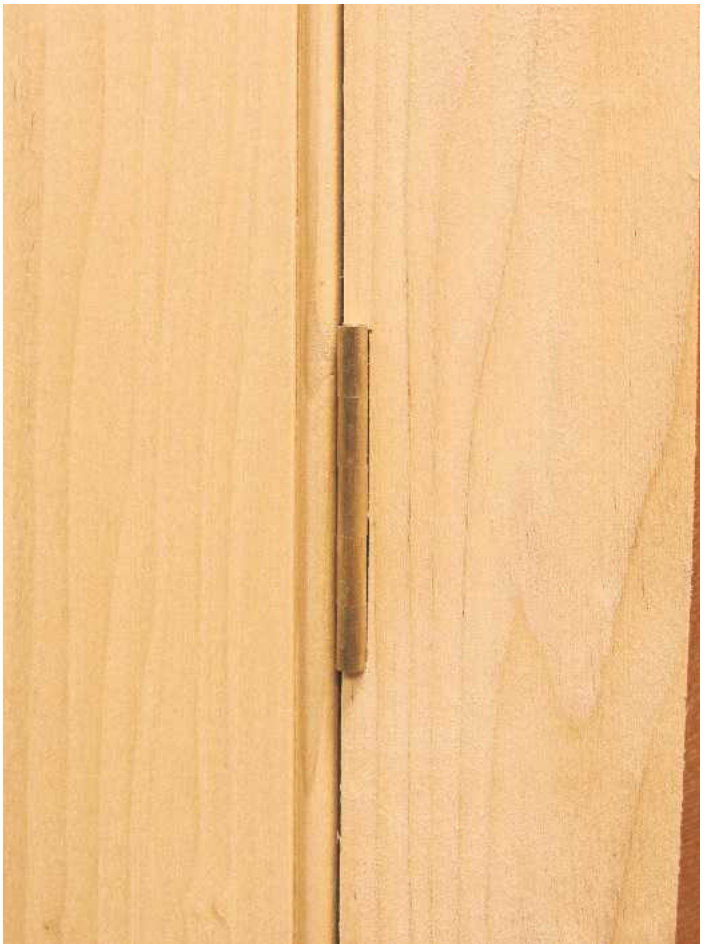
16 Pare at an angle, stopping just short of the gauge line to create the sloping from front to back



17 Complete the recess by chopping the slivers from the end knife lines



18 Check the hinge for fit

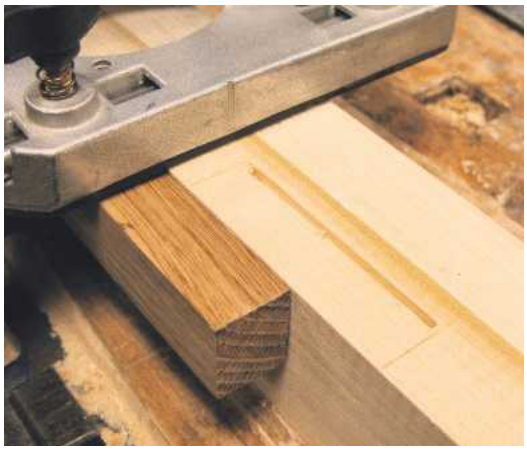


19 The hinge could have been recessed into the frame bead, but here the vertical lines are uninterrupted

ROUTER SHORTCUT

One shortcut for those who like using machines is to use a router for cutting the back line of the recess. Initially set a gauge to the width of the flap as described earlier and on a piece of waste mark the recess width. Set the fence on a trimming router with, say, a 3mm cutter so that the cutter just kisses the gauge line. Set the depth to the thickness of the flap; this can be done by inserting the flap into the depth stop and dropping the stop onto it (**photo 20**). Now use the router to cut a groove at the back of the recess – this should give a good clean line (**photo 21**), especially if a packing piece is clamped to the back of the door to stabilise the router. Give it a go and see how you get on!

20 Set the depth to the thickness of the flap by inserting the flap into the depth stop



21 Rout out a groove at the back of the recess, leaving a good clean line

How do I choose screws?

With a view to helping you choose the right kit for the job, here **Andy King** talks screw heads, threads, lengths and gauges

While we would all like to be able to turn out perfectly fitting joints, even the highest end of woodwork has to rely on mechanical fixings in some areas.

Slotted screws have been commonplace since the 18th century, with the American Square-drive Robertson being launched at the start of the 20th century and the Phillips around 1940.

In the UK, the Pozidriv screw is the most commonly used because they can be run in fast by a battery-operated tool. They are also safer because the driver head is less likely to slip or come out, even if it isn't engaged at 90°.

In Europe you often come across Torx screws, often on fittings, while in the USA and on cheap screws supplied with cheap fittings from the Far East, the Phillips head is favoured.

Thread design

So while for the majority of woodscrews just three different heads will do the job, thread design is much more complex and we are inundated with screws from different manufacturers – for chipboard, decking, flooring and so on, sporting all sorts of performance claims.

Hardened screws stand up to the torque exerted by a battery tool, and some of these designs can be driven in without the need for pilot holes. The higher-quality brands, like Spax, Fischer, Reisser and Screwfix's own Turbo screws, offer coatings which aid driving, increase durability and allow plasterboard to be fixed, and they come in a variety of finishes to mimic brass, chrome or satin.

Size matters

The best technique is for a thinner piece to be screwed to the thicker so the thread has more bite, but how long a screw do you need to choose for the job?

Depending on the work thickness, for construction work a good rule of thumb is double the screw length at least, so a 25mm-thick piece screwed to a 50mm-thick piece would be at least a 50mm screw, but closer to 60 or 65mm would be better.

It's almost the one third to two thirds ratio we use in mortise and tenons: with one third going through the work to be held, two thirds securing into the grounds in construction jobs, the result will be a very strong connection.

1 This screw has a self-cutting drill point to allow it to drive close to an edge without a pilot hole, but without splitting the timber

2 The ripples and ridges on this screw again offer cutting clearance for fast driving and reducing friction

3 The ridges on the underside of this countersink head are designed to cut the countersink into the work rather than crush the fibres

Screw gauges

Constructional work is usually based on 10, 12 and 14 gauge (or around 5, 5.5, 6, 6.5mm) while smaller gauges are for furniture and smaller stuff where there is less pull on the head. In normal woodworking a range from 3 to 6mm or 6 to 12 gauge is normal, but in furniture making smaller gauges for finer fittings are commonplace.

Screws for fittings

Most fittings are supplied with the correct screws, but what if they're not? What would be a good length of screw for a set of hinges, for example? A good average on joinery, such as internal doors, is around 32 to 35mm screws on smaller hinges (which will be 75mm hinges for internal doors) – but often an odd-size gauge on older hinges, a 7 gauge. Modern hinges usually take 3.5mm, about an 8 gauge.

External doors are similar, maybe up to 38mm depending on weight, so a 4in hinge would require 10 to 12 gauge screws.

You have to be sure the countersink sits flush, but you can get away with it sitting slightly below, so a slightly smaller screw can be OK, but too big and you get hinge bind as the heads can clash.

Length is fine as long as all the thread goes into the component, only a few millimetres holding against each leaf, but too long a screw into the frame/lining side can drive through the back and into the brickwork, stripping the threads. Work on a slightly shorter screw if it's a lining: 25 to 32mm is about right.

Most other fittings fix to predetermined thicknessed components, so the screws have to be in enough for good thread bite but without poking through.

Fittings for drawer locks, for example, will be let into around 20 to 25mm stock, but with the lock body flush, so a screw of around 15mm will be perfect. With long-grain and end-grain fixings, such as knife hinges, a shorter screw will bite well into the long-grain but not the end-grain. Because it can't project through a face, you could choose a longer screw for better bite.

The choice grows

In conclusion, screw technology has moved on massively over the years. In many cases you can get screws to drive and hold directly without the need for pilot holes, or in the case of the traditional woodscrew, additional lubrication of tallow.

Even so, although I don't like them much for general use, a slotted screw has a class of its own in the right situation! **ww**

SPECIALIST SCREWS

Roundheads

Roundheads were always common on black-finished fittings, originally known as 'black japanned'. They are used for gate furniture and the like. BZP (bright zinc plated), etc. are available in roundheads, but the black japanned ones are becoming harder to track down

Domed (raised) head

Raised or domed-head screws were again commonplace for a classier look, but are now normally reserved for door handles and the like

Mirror screws

Mirror screws comprise a standard screw head hidden by a screw-in dome

Stainless, brass & bronze

Certain timbers or situations call for different screw materials. Stainless, brass or bronze are commonplace in marine work as they are more durable in wet and salt water conditions, but also prove valuable in timbers with excessive tannin, such as oak where it will corrode a steel fastening and also stain the timber, and of course, external work

SCREWS: ANCIENT AND MODERN

Slotted screws

Don't discount the old-fashioned slotted screw for higher-class work where the heads are seen, either as part of the securing of components or to hold fittings. 'Soldiered' (aligned) heads on slotted screws look far superior, and a restoration or repair will never look right with a 20th century fixing to hold it.

KTX screws

If I have a favourite, it has to be Concept Distribution's KTX screws – **www.conceptdistribution.co.uk**. This is a clever amalgamation of the Pozidriv, Phillips and Robertson heads, so you have a choice of four different drivers to put them in, which makes life easy if you don't want to carry loads of tools for different screws.

Concept screws are a clever design, capable of being driven with their own 'KTX' driver or with a Pozi, Phillips or Robertson (square) driver

The armchair versions of the Sussex Chair are more robust than the standard version. This type is actually known as the 'Rossetti chair' – designed with collaborator Dante Gabrielle Rossetti – and is currently on display in the V&A's British Galleries. *Photograph copyright V&A Images/Victoria and Albert Museum, London*

Masses against the classes

William Morris' Sussex Chairs brought mass-produced style and quality to the emerging middle classes, as **Mark Gould** shows here

It was arguably the first piece of mass-produced furniture in the United Kingdom that allowed the burgeoning middle classes to get their hands – or, more accurately, their posteriors – on the sort of quality that was reserved for the social elite.

William Morris' range of Sussex Chairs from the 1860s truly deserves the label of a design icon. Copied or adapted by almost all major furniture makers, including Heals, it was classically elegant, robust, easy to make and fairly straightforward to repair – many are still in use today for this reason. They sell for anything between £800 and £1,500 for a really good all-original example.

Helen Elleston is the curator of the William Morris Museum, which is in the basement of Morris' fabulous house on the banks of the Thames at Hammersmith. Sitting at an original Morris and Co table surrounded by a dozen Sussex Chairs, she explains that it represents an iconic piece of English furniture.

She says: "The whole design and idea behind it sums up the Arts and Crafts movement because Morris found the idea of the Sussex chair when he was out walking in the English countryside – in Sussex. A local man – the name of the maker hasn't been recorded – was making chairs for sale by the side of the road. He was using simple woodworking techniques, simple tools, and rushes for the seat base." Elleston says Morris liked the elegance and simplicity, which sums up his design ethos. "He was against the mechanisation and mass production of the Industrial Revolution as it was churning out things en masse and there were children working in the factories and mills who had an appalling quality of life."

Reuniting design & craft

Morris was happy to use machines that took the drudgery out of the work for employees, says Elleston; repetitive tasks like turning were therefore automated. A Morris contemporary, the polymath, social thinker and philanthropist John Ruskin, said there had been a division of labour between the maker and the designer. Morris wanted to reunite the two in the same spirit that many modern designer-makers approach their craft today. "He wanted to revive the mediaeval guild system where there was a love of production and design, which went hand in hand with making," says Elleston. "He famously said 'have nothing in your house that you do not know to be useful, or believe to be beautiful.'"

The Morris and Co catalogue shows they were first offered for sale at seven shillings (35p), which in the 1870s and 1880s was a relatively low price. The carver chair was 10/6 (52.5p). The corner chair was also 10/6 while the three-seater settee was 35 shillings (£1.75).

Morris' friend and collaborator the artist Dante Gabriel Rossetti designed the lyre or fiddle back version aptly named the 'Rossetti Chair', which sold for 16 and six (82.5p). Again, this is an adaptation of an earlier provincial French design that was in common use in the early 19th century.

They came in plain or ebonised oak and some were a little taller, or with different styles on the top of the chair backs, while some of the spindles had different designs. On some of the chairs in the Museum the rush seat (sea grass was used on later models) is screwed into the top of the frame. They were initially made at the Morris and Co workshop in Merton Abbey, Wimbledon, and sold at the showrooms in London's Oxford Street.

Mass production

Max Donnelly, the curator of furniture at the Victoria and Albert Museum, says that while Morris' inspiration came from a local artisan, he was not necessarily what we would think of as a bodger – that is a green woodworker who uses a foot-powered pole-lathe to turn legs and spindles. "In *The Life of William Morris* Mackail says that 'It was not his own invention, but was copied with trifling improvements from an old chair of village manufacture picked up in Sussex'," says Donnelly.

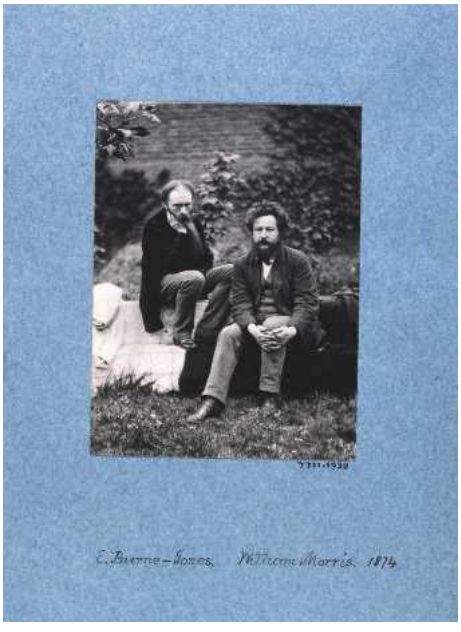
William Morris' Sussex Chair was based on an original by an unknown Sussex craftsman

The rush seat can be a bit of struggle to re-rush, but many of the chairs have survived and are still in use

This Sussex Chair variant is currently on loan from the V&A to the Musee D'Orsay in Paris for an exhibition
Photograph copyright V&A Images/Victoria and Albert Museum, London

"Similar types of chairs, with imitation bamboo frames and rush seats, were fashionable between 1790 and 1820."

Donnelly says that lathes, either foot-operated or latterly machine-powered, were used to turn the spindles, which fitted into holes augured into the chair backs. But the majority of the work was done with hand tools – chisels, saws, planes and augers.



This 1874 picture by Frederick Hollyer features Sir Edward Burne-Jones and William Morris
Photograph copyright V&A Images/ Victoria and Albert Museum, London

Donnelly believes that the chair was a genuine early example of mass production: "We must be talking thousands being produced from the 1860s to the 1920s," he says. "Morris wrote that 'they are made four or five dozen at a time.'"

However, he feels that the production line approach meant little scope for artistic interpretation, which seems to be at odds with Morris' idea of returning to some golden Medieval past of designer-makers.

"I'm not sure how I would describe the skill level of the craftsman other than adequately trained," says Donnelly. "There was nothing in the way of interpretation or creativity called on by those who made them."

Imitation or originality

The chair soon became a must-have for the thinking aristocrat. Rosalind Howard, the future Countess of Carlisle, kept detailed annual account books, which carefully recorded her purchases. In 1882 she bought 36 Sussex chairs at seven shillings each for Castle Howard, also 12 Sussex round-seated at 10/6 and six Sussex armchairs at 9/9.

Morris, the artist Sir Edward Burne-Jones and many others furnished their own homes with these chairs, so that they gained kudos among those who wished to signal their artistic aspirations through their furnishings.

"For example, artist Helen Allingham owned one," says Donnelly, "as well as institutions such as the Fitzwilliam Museum and Newnham College in Cambridge. As Mackail noted: 'With or without modification it has been taken up by all the modern furniture manufacturers, and is in almost universal use.'"

Arts and Crafts expert Tony Geering who runs Puritan Values, an antique dealership in Southwold, Suffolk, confirms the importance of the chair. "Of all the specific minor improvements in common household objects due to Morris, the rush-bottomed Sussex Chair perhaps takes first place," he says, adding that if imitation is the sincerest form of flattery, then Morris was indeed praised. "Plagiarism, then as now, was rife and you had all of the companies around High Wycombe making versions of the chair. In all there might have been 1,000 furniture makers in the UK at the time and 900 were making exact copies."

Whether deliberately or not, the Morris Chair range was pivotal in opening up Morris style to the wider world. "Initially he was selling to the affluent high society and wealthy patrons," Geering says, "who were in the end the only people who could afford the incredible skill of Morris, his enormous energy and equally skilled friends and collaborators."

But with the encouragement of another collaborator, the painter Ford Madox Brown, he introduced the relatively mass-produced Sussex range exactly as the Industrial Revolution was bringing wealth, and aspiration, to the middle classes.

Well-balanced design

Geering says he has sold around 1,000 Sussex chairs in 20 years of dealing. He reckons there are well over 10,000 still in circulation across the world, which is very much a tribute to the original design.

"The design is so well balanced that they are

Upholstery tended to be either brown or green leather, although the Morris originals came in his floral acanthus design

The backs and spindles were made in a variety of styles

really hardy. The fact they are lightweight means that they can be thrown around and they sort of skip across the floor. If they were heavier they would suffer more damage. The rush seat also adds to the strength as it pulls to the centre from all four sides," Geering explains. "And the armchairs are even stronger as the arms go down through the seat base to the side stretchers, and that doubles the strength."

He says the Sussex Chairs range was hand turned and bent with probably just water, not steam, to give the slight curve in the arms. The arms boasted their own dowelling system knocked together with little animal glue – they didn't use too much.

"The simple construction means they are easy to restore," says Geering. "You can knock them apart, re-glue, re-rush, clamp them together, wax and finish and they are ready for another 100 years." Restoring the armchairs is trickier, however: "When they have to be re-rushed, the arms and the two stretchers just below it have to be removed from the upper back leg," Geering explains. "Once the rusher has re-laid the rush, only then can they be inserted and glued back together. Believe me there is an art to getting them back into place because the tolerances are so close, which is why they are a very strong armchair indeed and also why so many have survived."

"I have just bought 16 Sussex Chairs. The armchair will go for £850 but if you have one that has a really good patina, the right amount of wear on the arms, the original rush seat, you are looking at £1,500; if it was owned by William Morris then make that £50,000!" **WW**

Photograph copyright V&A Images/Victoria and Albert Museum, London

The Morris Chair

Just as famous, just as copied and just as influential as the Sussex Chair –arguably more so – is the Morris Chair. Of course, the design wasn't a Morris and Co original – it was adapted from an original by Ephraim Coleman, coincidentally another Sussex designer-maker.

It's a chunky but still attractive design in square section light oak with a reclining hinged back set between two high un-upholstered arms. The upholstery comes in either brown or green leather although the Morris originals came in heavily decorated floral acanthus design fabric and had spindle-turned supports for the arms. First made in around 1866, it can be seen in period pictures of Morris' home.

The chair was and still is very popular in the USA and is still made by the L&JG Stickley company in New York. In fact the US loved the chair so much that it made its mark on popular culture featuring in a Marilyn Monroe cover of the Irving Berlin song *You'd Be Surprised:* "At a party/Or at a ball/I've got to admit/ He's nothing at all/But in a Morris Chair/ You'd be surprised," Marilyn shimmers.

Berlin must have had a soft spot for a Morris himself as he namechecks it again in the 1921 song *All By Myself*. It also featured in *My Honey's Lovin' Arms* in 1922, a song by Joseph Meyer: "A cozy Morris Chair/Oh what a happy pair", or, as Barbra Streisand sang in her recording of the song: "A cozy Morris Chair/What kind of chair is a Morris Chair?"

Finally, it gets a mention in *Rockin' thru the Rockies*, a comedy short by the Three Stooges released in 1940, when Curly claims: "I once shot a Morris Chair out from under Sitting Bull."

Treat one of these originals with a little bit more respect than Curly and an early Stickley version is on sale in the US at $11,200 – around £8,500.

NEXT MONTH

Coming up in the next issue...

WW October on sale 25 August

AUSTRALIAN BIG RIG BUILD

Keen toy and model maker Derek Lane jumped at the chance of building this scale model of an Australian 1988 Series II Mack Superliner, and what a great job he did!

BOARD GAMES MINI SERIES PART 1

Peter Dunsmore set about making this well-known game a little more attractive by incorporating some fancy woodwork and lovely American cherry and walnut to create a contrasting effect

NEW DESIGNERS 2017

The Woodworker visited the New Designers show in London where plenty of top quality design and making was on show. Here's Rowena Edwards from the Building Crafts College with her wheeled drinks trolley, winner of the MADE.COM Award for Stand Out Design

PLUS ▪ Gary Cook on vintage tool sharpening ▪ Tambour bread bin ▪ ABC of dovetailing ▪ Bunk bed build ▪ From tree to bench – part 2

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Briwax Beeswax and Liming Wax

While natural beeswax will protect surfaces it's applied to, liming wax can be used to create a traditional finish, as well as a dramatic effect on stained timber

Specification
Beeswax
Price: £10.90 per 250ml
Web: www.briwax.co.uk

RATING: 5 out of 5

Liming wax
Price: £12.85 per 220ml
Web: www.briwax.co.uk

RATING: 5 out of 5

Natural Creamed Beeswax

There's nothing quite like the smell of beeswax as you rub it into bare timber. For projects that don't need a particularly durable finish a traditional wax polish is perfect, though you may want to use a sealer first. As long as you've prepared surfaces well, you're almost guaranteed excellent results.
As well as giving a beautiful finish to hardwoods, beeswax can be repaired relatively easily and it's ideal for reviving existing furniture that has become grubby or dull. In fact, you'll probably find more Briwax products in use by antique restorers than any other. This creamed beeswax also contains linseed oils and turpentine and is great to use. And in case you didn't know, Briwax is now part of the ever-expanding Rustins group.

Liming Wax

Decorative wood finishes come and go, though liming is perhaps one of the more enduring effects, especially for ring-porous timbers such as oak and ash. Like beeswax, liming paste wax is easy to apply, though results are quite different, producing a white grained finish. Although wood can be sealed first, you'll get better results using it directly on bare wood. For a bolder effect it's worth opening up the grain first with a wire brush, although the product only needs to be applied sparingly. I tried this Briwax product on both bare and oiled veneered oak. Creating a lovely traditional finish, I reckon the effect would be quite dramatic on stained timber. Worth experimenting with, I think. **PD**

Black & Decker Multievo 18V combi drill

Despite the Multievo having plenty of guts and performing well under test, it's quite highly priced given the fact it is essentially a DIY tool

This model from Black & Decker is more powerful than its predecessor at 18V and comes with two 1.5Ah Li-ion batteries and charger. Unlike the 14.4V model, the Multievo is supplied with just the drill/driver head, and a range of eight additional heads as options. As well as a sander and impact driver, there's a trim saw, jigsaw, inflator, hedge trimmer (!) and even a router attachment. Who knows how effective this last attachment is, but with a top speed of 1,550rpm it does seem too slow for most router bits.

The Multievo is bulky, weighing 1.65kg. Measuring 260mm from front to back, it may not be ideal when working in confined spaces such as cupboards. It's comfortable to grip, with plenty of rubber around the handle. With battery fitted it's stable enough to sit on the bench top without toppling over.

Surprisingly, there's a 10mm chuck fitted rather than a 13mm version, which you'd normally expect on an 18V combi. At least there's a hammer action function, selected by twisting the 11-position torque collar. This is clearly marked and not too stiff to turn.

Controls

Both variable-speed trigger and forward/reverse button are easy to reach, while the speed slider switch up top is nicely chunky. Speed range is from 0 to 480rpm and 1,550rpm, while hammer action delivers up to 24,000 blows per minute. Maximum torque is 26Nm and a double-ended screwdriver bit is stored at the base of the handle.

You remove the chuck and gearbox head by simply depressing a locking button on top of the tool and sliding it off. Easy, and it just clicks back into place again when changing heads. Because it's detachable there's no LED worklight, which is a pity. Although not an essential feature, these days we're used to having lights on cordless screwdrivers. Without, it can make drilling or driving screws into gloomy corners a tad more frustrating.

The battery charger cable is not as durable as it could be, a common problem with 12V power supplies, though if you leave the charger in situ this shouldn't be too much trouble. You simply slide the battery into the charging dock and plug in. Charge time is pretty slow, taking between three and five hours – mine took four hours the first time. A flashing green LED indicates charge status, becoming solid green when fully charged and ready for use.

Unlike a previous Evo tool I tested, the Multievo comes without the attachments. Each of these will set you back between about £30 and £40 a time. That's no bad thing, as you can buy just the drill initially before venturing into the world of accessories, which may or may not be worth purchasing.

In summary

The Multievo has plenty of guts, whether drilling into timber with large-diameter flatbits or using the hammer action in masonry. For what is essentially a DIY tool, though, it's very pricey when you consider the cost of some 18V professional combi drills. The attraction, of course, is the potential of having interchangeable heads, so value for money really depends on how effective these are. **PD**

Specification

Power source: Cordless
Power rating: 18V
Plug voltage: 230V
Weight: 1.65kg
Battery capacity: 1.5
Variable-speed: Yes
Hammer action: Up to 24,000bpm
Drilling speed: 0-1,550rpm
Charge time: 3-5 hours

Price: £149.99
Web: www.blackanddecker.co.uk

PROS

- Great range of optional attachments, although these do have to be purchased separately
- Ease of use and good performance
- Suitable for a wide range of DIY jobs

CONS

- Charger is quite slow
- Drill body is bulky
- Lack of worklight

RATING: 4.5 out of 5

The drill's 18V cells are powered by a 1.5Ah Li-ion battery, and you have two of these with a charger

The chuck and gearbox are very easily unlocked and clicked back for head changing


The torque collar has 11 positions


The control buttons are sensibly placed...


... and the speed slider switch is a good size

Connecting with Bosch

We look at the latest innovation from Bosch, leading the way in terms of embracing new technology

Most of us are comfortable with the concept of remote control, and increasingly more devices around the home (like printers, etc.) can be interacted with via a mobile phone app using Bluetooth or Wi-Fi. While it may seem unlikely to most, the thought of having an actual power tool that you can remotely control from your mobile phone is, in fact, with us at this very moment. In a clear example of 'future now', those tireless innovators over at Bosch have managed to do just that. Leaders in many fields, they've taken another electronic step forwards and have introduced half a dozen new versions of their construction oriented power tools; but fitted them out with the necessary circuitry to enable their wireless connection to a standard smartphone or similar device.

New smart range

The Woodworker recently had a look at a couple of items from this new smart range: the 18V combi drill, and one of the laser markers (red). On the face of it they are just two more power tools from the extensive Bosch range, but the key difference here is that there is now an additional layer of connectivity built in. To access this wireless advantage, the user must first download the Bosch Toolbox app (short for application) to their smart phone, followed by an additional download for the relevant power tool concerned. I can see a time when there'll just be the one app that does it all, but it's early days yet for this technology, and still much to learn.

When it comes to appreciating this fledgling technology, it helps to understand the European way of working. There it's not uncommon for small- to medium-sized building firms to supply a large part of the kit and power tools for their workers, and not just leave them to their own devices like we do here in the UK. With the Toolbox app running, it's a straightforward job for the foreman to keep an eye on a number of drills, for example, and to see how they're faring and where they physically are on site (currently within the short range of the Bluetooth Wi-Fi signal).

Specification

Bosch GSB 18V-60C 18V combi drill

Torque – max: 60/31Nm
No-load speed: 0-600/0–1,900rpm
Max impact rate: 28,500bpm
Chuck capacity – min/max: 1.5/13mm
Charging time – approx: 65 mins
Torque settings: 20+1
Battery voltage: 18V
Drill capacity – wood: 38mm
Drill capacity – steel: 13mm
Drill capacity – masonry: 13mm

Typical price: From £137 (body only)
Web: www.bosch-pt.com

Bosch GCL 2-50C laser

Power source: 12V (10.8V) battery/4 × AA Alkaline adapter
Laser class & type: Class 2 Red
Working range of visibility: 20m (50m requires additional receiver)
Working range of plumb points: 10m (top & bottom)
Accuracy of laser lines: ±0.3mm/m
Accuracy of plumb points: ±0.7mm/m
Self-levelling range: ±4°
Dust & splashwater protection: IP54
Tripod mount: 6mm

Typical price: £179
Web: www.bosch-pt.com

The battery and electronics for connectivity are housed in the handle of the combi drill

Among other things, the Toolbox app shows the battery to be very flat indeed...

Soon charged, the battery is now showing 'full' and all is good to go

The self-levelling combi line and point laser

It comes with a laser target card for enhanced accuracy

The non-powered RM2 mount can be clipped to a wall or any projection

Connectivity developments

Seen like this, the system provides a way of monitoring an expensive investment, and this on its own is not such a bad thing. Although the connectivity system allows various electronic settings to be changed and stored, where things really start to get interesting is when it's possible to physically control the power tool or device from your phone. One of the first exciting Bosch connectivity developments is the remote control of the levelling laser. With an additional powered frame fitted, it's possible to set the laser up and to view and tweak the line from where you need to be – quite possibly the other side of the room. This sort of thing is ideal for solo working and is, I think, just the tip of a benign technological iceberg.

Whenever a company takes a step into the future like this, the results can never be fully known, and very often there are pay-offs in ways no one could have imagined. This will undoubtedly be the case here, and I await the connected future with considerable interest; we'll bring you more news as it arrives...

THE TOOLS

Bosch GSB 18V-60C 18V combi drill

The Bosch GSB 18V-60C is a rugged example of an 18V combi cordless drill, with a Lithium-ion battery and all of the basic features you'd expect from a quality power tool. All of the controls are sure and simple, and I particularly liked the fade on the LED worklight, which meant it stayed illuminated for seconds after letting go of the trigger (this lag period can be remotely adjusted via the Toolbox connectivity app).

Bosch GCL 2-50C laser

This is a very useful device for all manner of setting out on site, and projects both lines and points (for plumb) in the customary red laser light (there's also a green laser available for increased visibility). Powered by the 12V Li-ion battery (compatible with the rest of the range), it's accurate to 0.3mm. The laser can be sited in its own rotating mount, which can be wall hung or held in place with its powerful magnet. Although the laser can be turned on and off with the phone app, you'll need the extra power mount (RM3) for complete remote control and adjustment from across the room.

In summary

Connectivity – the concept: it's a step into the future, with exciting potential; let's embrace it and watch its progress through the workplace. **MC**

PROS

- Remote control
- Monitoring potential on a larger scale
- A step towards tool tracking

CONS

- Needs technological commitment from user

RATING FOR BOTH:
4.5 out of **5**

There's also a standard 6mm tripod mount for increased versatility

Laser on...

... and off

Stanley FatMax carpenter's hatchet

Why does any woodworker worth his or her salt need an axe? Read on and all will become clear...

Specification
Blade: 90mm
Overall head length: 150mm
Weight: 28oz

Typical price: £25
Web: www.stanleytools.co.uk

PROS
- Excellent dual function
- Solid Antivibe one-piece construction

CONS
- A little too heavy for me
- Needs proper honing

RATING: 4.5 out of 5

There was a time when an axe or hatchet was an essential part of any carpenter's tool kit, and as an apprentice I was taught to use one correctly – they aren't just the wrecking or splitting tool many people believe!

It brought back a lot of fond memories for me once I had honed this one up; it's very well made and takes a good edge. Pricewise, it's also a steal compared to what I paid for a Stanley Steelmaster axe back in 1978! This is one that should certainly stand the test of time.

Shaping & ripping

So why own one? An axe can be used for a lot of shaping work and for ripping out old fixtures. It once reigned supreme for chopping grounds or plugs into shape for driving into brickwork, but power tools have put the humble hatchet on the backburner – a pity as it's still a great tool. One of the FatMax range, its tuning fork-style Antivibe handle is encased within rubber and there's plenty of meat on the axe head; with 90mm of edge it's capable of removing or splitting big chunks with ease, but although the tool has a good edge grind to it, if you want to use it for finer controlled cutting, it will need to be sharpened properly; this is easier to achieve by holding the stone and rubbing it over the tool rather than taking the tool to the stone. The edge is protected by a rubber guard.

Useful hammerhead

It has a cutting head and a useful hammerhead, and a small notch in the blade can be used for removing nails as well,


As supplied the axe will need some work to get the best from it

It's easier to take the stone to the axe for a consistent hone angle


Flip the axe to turn the wire edge back over and repeat using the finer side of the stone


I refined the edge with some Veritas honing compound on a block of wood


Drag the block over both sides of the axe a few times to polish the edge


You should be able to pop a few hairs from your arm if you've got it in the right area, but obviously be careful when doing this!

Cutting a twisted plug is a classic use of an axe, chopping opposing corners

The finish from a well honed axe should be clean

The resulting plug should have a propeller-style twist when viewed on end

but this isn't as efficient as a decent adze eye hammer. The hatchet is stated as being 28oz, based on the head weight, but actually tips the scales at 35.5oz, and I found it a tad heavy, although altering my grip further up the handle gave more control for finer cuts.

In summary

I used it to scribe a piece of bullnose architrave as well as the ubiquitous twisted plug for wall grounds, and found it allowed for deft use. An axe may not be at the top of everyone's wants list, but it's still a very versatile tool in the right hands and if you are a hand tool aficionado, certainly one to become familiar with. So go on, give it a try and see what you've been missing out on! **AK**

Scribing work such as this architrave is another classic use for a hatchet

Start from the bottom and work up in a series of small controlled chops

Continue to work up and ease away the waste

Controlling the axe in small chops will allow you to scribe to a line easily

CompacTool six-piece turning set

This set of tools is specially designed for smaller lathes and working in close quarters – ideal for novices, and there's no compromise on build quality

Specification

Tools included: 25mm bowl scraper; 12mm roughing gouge; 12mm skew chisel; 10mm spindle gouge; 10mm bowl gouge; 1.5mm narrow parting tool

Price: £120
Web: www.toolpost.co.uk

PROS

- Ideal for smaller lathes
- Top quality construction

CONS

- You may have to regrind to suit your own purposes
- Deeper bowl cuts can be hard on the wrists

RATING: 4.5 out of 5

In recently testing the Nova Comet II lathe, one thing I found was that turning bowls or anything directly over the beds was a struggle with longer turning tools, as in some instances, the handles prevented me from dropping them far enough to achieve the cut. I also had to remove the tailstock to access the work with the tools more easily, so having recently had a chat with Peter Hemsley, owner of The ToolPost, he informed me of a set of short tools that were specially commissioned from renowned toolmakers Henry Taylor Tools under their Hamlet brand, which sounded like a good solution.

Tools up close

Having a closer look at this set it's immediately evident that these are of excellent quality. The set features short ash handles of around 150mm long including the brass ferrule, along with polished M2 HSS blades, which give the three gouges – roughing, spindle and bowl – an overall length of around 285mm. Slightly shorter than this are the 12mm skew chisel and the 25mm bowl scraper, which are both around 250mm long.

Completing the set is a very thin, almost knife-like parting tool, with a blade just over 1mm-thick and an overall length of 220mm, including the handle, which is ideally suited for finer and smaller pieces.

No compromise

Although shorter, there's no compromise in the blades as each is as chunky and substantial as a standard length chisel, allowing bigger cuts to be made with ease, but it's being able to manoeuvre easily around the work that sets these tools apart.

As with all turning chisels, the manufacturer's idea of optimum bevel or cutting profile and that of the end user may be different, so you may have to tinker to reach your personal preference, but aside from this, putting these chisels to use, I was immediately at home and more confident in making a cut, especially on over the bed or bowl work where, with longer tools, I was finding it difficult to get the cut I wanted.

However, as these are short tools, I found that when making either a substantial cut or working on a deeper bowl, the shorter handle imparts more strain on the holding hand.

This is where the cantilever action of a longer handle reduces the strain but also introduces manoeuvrability issues, so it's a case of compromise and taking finer cuts to keep things on a steady plane.

I also found the shorter length advantageous on between centre work, especially when making pen kits, as I discovered they were ideal for finer close quarter control. The thin parting tool is also an exceptionally useful addition on smaller work for either decorative grooves or general parting work.

I found it perfect when making a pen that needed 3mm of the turned barrel removed to act as a spigot – I had no tool fine enough that was up to the task, until this one came to hand and it worked like a charm.

In summary

As a set, these chisels have plenty going for them, especially if you like working on smaller pieces such as trinket boxes, small platters and bowls, etc. They are a great addition to any turner's kit for such work irrespective of the size of lathe.

Any novice should find they work really well and allow you to address the work correctly, no matter what the project. They've certainly made life easier for me on the Nova since I've had them on test, so it looks like I may well have to invest in a set! **AK**

The short length allows easy access without removing the headstock

Taking deeper cuts can be strenuous on the wrist so a finer cut works best

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"Inside every piece of wood there is a bird waiting to be released"

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Stanley No.5 'before & after' photo courtesy Peter Hemsley – The ToolPost

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07951 130 694 (London)

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Mr. Harold Ward and his light Commer truck with ladders for delivery

In this next part of the series, we join **Stan Clark** as he starts his first day working for Mr. Harold Ward, learning the ropes, meeting his fellow workers, and being assigned the job of tea boy

My first day working for Mr. Harold Ward

On Monday 19 April 1954, my mother was to walk me from our home at Camp Hill down to Mr. Harold Ward's workshop in Church Lane, Bugbrooke, where I would commence my first day of working after leaving school. On arrival, Mr. Ward was working on the large circular saw just inside the workshop, cutting out square lengths of ash that would be later turned into ladder rungs.

This job had been arranged behind my back between my mother and Mr. Ward – I knew nothing about it until the last minute – and besides, what I thought or said was irrelevant, as I had no say in the matter.

Introduction to the workplace

Harold was to take me all around the workplace, introducing me to the other workmen that he employed, as well as giving a talk on safety due to some of the saws and woodworking machinery.

My very first job was to help him carry the ash wood from the stack outside of the shop, and stand it next to him in easy reach, carrying the squares that he was cutting back outside and putting them into stacks to dry out or season. The noise from this large saw took some getting used to as it whined away, and when it was not cutting it had a ringing-sound-cum-whistle, with quite a draught of air coming from it, and when the wood made contact with the blade it would make my ears flutter, and at times it could be very painful – there was no heath and safety in those days.

I was told to keep well away from it at all costs, and was shown how to shut the saw down by tripping the switch, and then by switching it off from the mains by tripping another switch to make it safe.

Tea boy

By this time it was tea break, and Alf Beazley, who made the tea, brandished a large mug full, and I was given a five gallon can with a piece of elm board on the top, which doubled up as a seat for me. I then proceeded to eat some slices of bread, which mother had packed for me. It was my first sitting with all the men whom I was due to work with, and I was looking forward to getting to know them all. During this tea break, everyone sat in Alf's turning shop, as it had a woodburning stove in it to help keep the place warm. Some of the elder men smoked while drinking their tea; others studied the form of the horse racing along with writing out bets. These were collected before lunch time by Mr. Stanton who kept the Five Bells. He'd come around to Alf's window that overlooked an orchard and the back garden of the pub.

The noise and banter from this tea break was broken by Mr. John Scarsbrooke, Mr. Harold Ward's brother-in-law, shouting 'right ho!' as he came back from having his tea break with Mr. Ward's mother. He asked Alf to show me the ropes for the tea making, so I was shown where everything was kept, along with the tea money, which I had to collect every week from the others. One thing that I did like about being tea boy was that, once a week, I'd have to walk to the West End of Bugbrooke to collect the tea and sugar from the small shop.

Clearing shavings

I was then asked to clean all the sawdust out from under the saw bench; this lovely smelling dust had to be taken over next to the brook. He gave me the largest wheelbarrow that I had ever seen to do the job: it was not a heavy task even though the barrow was large. It was more important to carry large quantities of sawdust or shavings over to a very large heap that never stopped burning, only if the field was flooded. After this I had to sort out all the waste wood that Mr. Ward had slung to one side of his saw bench, as some of it was cut into lengths ready to be chopped into sticks. This was bundled up with a machine, then sold as fire lighters. **ww**

NEXT MONTH

Join us next month for more stories from Stan and his colleagues in the ladder making shop.
And if any other readers have a story to tell, we'd be glad to listen. Just write to **editor.ww@mytimemedia.com** and we'll see how we get on

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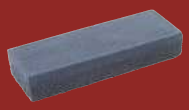

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