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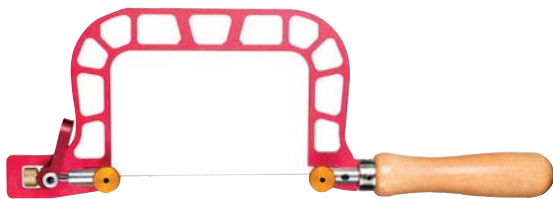
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Welcome to...

...Making

For a lot of us, when it comes to designing our next piece of furniture, delivery and installation will be high on the list of things to consider. The decisions made here are not generally visible to anyone other than the maker or a select few that recognise how hard it was fitting a 36in TV into a matchbox. Good aesthetics are almost a given if the dialogue leading up to a commission has been consistent and thorough. Competent makers have that swan-like calm about them where everything above the waterline is calm and composed while below and out of sight there's a lot of thrashing around going on. Anyone that has an opinion these days, and let's face it that's practically everyone on the planet, is a designer, qualified or not. So it bothers me why so many craftsmen feel the need to undermine their core skill with the prefix designer? In fact if I were a qualified designer I'd be seriously hacked off with all those makers calling themselves designers. I mean it's tough justifying something that's often subjective and hard to quantify at the best of times without every skilled labourer jumping on the band wagon. If you want to know why makers of anything struggle to make a living from their craft it's because they're devaluing the one thing that makes them unique; the ability to make things. What next, the stylist maker?

This issue has a number of articles that champion the maker's cause. For example our main project features Andrew Laphorn's Tripod table in a fusion of bespoke cabinet-making and ingenious batch production techniques. In short, the appropriate level of design you'd expect from a competent maker. In our profile, Anne Briggs Bohnett chats to Jeff Hamilton, a master tool maker. Our gallery comes from the Center for Furniture Craftsmanship's end of year show, note the lack of 'designer' upgrading here. The level of craftsmanship makes it quite clear that these pieces were made by competent makers. Finally, in what is best described as a fusion of craft and design I'm sharing with you my interpretation of a classic Japanese style joint.

Derek Jones

Derek Jones
derekj@thegmcgroup.com



PHOTOGRAPH BY DEREK JONES/GMC PUBLICATIONS

My version of a
traditional Japanese
joint fuses craft
with design

Furniture & cabinetmaking

EDITOR Derek Jones
Email: derekj@thegmcgroup.com
Tel: 01273 402843

ASSISTANT EDITOR Briony Darnley
Email: briony.darnley@thegmcgroup.com

DESIGNER Oliver Prentice

GROUP EDITOR – WOODWORKING Mark Baker
Email: markb@thegmcgroup.com

SENIOR EDITORIAL ADMINISTRATOR Karen Scott
Email: karensc@thegmcgroup.com
Tel: 01273 477374

ILLUSTRATOR Simon Rodway

CHIEF PHOTOGRAPHER Anthony Bailey

ADVERTISING SALES EXECUTIVE
Russell Higgins, Email: russellh@thegmcgroup.com

ADVERTISEMENT PRODUCTION & ORIGINATION
GMC Repro Email: repro@thegmcgroup.com
Tel: 01273 402810

PUBLISHER Jonathan Grogan

PRODUCTION MANAGER Jim Bulley
Email: jimb@thegmcgroup.com
Tel: 01273 402810

PRODUCTION CONTROLLER
repro@thegmcgroup.com

MARKETING Anne Guillot

SUBSCRIPTIONS Helen Christie
Tel: 01273 488005, Fax: 01273 478606
Email: helenc@thegmcgroup.com

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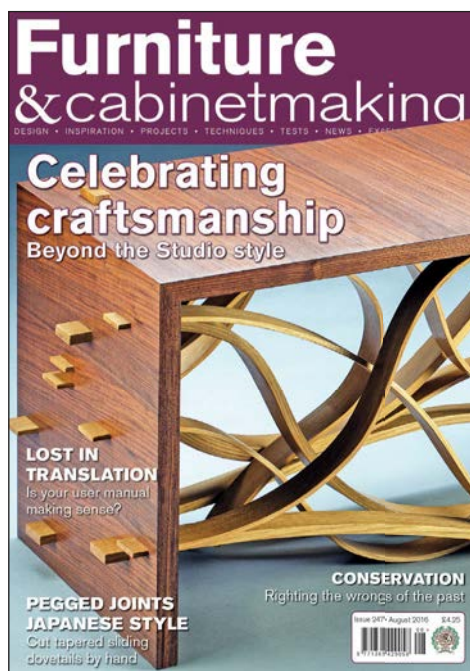
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pursuit. Readers should not attempt the
procedures described herein without
seeking training and information on the
safe use of tools and machines, and all readers should
observe current safety legislation.**

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Front cover image courtesy of Chris Pinchbeck

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www.woodworkersinstitute.com

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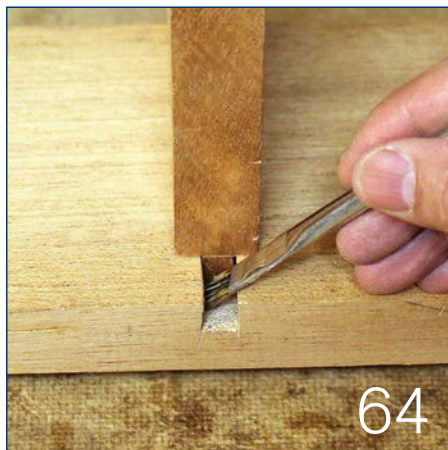
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News & Events

Contribute to these pages by telling us about matters of interest to furniture makers.

Call Derek Jones on 01273 402 843 or email derekj@thegmcgroup.com

Please accompany information with relevant, hi-res images wherever it is possible

Waters and Acland apprentice to represent the UK at EuroSkills 2016



PHOTOGRAPH COURTESY OF WATERS AND ACLAND FURNITURE WORKSHOP AND SCHOOL

Angus Bruce-Gardner with the Union Jack games table he made while on the designer-maker course at Waters and Acland Furniture School

There may be high hopes for our football teams in Euro 2016 this summer but for Angus Bruce-Gardner and Waters and Acland Furniture Workshop and School there is only one European competition that matters, EuroSkills Gothenburg 2016.

Taking place from 1–3 December, EuroSkills will see the most talented young people from over 30 European countries come together to compete in over 35 different skill areas ranging from engineering and construction through to creative and hospitality. The competitors all have one aim – to win a Gold medal in their chosen skill and prove they are the best in Europe.

Oliver Waters, of Waters and Acland Furniture Workshop and School said: “In qualifying to represent the UK in

cabinetmaking at the EuroSkills event Angus has demonstrated his true passion for cabinetmaking at the very highest level. Our workshop and furniture school motto is ‘perfection in the making’ and Angus has really taken this to heart. Constantly striving to be the very best young cabinetmaker in the world. It’s an honour for both Angus and our furniture school that he has been chosen to represent the UK in such a prestigious event. We of course wish him well and are totally committed to providing him with the very best training possible.”

Angus Bruce-Gardner, said: “Getting to this point has taken hard work and dedication. Long hours and most weekends have been spent honing my skills in the workshop and I’m now looking forward

to testing myself against the best young cabinetmakers in the world.”

Angus, along with the other members of Team UK, will now go on to complete an intensive training programme, supported by trainers, employers and training providers. The competitors who take part in EuroSkills this year will also go on to compete for a place in the team that will represent the UK at WorldSkills, the largest international skills competition, which takes place every two years. The next WorldSkills Competition will take place in Abu Dhabi from 14–19 October, 2017.

Contact: WorldSkills

Web: www.worldskillsuk.org

Wallace Collection appeals for help to conserve an 18th-century armchair

Although it is better known for its collection of antique French furniture, the Wallace Collection in London also houses several fine examples of English work. The Collection recently launched an appeal to help restore one of its most important pieces, an 18th-century carved-giltwood armchair.

The chair is in the Kentian style and has distinctive X-shaped front legs. It is of the same model as four armchairs at Chatsworth House in Derbyshire. It is thought that these chairs were originally part of the same set and may have been designed by William Kent for Lord Burlington at Chiswick House in the 1720s.

Urgent treatment is now required to stabilise the chair and conserve the remaining original material. The chair is currently on view in the Wallace Collection's Conservation Gallery as part of an appeal to raise the money needed. For details of how to help, visit the Collection's website.

Contact: The Wallace Collection Web: www.wallacecollection.org



This 18th-century armchair is in urgent need of restoration

Bursary boost for popular training course



David Hammond gaining experience of the Wood-Mizer LT-40 under the watchful eye of David Biggs

A new bursary scheme has been created by Wood-Mizer UK to help people already working in or considering a career in the timber supply chain. The bursary is administered by Woodland Heritage and helps to subsidise a place at its popular 'From Woodland to Workshop' courses, held twice a year at Whitney Sawmills in Herefordshire.

The first bursary was awarded to David Hammond, who attended the course in May to assess its suitability as a training resource for ex-service personnel.

Wood-Mizer UK's General Manager, David Biggs said: "Having attended the 'From Woodland to Workshop' course myself last year, I could see the tremendous benefits that all participants gained from it, regardless of where they work in the wood chain. The course reaches out to people wanting to start processing wood, whether

as new entrants to the industry or as existing professionals keen to diversify and to add value to their current business."

The next course will be held at Whitney Sawmills between 26–28 September, 2016 with a dozen places available.

"We are keen to receive expressions of interest from 'end-users' – particularly furniture designers and makers," said Woodland Heritage's Belinda Moore. "The course fee is £750, but thanks to Wood-Mizer UK's bursary one fortunate student will be able to attend for just £250, which is great value for a three-day course of this breadth and depth."

More details about the course can be found at Woodland Heritage's website, the Wood-Mizer bursary is open for applications from 1–31 July via the same site.

Contact: Woodland Heritage
Web: www.woodlandheritage.org.uk

Timber trade news

Forestry Commission issues alert for caterpillar pest

People in parts of London, northern Surrey and West Berkshire are being reminded to look out for and report caterpillars of the oak processionary moth (OPM), which could be damaging oak trees in the area. They are also advised to keep away from the caterpillars and their nests, because their hairs can cause itching skin rashes and other health problems, and to report sightings to the Forestry Commission. The OPM feeds on oak leaves, and in large numbers they can severely defoliate trees and leave them vulnerable to other pests, diseases and drought.

Contact: Forestry Commission
Web: www.forestry.gov.uk

Living Ash trial created in the National Forest

A trial to look for potential tolerance to ash dieback in different varieties of ash has been created by Forest Research, the research agency of the Forestry Commission, in the National Forest near Ashby de la Zouch, Leicestershire. Over 4,000 trees have been planted across two hectares of land in an experiment that will extend over the next five years. The trial is part of the Living Ash Project sponsored by Defra and co-ordinated by the Earth Trust.

The common ash is a very genetically diverse species, and experience from the continent shows that between 1–5% of all trees are tolerant to ash dieback, which means that it is possible to breed ash for tolerance to the disease. The Living Ash Project aims to identify these tolerant trees and bring them together to form a new breeding population.

The public can also help by looking at ash trees in their neighbourhoods, and tagging trees using Ashtag. The project partners have 2500 tags to give away, available from www.livingashproject.org.uk

Contact: National Forest Company
Web: www.nationalforest.org

Appeal to restore woods

575 ancient woods across the UK are currently under threat from development according to new Woodland Trust figures. The charity is looking for 'Threat Reporters' to sign up and identify cases of ancient woods under threat and has launched a new guide to help communities and landowners identify areas of 'planted ancient woodland' which could be restored.

Contact: Woodland Trust
Web: www.woodlandtrust.org

Events

PHOTOGRAPH COURTESY OF PETER SEFTON FURNITURE SCHOOL



Open Day at Peter Sefton Furniture School

Peter Sefton Furniture School is hosting its annual Open Day on Saturday 16 July, 2016. The School will be open from 10a.m. to 3p.m. for those who wish to learn more about the long and short furniture making and woodworking courses. Visitors will be able to meet the School's expert tutors; watch demonstrations; and pick up advice, tools and products. The demos will include hand tool techniques, routing techniques and French polishing. Another attraction is the Professional Long Course students' End of Year Show where you can also talk with Sean Feeney, the School's Designer/Maker in Residence. The School is supporting the Help For Heroes charity who will be manning the BBQ, they will also be collecting any unused or old hand tools that will be auctioned at David Stanley Auctions.

When: 16 July, 2016

Where: The Threshing Barn, Welland Road, Upton Upon Severn, Worcester, Worcestershire WR8 0SN

Web: www.peterseftonfurnitureschool.com

Axminster Leigh jig demonstration

Join Shaun Vincent for a demonstration of the Leigh range of dovetail jigs in Axminster. The Leigh system can be a complex kit, but it is capable of producing excellent dovetails. A key member of staff in each Axminster store has been specially trained to show just how easy it is to create perfect dovetails. In addition, there will be the opportunity for customers to try before they buy and have their machine set up for free when they purchase a Leigh jig. There will also be a chance later in the year to see Leigh jigs being demonstrated at the North of England Woodworking & Power Tool Show in Harrogate from 18–20 November.

When: 16 July, 2016

Where: Trafalgar Way, Axminster, Devon EX13 5NG

Web: www.axminsterskillcentre.co.uk

Record Power Roadshow at Yandles

Yandles is hosting a two-day Record Power Roadshow. Visitors will be able to watch bandsaw and planer demonstrations and receive free expert advice on all Record Power and Startrite machines.

There will also be exclusive show deals online and in-store and 15% off all self-select timber.

When: 16–17 July, 2016

Where: Yandles, Hurst Works, Hurst, Martock, Somerset TA12 6JU

Web: www.yandles.co.uk

PHOTOGRAPH COURTESY OF MANCHESTER FURNITURE SHOW



The Manchester Furniture Show highlights the latest trends

Manchester Furniture Show

Visitors to the Manchester Furniture Show in July can expect to see the newest trends in upholstery, cabinet and dining, beds and bedroom furniture, occasional, mirrors, art and decorative accessories. New brands showing this year include Hookes Interiors, Panacea, Devonshire Pine & Oak, Arthaus, Camel Group, Indian Hub and Ancient Mariner.

When: 17–19 July, 2016

Where: Manchester Central, M2 3GX

Web: www.manchesterfurnitureshow.com

Brimarc Roadshow at Yandles

In addition to the Record Power Roadshow earlier in the month, Yandles will also be hosting a Brimarc Roadshow on 23 July. There will be demonstrations throughout the day with experts on hand to answer any questions about all Tormek, Proxxon, Flexcut, Nova and Veritas products.

Visitors will also be able to take advantage of exclusive show deals, both online and in-store, and there will be 15% off all timber planing and turning blanks.

When: 23 July, 2016

Where: Yandles, Hurst Works, Hurst, Martock, Somerset TA12 6JU

Web: www.yandles.co.uk

Australian International Furniture Fair

Co-located with Australia's premier interior design event, Décor + Design, the Australian International Furniture Fair (AIFF) is Australia's largest trade-only furniture event. The event will showcase the latest in furniture designs for commercial, residential and retail industry.

The show also features Vibrant Visions in Design (VIVID), which shines a spotlight on some of the most dynamic emerging Australian designers; AIFF Loves Homemade, a dedicated area supporting Australian-based furniture, cabinet and joinery makers; and Design: Bazaar, which showcases small, independent studios. Industry experts will appear at the International Seminar Series, discussing trends and hot topics around the theme of 'Global-Local Inspiration'. Designers will also discuss their work, sharing their personal inspirations and perspectives

When: 21–24 July, 2016

Where: Melbourne Convention & Exhibition Centre, 1 Convention Centre Place, South Wharf, VIC, Australia 3003

Web: www.aiff.net.au



PHOTOGRAPH COURTESY OF AIFF

The AIFF is Australia's premier destination for the furniture industry

Plain sailing for boating baby

When Sam Rouse found out that his wife Kayla was expecting a baby, he did what any father would do – he built a wooden crib in the shape of a boat

PHOTOGRAPH COURTESY OF CHIPPENDALE INTERNATIONAL SCHOOL OF FURNITURE



The boat-shaped crib is made from ash, elm and fumed oak with cherry and walnut accents and has an anchor-shaped floor stand

Sam, a student at the Chippendale International School of Furniture in East Lothian, is originally from North Carolina. He met his wife while at university in Virginia, but they always planned to move to Scotland to allow Sam to pursue his life-long passion for woodworking.

When Sam enrolled at the Chippendale School, it was only natural that his first furniture project be for the newest member of his family. Sam completed the crib just in time for Liliana's birth in April.

Sam spent many hours researching traditional boat building techniques as well as standard sizes for a baby's cradle. The body of the boat is made of overlapping planks of ash that were each hand-planed and individually shaped to the curve of the frame. Ash is a traditional boat-building wood, used because of its straight grain and bending capability. The top handrail is made of cherry with a contrasting darker walnut strip in the middle. A marquetry compass rose in the bow of the boat adds complexity to the design and brass fixings give the cradle

a distinctive nautical feel. The spaces between the inner and outer wall of the boat and under the baseboard are filled with British wool to help insulate the cradle. The anchor-shaped base is made of fumed oak. The elm legs blend into the background allowing the base and cradle to become the main focal points. The finish is a clear matte lacquer, chosen for its functionality and safety.

Sam has now returned to the US and plans to start a furniture design business of his own. His desire is to help others create heirloom quality pieces of furniture. "There is something truly special about having a piece of furniture in your home that was made specifically for you – quality furniture that not only looks beautiful but is sturdy enough to stand the test of time," he says. "I believe that there are many people who are looking for just that and I plan to help them create inspiring pieces of furniture that will truly be enjoyed and handed down the generations!"

www.samrousefurniture.com
www.chippendaleschool.com

Reader letter

Extraction standards

Hi Derek,

I was interested in your review of the Festool CTL-SYS mobile dust extractor in *F&C* 244, having recently bought the larger CTL26. Apart from its good performance, I chose this model primarily for its nicely integrated design, in particular its cable and suction hose storage which other makers seem to treat as an afterthought, at best.

What particularly caught my eye were your comments about the relative merits of class L and class M filtration standard extractors. As you rightly say, in a shared working environment, a class M extractor is pretty much a must, not least because in that sort of environment changing dust bags and filters tends to be regarded as no one's responsibility, and therefore likely to be neglected were it not for the irritation of the warning system which signals the need for them to be attended to.

However, I would argue that, for the safety-conscious amateur, M class certification is an unnecessary expense even for periods of fairly lengthy use. It is important to understand that the 50% price premium Festool asks for M class certification does not bring a higher standard of filtration. The filtration of its L and M certified extractors is identical. What you get for the circa 50% price difference is a warning system that tells you when airflow is reduced because the bag is full or the filter needs to be changed. I reckon I can look after that myself without a beeping nanny multiplying my capital cost by 50%!

Best wishes,
Jim Hooker



The Festool CTL-SYS mobile dust extractor is class L standard

If you're a member of a collective and would like to raise your profile then submit a story to derekj@thegmcgroup.com

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

CHOICE OF 5 COLOURS

RED, BLUE, BLACK, SILVER & GALVANISED STEEL

MODEL DIMS WxDxH(mm) EXC.VAT INC.VAT

150kg 800x300x1500 £29.98 £35.98

350kg 900x400x1800 £49.98 £59.98

ALSO EXTRA WIDE INDUSTRIAL UNITS AVAILABLE

150 KG (evenly distributed) Strong 9mm fibreboard shelves

350 KG (evenly distributed) Strong 12mm fibreboard shelves

Clarke RANDOM ORBITAL SANDER

CRO51

INC 5 DISCS

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

Clarke ELECTRIC POWER FILE

Variable belt speed

Tilting head

Black & Decker CPF13

MODEL MOTOR EXC.VAT INC.VAT

CPF13 400W/230V £44.99 £53.99

KA900E* 350W/230V £59.98 £71.98

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Clarke DRILL BIT SHARPENER

Great for 3mm to 10mm HSS drill bits

70W motor

Drill bit guide ensures sharpening at the correct angle

Saves cost of new drills

CBS16

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VIDEO ON-LINE

VAC KING WET & DRY VACUUM CLEANERS

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

MODEL MOTOR CAPACITY EXC.VAT INC.VAT

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CVAC30SSR 1400W 24/21ltr £86.99 £104.39

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SS = Stainless Steel

Clarke STAPLE/ NAIL GUNS

All models include nail/staple pack and tough moulded case

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SPARE NAILS / STAPLES IN STOCK

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Ideal for surface removal, sanding and finishing

Clarke

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STANLEY

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Clarke CORDLESS DRILL/ DRIVERS

BOSCH Power Tools

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air master

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

HUGE RANGE OF AIR TOOLS IN STOCK

* V-Twin

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* V-Twin

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

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Clarke 6" BELT/ 9" DISC SANDER

Includes stand

1 HP/ 230V 1ph motor

CS6-9C

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£209.00
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Clarke 1" BELT/ 5" DISC SANDER

Includes 2 tables that tilt & lock

CSB1-5

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Clarke 4" BELT/ 8" DISC SANDER

Includes two tables

550W 230V motor

CS4-8

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Clarke DISC SANDER (305MM)

Powerful, bench mounted disc sander • 900W

No load disc speed: 1490rpm

305mm Disc Dia.

(1 x 60 grit sanding disc included)

Dust extraction port

CDS300B

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£119.98
EXC.VAT
£143.98
INC.VAT

Clarke SHEET SANDERS

CON300

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Clarke PORTABLE THICKNESSER

Max thickness cap. 125mm and 250mm wide

Planing depths adjustable from 0-2.5mm

Powerful 1250W motor

8000rpm no-load speed

CPT250

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£189.98
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Clarke OSCILLATING BOBBIN SANDER

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

Dust collection port

Inc. 6 sanding sleeves/bobbins

330mm table height

16mm oscillating stroke

COBS1

ONLY
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Clarke PLANERS & THICKENERS

Ideal for DIY & Hobby use

Dual purpose, for both finishing & sizing of timber

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INC.VAT

Clarke PLANERS & THICKENERS

Ideal for DIY & Hobby use

Dual purpose, for both finishing & sizing of timber

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EXC.VAT
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Clarke 10" (254MM) SLIDING COMPOUND MITRE SAW

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

£129.98 EXC.VAT
£155.98 INC.VAT

CMS10S2

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MITRE SAWS

TC-SM 2534

- Quality Range of Mitre saws and blades in stock

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

Clarke MORTISING MACHINE

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

£149.98 EXC.VAT
£179.98 INC.VAT

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 BENCH BANDSAWS

TC-SB200

Produce fast, precise mitre & longitudinal cuts

- Cuts in wood, plastic, etc.

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

Clarke PROFESSIONAL BANDSAWS

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

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

CBS300 **£349.98 EXC.VAT**
£419.98 INC.VAT

CBS350 **£449.00 EXC.VAT**
£538.80 INC.VAT

Models also feature: MULTI-STEP DUST EXTRACTION OUTLET, REMOVABLE DUST TRAY, FLEXIBLE WORKLIGHT, BLADE TENSIONING CONTROL

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

Clarke DETAIL SANDERS

CDS-1V

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

ALL MODELS INC. SANDING SHEETS

MODEL	WATTS	EXC. VAT	INC. VAT
PS105	105W	£17.99	£21.59
RT-OS13	130W	£22.99	£27.59
CDS-1V	280W	£24.99	£29.99

Clarke MITRESAW STAND

CFMS1

Suitable for most sizes/makes of saw

- Inc. outriggers & rollers

NEW FOLDING MITRE SAW STAND IN STOCK - CONNMV1 ONLY £119.98 INC.VAT

PRICE CUT NOW ONLY
£59.98 EXC.VAT
£71.98 INC.VAT
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Clarke DRILL PRESSES

CDP152B

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

NEW RANGE

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

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

Clarke MULTI FUNCTION TOOL WITH ACCESSORY KIT

CMFT250

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

- Variable speed

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

Clarke BOSCH JIGSAWS

CJS380

"DIY" Professional

MODEL	POWER (W)	DEPTH OF CUT (WOOD/STEEL)	EXC. VAT	INC. VAT
Clarke CJS380*	420W	55/6mm	£12.98	£15.59
Clarke CON750*	750W	80/10mm	£24.98	£29.99
Bosch PS1700E*	500W	70/4mm	£44.98	£53.99
Einhell RT-JS 85*	850W	85/5mm	£49.98	£59.98

Clarke 13" MINI WOOD LATHE

CWL325V

Ideal for enthusiasts/hobbyists with small workshops

- Air-blower removes dust from cutting area
- Table tilts 0-45°

FROM ONLY
£134.99 EXC.VAT
£161.98 INC.VAT

Clarke ROUTER TABLE

CRT-1

Router not included

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

FROM ONLY
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£71.98 INC.VAT

Clarke CONTRACTOR BOSCH ROUTERS

CR2

Powerful heavy duty machines ideal for trade and DIY use

CR2 INCLUDES 15 PIECE KIT WORTH OVER £20

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

Clarke BENCH GRINDERS & STANDS

Stands come complete with bolt mountings and feet anchor holes

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

CBG6SB **£29.98 EXC.VAT**
£35.98 INC.VAT

6" & 8" AVAILABLE WITH LIGHT

Clarke BISCUIT JOINTER

BT-BJ900

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

FROM ONLY
£49.98 EXC.VAT
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Clarke SCROLL SAWS

CSS16V

50mm max cut thickness

- Air-blower removes dust from cutting area
- Table tilts 0-45°

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

MODEL	MOTOR	SPEED RPM	EXC. VAT	INC. VAT
CSS400B	85W	1450	£69.98	£83.98
CSS16V	120W	400-1700	£79.98	£95.98
TH-SA40SE 1200W	400-1600	£79.98	£95.98	

Clarke 12" DOVETAIL JIG

CDTJ12

Simple, easy to set up & use for producing a variety of joints

- Cuts work pieces with a thickness of 8-32mm
- Includes a 1/2" comb template guide & holes for bench mounting

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

Clarke CR1C

CR1C

DIY

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

Clarke CBG8W

CBG8W

8" whetstone & 6" drystone

- With sanding belt

FROM ONLY
£67.19 INC.VAT

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

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Editor's round-up...

Having trouble sourcing the right tool for the job? Derek Jones sets about identifying the essential tools and equipment on offer this month

All sterling prices include VAT, correct at time of going to press

There's definitely something 'chicken and egg' about making certain jigs. Take this dovetail alignment board for example.

Two flat square pieces of wood joined at the ends with perfectly aligned dovetails so that I can produce more perfectly aligned dovetails between more flat square pieces of wood some time in the future. I know what you're thinking but this jig, like most jigs, is all about

streamlining and convenience. Note the 4mm wide wedged mortise and tenon joining the two sections that make up the guide fence. Don't waste your time cutting a mitre for this, it will eventually fail and when it does so will your confidence in the jig. The take home here is, make it well and make it once. This month we've compiled a list of items that once spotted you won't want to let out of your sight.



PHOTOGRAPH BY GINO/DEREK JONES

MINI TEST: Veritas small scraper plane

This month's mini test is perhaps a slightly obscure choice but none the less worthy of a close look. If the benefits of card scraper ownership have not appealed to you so far then maybe the combination of a scraper and plane will be enough to tempt you. There's nothing complicated about using a scraper, in fact the hardest part is maintaining an edge that scrapes a shaving and not a pile of dust. The angle of the cutting edge on a standard plane is less critical than that on a scraper. While a few degrees here and there will affect the plane's performance it won't necessarily render the tool useless. The business end of your scraper, however, is less forgiving.

The instructions with this Veritas tool, and all Veritas tools come to think of it, are packed with just the sort of information you need to get the best from your tool. They explain the principles of scraping and how to set the edge up and maintain it. At just over 130mm long it's a typical block plane size without straight sides. There's no need for an adjustable mouth or means of lateral adjustment as the blade registers with the body of the plane and clamps into position via a top mounted lever cap. Behind the tightening screw there's a palm grip handle that can be moved left or right to suit your grip or gain access to a vertical face.



PHOTOGRAPH BY PETER JONES/AMC

Like all plane blades, the cutting edge needs to be under a certain amount of tension before it can work and for the small scraper plane this is applied via a camber screw located beneath the handle. It requires the use of a small screwdriver, around 4mm across. As the screw presses onto the back of the blade it creates a bow and pushes the edge beyond the sole of the plane. A gentle curve results in a fine cut, a sharper one gives a more aggressive one.

Because of its size I've found this little tool excellent for tidying up small patches of awkward grain. I've found it to be the ideal tool for levelling off inlay when using contrasting timbers as the shavings are less likely to contaminate lighter timbers, something that is hard to avoid when you're sanding.

If you work with a lot of interlocking grain or just live in fear of tear-out generally, then it's time to invest in a scraper plane.

Tormek T-8

The T-8 provides the best design possible for successful sharpening. Tormek have integrated the previously mounted sleeves for the Universal Support into the fully cast housing, guaranteeing minimal play and improving control when sharpening, which ultimately increases the accuracy of the final results. The efficient drive system maintains a constant speed, even under full load and the user can sharpen all qualities of steel, including HSS (high speed steel). The SE-77 upgraded jig is used for square edge tools, and it now has a movable side that allows for fine adjustment of the setting, ensuring a 90° corner or the option to create a cambred shape.



W020 heavy duty router table

This upgraded router table has several new features including two adjustable vertical hold-down feather boards, an adjustable horizontal feather board, a set of four fence shims to allow the outfeed fence to be stepped out up to 4.5mm, a centralising jig to allow the router to be easily lined up in the centre of the aperture, redesigned universal router clamps to allow removal and refitting of the router in under a minute without losing your settings and a scale mounted in the table for setting the fence. The rigid steel floorstand provides a comfortable working height for handling large panels. The table top is hinged to the floorstand and can be raised up, using the lifting handles provided, making the router more accessible when adjustments are needed. The new design of the router clamps is ideal for users who want to regularly remove the router and then refit it without losing the settings, saving time and effort. The clamping system used to attach the router to the table is universal allowing any sized router from any manufacturer to be used.



APF10 Evolution powered respirator

This positive pressure powered respirator eliminates the drawbacks encountered with standard negative pressure face masks, as Axminster claim. The motor unit blows filtered air down over the face at a rate of 160L/min. The air exiting around the sides and bottom of the mask is at a slightly higher pressure than that outside, thereby forming a most effective seal. The respirator is supplied with an eight-hour battery, plus charger, two filters, a flow-rate meter and complete instructions all within a strong storage box.



£199.94

TBJ001 biscuit jointer



£119.56

A new addition to Triton's precision woodworking range, the TBJ001 is a powerful 760W biscuit jointer with cast-aluminium base, fence and drive housing. This is an ideal tool for producing fast, strong joints for furniture and shelving construction. It has an accurate adjustable and removable fence with height range between 0–40mm and angle adjustment of 0–90°. A simple six

position turret stop simplifies the depth setting for easy biscuit size selection. Its hinged base makes for easy blade change and cleaning while an integral dust port and insulated handles means it is both safe and comfortable to use to make repeated cuts. The kit includes a fitted blade, blade pin spanner, hex key, spare carbon brushes and a dust bag.

Contacts

APF10 Evolution powered respirator

Contact: Axminster Tools & Machinery
Tel: 0800 371822
Web: www.axminster.co.uk

Shield Technology website and VanGuard Wipe

Contact: Shield Technology
Tel: 01472 360 699
Web: www.shieldtechnology.co.uk

TBJ001 biscuit jointer

Contact: Triton
Web: www.tritontools.com

Tormek T-8

Contact: BriMarc
Tel: 03332 406967
Web: www.brimarc.com

Veritas small scraper plane

Contact: BriMarc
Tel: 03332 406967
Web: www.brimarc.com

W020 heavy duty router table

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

A screenshot of the Shield Technology website. The header features the company name 'SHIELD TECHNOLOGY' and the tagline 'Guarding Against Corrosion'. Below the header is a navigation menu with links to Home, All Products, Restoration, Protection, Maintenance, Engine Care, Stockists UK & EU, Stockists USA & Canada, Articles, Delivery, and Contact. The main content area is titled 'Items for Sale' and displays a grid of products including 'Restore Rust Remover Gel', 'Restore Pre-Clean Degreaser', and 'Protectant Wax Polish'. A blue circular badge with the word 'FREE' is overlaid on the left side of the product grid.

Shield Tech website and VanGuard wipe

Shield Technology has launched a new and improved website where information on corrosion inhibiting products and rust removers can now be accessed more quickly and simply. The products are arranged in three categories: Restoration, Protection and Maintenance. The site also includes details of stockists in the UK, the EU, the USA and Canada.

As part of the launch for the new site, customers who order online before the end of July, 2016 will receive a free gift of a VanGuard Wipe, a brand-new Shield Technology product. VanGuard Wipes are a versatile and quick means of applying corrosion inhibitor to a surface. Each wipe is packed in an individual sachet. The wipe is saturated with a triple action corrosion inhibiting package. It contains a highly refined low viscosity Swedish mineral oil which provides simple barrier protection. However, the oil also acts as the carrier for powerful ferrous and non-ferrous metal contact corrosion inhibitors, plus a powerful vapour phase inhibitor.

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Teaching to the 21st century

**Peter Korn introduces work from students
at the Center for Furniture Craftsmanship**



Detail of the 'Vondel' table

PHOTOGRAPHS BY CHRIS PINCHBECK

As director of a nonprofit woodworking school in Rockport, Maine for the past 23 years, I am keenly aware that training future generations of woodworkers goes well beyond the need to pass on technical information. To keep a traditional craft relevant, one's curriculum must evolve to address the shared concerns, individual tastes and economic realities of contemporary society.

Early on in my career, I was fortunate to work as a teaching assistant to furniture makers such as Sam Maloof, Art Carpenter, Jim Krenov, Alan Peters and Tage Frid, who are considered pioneers of the 20th-century Studio Furniture movement in the US. At the time, they dominated the woodworking landscape like towering oaks. Three decades later, having attained the age my now-departed mentors were then, I look over a much-altered terrain. Who knew that Studio Furniture would eventually follow Arts & Crafts, Art Nouveau and Art Deco into history, as it seems to be doing? Yet this is no reason to be elegiac. A new generation has taken up woodworking on its own terms, which is just as things should be.

The ethos of the 20th-century American Studio Furniture movement was to create objects that could come from only one person's highly skilled hands and well-honed aesthetic. The result was generally expressive, elegant and expensive work well-suited to gallery pedestals. In contrast, many young makers today are drawn to create well-designed objects suitable for commercial production at price points attractive to larger audiences. What both generations have in common is the passionate engagement of mind and hand



'Vondel' table in walnut veneer and oak with an oil finish by Jose Ramon Diaz Oldenburg

in bringing meaningful new ideas into the world. What differs are the cultural horizons to which they orient themselves.

To best serve 21st-century woodworking students at the Center for Furniture Craftsmanship, we leaven the accumulated knowledge of the past regarding tools, materials and techniques – as embodied by Alan Peters et al. – by also introducing students to the possibilities inherent in CNC milling technology and computer-aided design software. Likewise, we assign project briefs that focus on the design and marketing of batch products, as well as briefs for one-of-a-kind, beautifully wrought objects.

The work exhibited in these pages was produced by students in our flagship professional training course, the Nine-month Comprehensive. The Lead Instructor is Aled Lewis, from Wales, who is joined for every project by guest instructors with the relevant expertise. Aled's curriculum negotiates a healthy tension between imparting woodworking skills and fostering students' fluency with design. Where the former goal may be most efficiently served through the assignment of set projects, as it is in more traditional crafts programmes, the latter goal leads us to encourage students to design their own projects from day one. Our aim

is to develop their technical skills hand in hand with their creative abilities. It is not an easy educational approach, but the results are rewarding. The curriculum demands a tremendous amount of commitment from our 12 students, and even more from their instructors. Shepherding a dozen ambitious, highly individuated projects from design to successful completion requires a degree of focus not unlike that of a chess master playing 12 simultaneous games.

Peter Korn is Founder and Executive Director of the Center for Furniture Craftsmanship in Rockport, Maine. More information is available at www.woodschoool.org

'Entry Table with Cooped Bowl' in ash and birch with an oil finish by Andrew Messa



Detail of the 'Entry' table

'Coffee Table' in walnut and oak with an Osmo wax and oil finish by Marc Foose



'Freo Desk' in white oak with an oil finish by Jeremy Porter



'Splint Peg Cabinet' in ash and ash splint with an oil finish by Heide Martin



'Maize Pendant Light' in walnut with an oil finish by Yorgo Liapis

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Economy of scale

Andrew Lapthorn's Tripod table captures the appeal of a bespoke piece through clever batch production



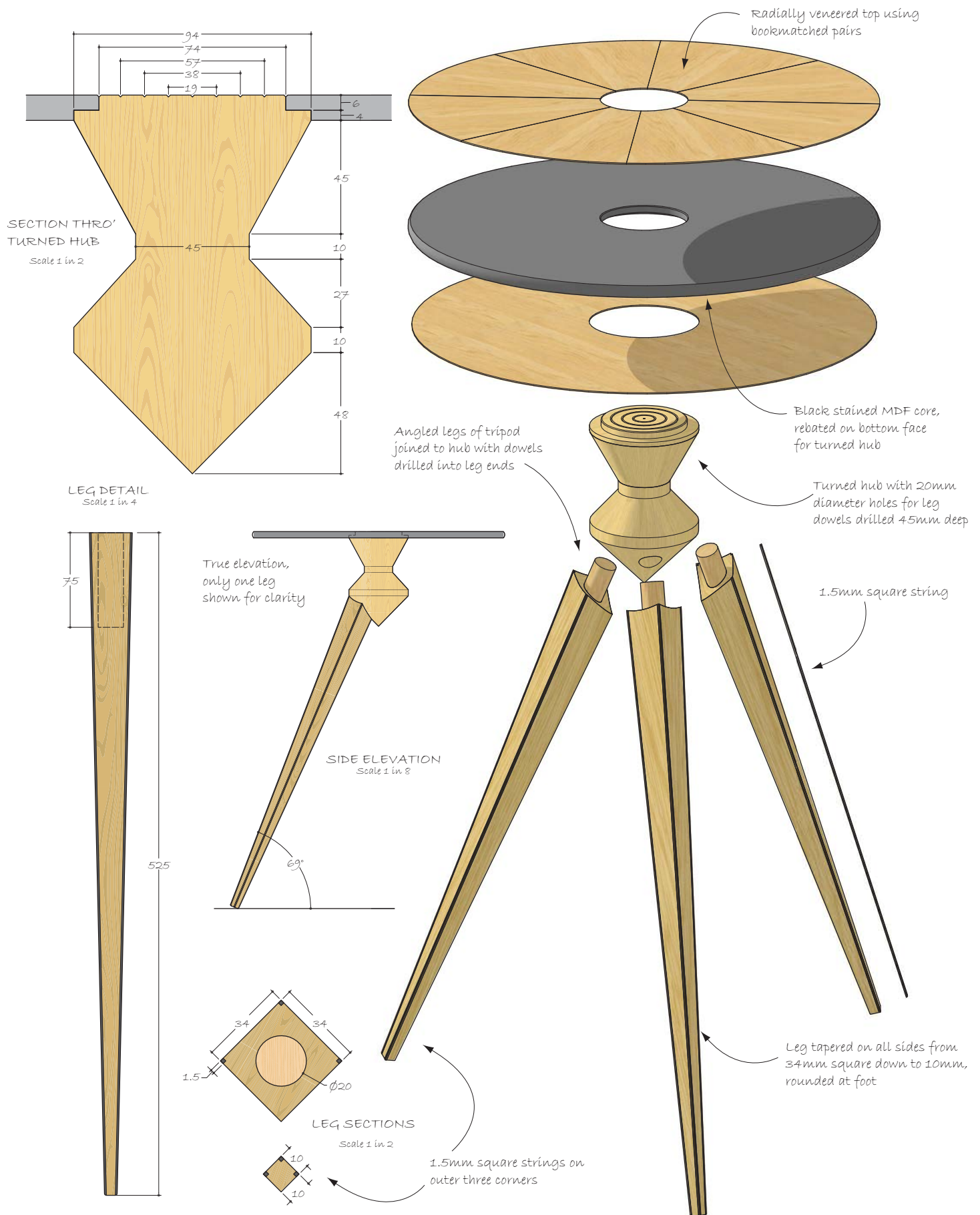
The Tripod table was designed primarily for exhibiting purposes. It was intended as an introductory piece not only to my work but also to the world of bespoke furniture. The idea was to take as many cabinetmaking skills as possible and condense them into a single affordable and practical, easily portable piece of furniture. The result was a distillation of the art of cabinet/furniture making that was both affordable for the client and for me to make.

Wood and materials used

- 9mm black MDF for the table top
- 100mm square stock for the boss in sycamore (*Acer pseudoplatanus*), oak (*Quercus robur*), walnut (*Juglans regia*) or other suitable timber
- Three lengths of straight grain timber for the legs
- 1.5mm square ebonised stringing
- Oak dowels



Tables in lacquered beech, oak and glass



The top

Made from 9mm MDF, the top takes the form of a doughnut 400mm in diameter with a 75mm hole at the centre. The hole at the centre facilitates the leg structure, which comes through and is flush with the radially veneered top. The reason for using MDF (other than for stability) is that you can buy it in sheet form already stained black. This is consistent right through the thickness so it can be machined and polished to give an ebonised finish to the edge.

First, machine the centre out with a router using a profile guide or a profile cutter in conjunction with a template. Then turn a disc that is an engineered fit and drop it into the hole. Fixing the beam of the router to this disc means you are then able to machine out the top thereby perfectly aligning the two circles one within the other.

The top is radially veneered so as to give more impact to the piece. This shows the wood to greater effect and shows off another classic cabinetmaking technique found in high-end furniture. It also gives the table a more considered look.

In this case I divided the top into eight (though six would work equally well, if not better), using crown cut veneers. Using

a mirror to explore the variety of patterns possible from the veneer, a scalpel and a clear acrylic template, each segment is cut out and taped together using clear parcel tape.

The beauty of the design is that you don't have to be so precise in getting the points of your veneers to meet at the centre. A millimetre or two here or there won't matter as the centre will eventually be trimmed away, although this should not be an excuse for not striving for perfection.

Ensuring the centre of the veneer is at the centre of the hole, it is then pressed. Four bits of tape are added around the outside edge to prevent slippage and also to prevent tears when removed from the press. Once done the excess is trimmed away and the procedure is repeated.

A small radius is routed on the outer edge, top and bottom, a small 1.5mm chamfer on the top edge of the inner ring. Finally, a rebate 10 x 6mm is routed on the underside.

I have recently invested in a polyurethane vacuum bag from Airpress. Though more expensive than the vinyl ones I had previously, it is definitely an improvement and has made the vacuum pressing process altogether more pleasurable. While it maintains the transparency of the vinyl bags it is more pliable, despite being thicker, making it easier to manage. Another big plus is that the bag is seamless. With the vinyl bags this proved to be a weakness in the long term. So far so great, now it is only the test of time that will prove its durability.



Table tops in black MDF ready for veneering

Alternative to black MDF

Rather than having to buy a whole sheet of black MDF you could just use regular MDF and stain it. Making full use of the absorbent nature of the material, during the prototyping phase, I used a Morrells light fast stain to stain the outer and inner edges of the doughnut.

The boss

The central hub or boss is turned from 100mm square stock. This is best turned from a single piece of timber as the top end is seen. Being the focal point of the top any glue line or poorly matched end grain will be conspicuous. As 100mm timber is not readily available in most woods, sometimes there is no option other than having to make up the thickness by laminating two or more pieces

together. I tend to veneer this with, for example, a roundel of decorative veneer of the same species, more often than not a burr. Again it adds, in a modest way, to the layers of interest to be found in the finished table.

The stock is turned down to an even cylinder 94mm in diameter with a 9 x 6mm rebate at the top end and a cone at the other at a 45° angle leaving a stub on the end,

this gets 'sharpened' to a point later.

If turned from a single piece then at the top end I usually add three 1mm 'V' shaped grooves at 9mm spaces, which are ebonised later. These concentric rings add to the geometry/dynamism of the work and highlight yet another skill incorporated in the construction of the piece, that of turning.



Radially veneered table top in sycamore with ebonised detail



Horizontal slice of oak veneer showing medullary rays with burr oak roundel



Radially veneered top in black walnut with burr walnut roundel



Top detail of the finished boss



The boss is securely mounted in a pillar drill and held fast with a band clamp

Once you're satisfied with the turning the boss can be removed from the lathe, the stub cut off and the end sharpened to a point using a 1½in paring chisel, finishing off with a fine paper.

At this stage the top end can be veneered as previously suggested, or indeed if the 'V' grooves have turned out uneven or unsightly (very easily done) rather than lose the work, it can be veneered. Use an expanding polyurethane glue

as this will prevent the rings from telegraphing through.

The final process in making the boss is to machine the dowel holes to take the legs. This is a relatively straightforward process but it does require a pillar drill and a sturdy accurate jig to hold the work at the required angle. A band clamp is the approved method in this case for holding the work firmly in place.

Positioning is key as the boss must be

centred exactly in the pillar drill. There is a degree of trial and error here, but when fitted the outside point of the leg should not go beyond the rim of the boss when glued in place. If anything, it's better to be a fraction under. Once you're satisfied with the setting, the holes are then drilled to a depth of about 50mm. Slacken the band clamp and rotate the work through 120° to drill the next hole until all three have been done.



A pair of finished bosses with 'sharpened' ends

The legs

For this sculpted joint, positioning is all important. Anything slightly too high, too low, off to the left or right will result in unsightly gaps around the shoulders of the joint. If done with care and attention to detail the result is very gratifying.

The legs are made from three lengths of timber 600mm long x 34mm square. Wherever possible a straight grained timber is employed. This will become advantageous later on. With a 20mm Forstner bit held in the tailstock, the work is centred on the lathe and by winding the tailstock in, a 75mm deep hole is bored into the end.

The legs are then held in a jig on the diagonal placed on the sliding table of a dimension saw with the fence at 24°. The ends are then nipped off. This process removes most of the initial waste from what will be the shoulder line of the joint.

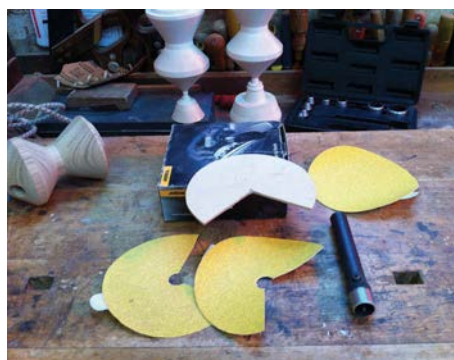


Using the lathe to bore a hole in the end of a leg with a Forstner bit

Profiling the shoulder

Turning a cylinder the same diameter, or more, with a conical end at 45°, mimicks the jointing surface of the boss. This is then finished with a sanding sealer or lacquer but not with oil or wax.

Cut out a 150mm disc from a sheet of coarse grit (60/80) abrasive paper, and remove the centre with a 25mm hole punch. A segment of approximately one-third is then removed and the remaining two-thirds is backed with double-sided tape. After removing the backing from the tape, the disc is carefully wrapped around the conical end of the lacquered turning so that you end up with a seamless joint. The more seamless the better as it will last longer.



Modified self-adhesive sanding discs

For batch production purposes I have been able to source 150mm x 60 grit self-adhesive sanding discs from Mirka which save a lot of messing around, and I have also made a solid aluminium cone. As it is metal I get good adhesion, a hard-wearing surface and most importantly it draws the heat away thereby giving longer life to the abrasive paper. One can expect to get at least two or three legs from a single disc, sometimes more sometimes less depending on the timber used and how good the paper joint is. In contrast, the hardwood cone shown in the image (above centre) shaped around 30 legs before degrading beyond the point of usefulness.



Turned cones for shaping the shoulder of the legs. The wooden one is showing signs of degradation from friction

A cradle is then constructed, which straddles the lathe and allows the leg to be supported on the diagonal at 21° from the horizontal. Again the important point here is to ensure the centre line of the cradle, thereby the leg, is directly in line with the centre of the lathe.

The leg is then introduced slowly into the rotating abrasive cone. By rocking the leg gently at the start the process goes a lot quicker and is less likely to result in friction burn.



The modified sanding disc stuck neatly onto the cone. The leg is mounted in a cradle over the lathe ready for shaping the shoulder

Towards the end four sharp points begin to form and a steady, firm, straight push is all that is required to get the finished profile. If the left and right points of the shoulder don't form at the same time then something is out of line.

Once you're satisfied with the shoulder the legs are then shaped. Marking out the taper on one inside face the waste is removed then finished with a plane and the procedure is repeated for the second inside face.

At this stage a stringing line is added. It is not necessary but I think it enhances the value of the table as well as the design and all for relatively little effort.



The legs shaped, jointed and rebated ready to take the stringing

Using 1.5mm square ebonised stringing, a 1.5mm square rebate is machined from three of the outward facing corners.

Holding a reduced 20mm dowel in a vice so that the leg can be rotated and using a fine plastic coated electrical cable or nylon fishing line, all three stringing lines can be glued in at the same time by winding the line firmly around the leg. It takes two to three minutes and once dry it then takes seconds to remove.

Ordinarily I hold the stringing in position with masking tape but for the sake of speed I had to find an alternative means. Having to apply a lot of small bits of tape and then pick them off again is enough to try the patience of a sun-ripened tomato!

The excess stringing is nipped off at the shoulder with a scribing gouge then cleaned up with a nicely sharpened and finely set smoothing plane. This is where a straight grained timber for the legs helps as they then don't require sanding. This eliminates the inconvenience of getting black dust worked into the grain.

The four corners of each leg are then stroked with a finely set block plane and the leg is then cut to length. Finally, a small chamfer around the bottom of the leg is added.

If polishing the work then all components are finished at this stage before the gluing of the legs, the oiling is left until afterwards.

To complete the leg joint, an oak dowel is turned roughly on the lathe and is finally sized by knocking it through a dowel plate. Cutting into 80mm lengths, chamfering the edge at either end and adding a couple of 'V' grooves down the side completes this task.



Gluing in the stringing lines on three of the four corners of each leg using 1mm plastic coated wire



Oak dowels

Gluing up

The final jig is the gluing-up jig. Gluing up a three-legged anything usually presents its problems with no opposing partner to cramp onto, let alone three tapering legs into one boss at an acute angle all at once.

The footprint of the table is set out with a compass and the positions of the legs plotted onto a 600mm square board of 18mm ply (18mm MDF proved not to have sufficient integrity). In the image shown (below right) it has been done with differing table diameters and heights in mind.

Holes in which the legs locate are drilled to a depth of 10mm. This holds them in position and stops them splaying out as pressure is applied. Three cutouts are then required towards the centre to accommodate the cramp head of a sash cramp.

The joints are assembled using Cascamite. This lubricates the joint in the initial stages of assembly and gives plenty of time to complete the gluing-up process before setting.

While the process is straightforward one must be very aware of the stresses and strains

put on the legs as each cramp is tightened in turn, to ensure an even pull all round.

If the joints have been fashioned accurately, firm but even pressure should suffice to pull the joint together, though every now and again the extra turn of the cramps can eliminate a hairline gap at the shoulder.

Because the joint is on a single dowel quite often any gaps on the shoulder are due to misalignment. To eliminate this possibility, a quick rotation left and right under slight pressure will usually find the joint bedding in. The second benefit of choosing a straight grained timber for the legs becomes apparent at this point.

Because of the narrowness of the leg

toward the bottom this is where any bending or distortion will occur as the pressure is increased, so keep a watchful eye at this point. In the past I have returned to the workshop in the morning to be confronted by an unsightly pile of cramps and bits of precious timber where one of the legs have failed.

Once set, add a small bead of PVA around the rebate on the underside of the top and place the neat fitting top onto the boss. While pressing down firmly, rotate the top a couple of times to and fro for what is in effect a rub joint. All of a sudden the job is done.

The finished Tripod table will be a great companion piece to any room in the home. *F&C*

Andrew Laphorn, MSD-C

Andrew Laphorn was born in Rochester, England in 1955. Having spent time at sea in the merchant navy and then working as a shipwright, he enrolled at Rycotewood College, Thame, in 1979. He completed his studies in 'Furniture, Fine Craftsmanship and Design' in 1981, at the same time he passed, with distinction, his Licentiatehip of the Society of Designer Craftsmen. For 35 years he has been successfully running his own business as a furniture designer and maker, he is also a visiting tutor at the Furniture Craft School on the Scotney Castle Estate. His workshop is situated in the Historic Dockyard, Chatham, Kent.

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A man with glasses and a blue t-shirt, wearing a dark apron, is working on a lathe. He is holding a small piece of wood against a spinning wheel. The background shows a workshop with various tools and wooden pieces hanging on the wall.

Anne Briggs Bohnett meets
the master of the marking
gauge, Jeff Hamilton

Making his mark –
An interview with
Jeff Hamilton of
Hamilton Woodworks

I first used a Hamilton marking gauge on a friend's bench at Woodworking in America in 2014. I 'met' Jeff when he joined Instagram shortly thereafter, and finally got to spend some quality time with him at Woodworking in America 2015. Jeff donated one of his gauges to my Community Tool Chest project, and I later added a few to my personal collection. They have held a treasured spot in my tool chest since. Knowing about our mutual love for community, family and farming, I was very excited to have the chance to interview Jeff for *F&C*. Our interview ranged

from downright silly (his favourite band is Iron Maiden, in case you were curious) to heartfelt stories about the rigours of working full time, being a dad of three, taking over his father-in-law's cattle farm and starting his own toolmaking business in the midst of it all. Like so many other small tool makers and woodworkers, Jeff is very excited for the day he can "finally retire, and start making full time." Until then, his life promises to be extremely busy.

Jeff is a family man through and through – he loves spending time with his kids, and talks a lot about how his wife Kristi is his biggest

fan and supporter (or, he said with a chuckle, at least she puts on a good show). Two and a half years ago, he took over his father-in-law's cattle farm because "someone needed to do it." He inherited his love of woodwork from his father Harry, who taught him how to work with his hands and use his brain to solve problems. He loves riding his road bike and trout fishing, he hates painting walls and trim. Every day he tends cattle, goes to work, spends time with family and then goes back to work in his shop. "If I plan it right, I have about two hours to make tools every day. So time in the shop cannot get wasted."



4in cherry marking gauge



First a light pass, with subsequent passes to deepen the line

Marking gauges

Jeff has been making his wooden marking gauges for handtool users since 2005, but his first major breakthrough as a toolmaker, as has been the case with many other small toolmakers, came when Christopher Schwarz first blogged about his panel gauge in 2011. Joining the social media website Instagram has also greatly affected his demand for tools. While he says it's tough to keep close track of just how many tools he's made over the years, Jeff told me he buys his blades in packs of 2000, and he just ordered his 10000–12000 blade batch.

Every woodworker needs a marking gauge. There are all kinds of gauges on the market, and making your own is not too tough – even for a beginner woodworker – but Jeff's gauges really shine in a myriad of ways. They are not only beautiful heirloom quality tools, they are also extremely well designed for efficient, consistent use. They feature a wide fence which keeps layout lines very accurate, a shallow fence depth that allows layout on the bench top without interference from the

fence, they can be used either right or left handed and the most brilliant feature is the moon shaped cutter, which is unique to Hamilton gauges. The shape of the cutter slices the grain of the wood rather than scratching it, which is how pin-gauges work – pin gauges tend to follow the grain of the wood rather than follow the line you intend to cut. The bevel of the cutter also presents a great advantage in that it pulls the fence in tightly to the stock as it is cutting.

Using Jeff's gauges is quite simple, you can set the gauge by placing the blade into the indents of a ruler or by the thickness of the stock you are joining. There are several ways to hold the gauge, but it was designed to be held a certain way: pinch the beam near the blade with the thumb and pointy finger, allow your other fingers to fall into place, the middle finger should fall on the angle, the ring finger in the radius and your pinky finger should come to rest on the beam. This gives

the user total control of the tool. "I love to show people how to use the gauge in person, the look on their face when they lay out that first line is priceless," Jeff says. A light touch is all that is needed to lay out a very fine line, too much pressure will cause the razor-sharp blade to dig in making the gauge difficult to push or pull. "With the fence referenced against the stock, I like to roll the blade into the wood pulling the gauge toward me to make the first pass."



Use bench stops to help hold your work



Hone the bevel on a stropp

Dreams for the future

Jeff and I talked a lot about future plans for his business. In four years, he plans to retire from his day job and pursue making tools and doing woodwork full time. He told me that his 'dream life' would include buying a bandsaw mill and building a post and beam construction shop 'where I can build chairs and make tools with a big smile on my face.' The next product he hopes to release is a layout knife "because it is the logical 'next step' in the layout process." He has also been working on a mortise gauge for several years. Jeff told me he gets his best ideas while sleeping: "While I'm dreaming, I solve most of the issues that I've been having." Sign me up for that superpower!

I asked Jeff if he had any advice for those interested in making tools to sell. He said: "Be careful what you wish for. Just after I started making gauges, Larry Williams said to me, 'Jeff, if you show me a rich tool maker, I bet that tool maker's wife has a damn good job.' Making tools for yourself is really not that hard if you have the time to see it through. But making tools for other people is a completely different animal. When you turn your passion into your job, you become married to it. There is no time off, people are depending on you to provide a quality tool in a timely manner, and sometimes, orders are piling up and you have to stay inside and fulfil them instead of doing things you like and spending time with your family who misses you." Jeff got his start making tools after a class at the Marc Adams School of Woodworking. Marc presented the class with a challenge, and Jeff accepted.

"Making tools for yourself is really not that hard... But making tools for other people is a completely different animal"



Both beautiful and functional

The rest, as they say, is history. He has found a way to manage his time so he's able to do what he loves, and he's found a product he really enjoys making and is proud to sell – he told me those were key bits. He's been smart to find friends and mentors in the industry, a few he mentioned were Larry Williams and Don McConnell (Old Street Tools), Jameel Abrams (Benchcrafted), Mark Hicks (Plate 11 Benches), Chris Kuehn (Sterling Toolworks) and Dave Jeske (Blue Spruce Tools). *F&C*

Hamilton Woodworks

At the time of going to press Jeff's website was undergoing a redesign but can still be found at: www.hamiltontools.com

You can also find Jeff on Instagram: [@gaugemaker1](https://www.instagram.com/gaugemaker1)



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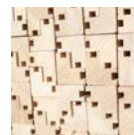


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When push comes to shove

Derek Jones looks at using tabled lap joints



PHOTOGRAPH BY JANE/DEREK JONES

There's not that much call for Japanese-style of joinery in my line of work, at least I'm not aware of ever consciously infusing a western style with an exotic influence. That said there are some obvious similarities between the styles; wedges, tenons, tapers and scarfs to name a few that make it impossible to completely separate the two.

Accepting that the basic rules of engagement for joining two or more pieces of material together with similar working properties are the same the world over, it's interesting to note where and why things are done differently. Strip away the obvious cultural differences and you will find good solid practical reasons for the different approaches. The more intricate examples

of Japanese joinery are linked to the design and construction of buildings and temples, the mechanics of which are dictated as much by the physical aspects of the material as the task of assembly. And let's not forget that the origins of woodworking joinery are from a time when glues were either not available or just unsuited to the task. From a furniture maker's perspective joinery that obviates the need for glue is an attractive one; no clamps, no downtime and no mess to clear up. What's not to like? Add to the list of pros the idea of a convenient disassembly some time in the future and things start to look very attractive indeed.

Joints that meet this criteria are designed accordingly and use a variety of cunning tricks to make them work. The first step

in planning such a joint is to recognise the stresses that will be applied to it such as compression, tension and deflection. Grain selection and orientation will typically be used to counter the primary force with at least one feature to locate things and another to lock the mating parts in place. Get the balance right and you have a joint with true structural integrity.

Of course, you could argue that when we construct a joint that uses glue, all these details have to be taken into consideration as well, along with appropriately aligned mating glue surfaces, which makes them even more demanding. Following my attempt at this wedged lipped tabled lap joint I'm not convinced.

Inspiration

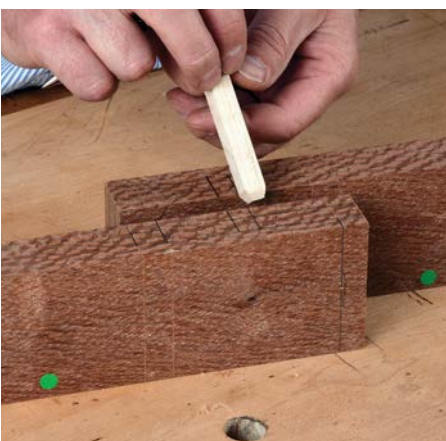
The inspiration for trying this joint came from a traditional 19th-century Chinese chair. The back rail is made from three separate pieces of dense rosewood-like timber. This shape is not uncommon in the western world, Windsor chairs and Hans Wegner's PP56/66 for example, and are mostly made from a single piece of wood. The piece in question, typically ash, would be subjected to heat and moisture in the form of steam rendering it pliable. While in this state the component would be forced into shape and held there until cool and dry thus retaining the shape. As clever as it is this technique won't work on exotic timbers like rosewood hence the need for equally clever joinery.

Designing the joint

To familiarise myself with the general anatomy of the joint I made a sample from MDF. Although it won't tell me anything about the strength of the joint apart from not being a suitable material it did help to identify some of the pitfalls in marking out. My choice of timber was a piece of Ropala that had been hanging around the workshop for years, which I immediately regretted. It's as tough as old boots and doesn't mark up as easily as something like mahogany. I'm pretty sure this is an easy trap to fall into as my approach to marking up was to adopt a very western style and proportion things out using the rule of thirds. I've since discovered an alternative technique that makes use of a Japanese square. More on this another time.



Components are often the most reliable method of transferring a dimension



Lay out the shoulder lines clearly and to depth



Three sections form the back rail on this Chinese chair



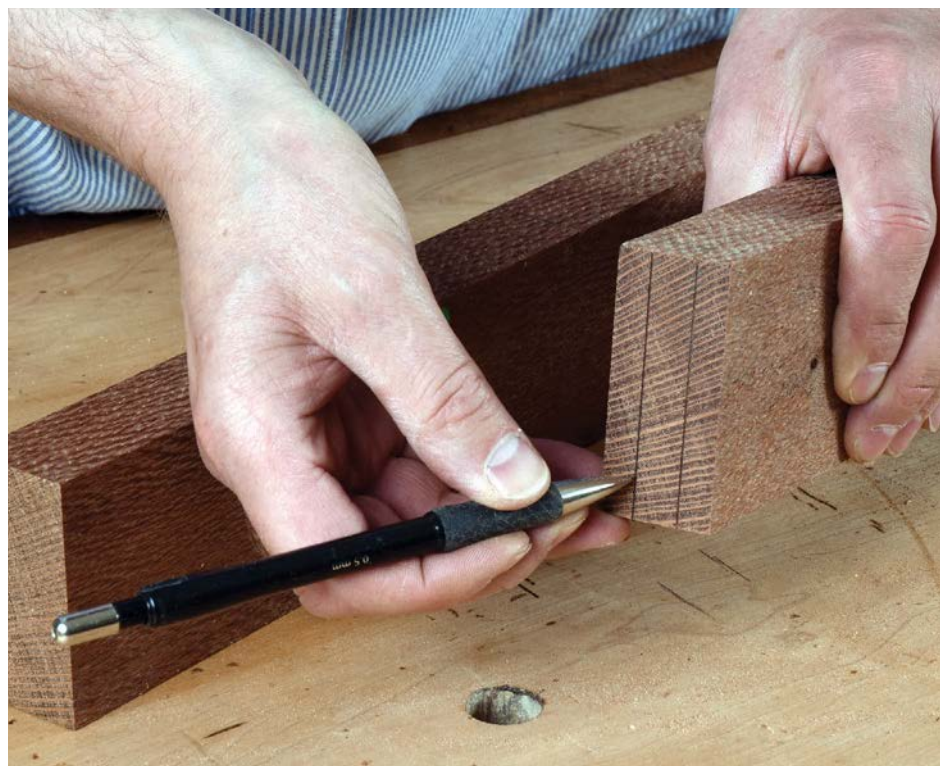
A peg forces the interlocking parts together

Joint anatomy

Tabled joints feature a hook cut into the mating parts for alignment. In this joint 'lap' refers to each part of the joint overlapping the other. There is a lip at the end of each table to resist racking. The wedge or peg in this case is used to lock the parts in place.



An MDF test piece shows all the major parts of the joint and how the voids are to be filled



Transfer as much information as you can while the components are still in tact

Below the waste

This joint is made up of several straight saw cuts that mirror those used to create a straightforward tenon, i.e. shoulders and cheeks. I recommend zoning the waste sections above the base lines and marking them accordingly as the tables are created from within the component. Pay careful attention to the depth of the crosscuts as

well as to which side of the line constitutes waste. Sounds obvious but it will catch you out if you're not paying attention. If you're geared up for western joinery then there are no special tools required to take on this joint. A sturdy shoulder plane will soon become your best friend closely followed by a wide chisel.



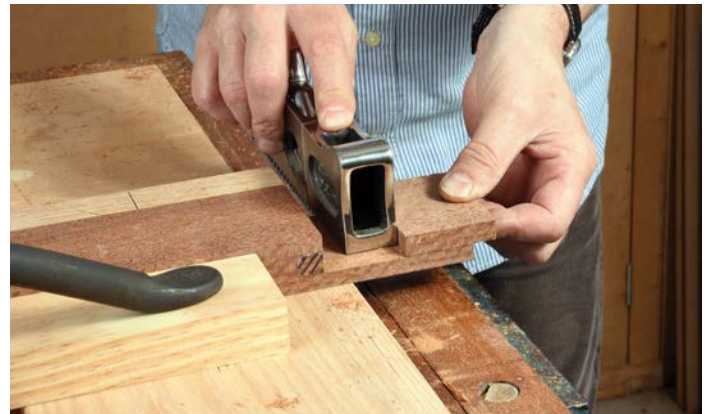
Identify waste clearly



Unless you class a shoulder plane as a specialist tool no specialist tools are required



A wide chisel is the way to go...



... followed by a wide shoulder plane

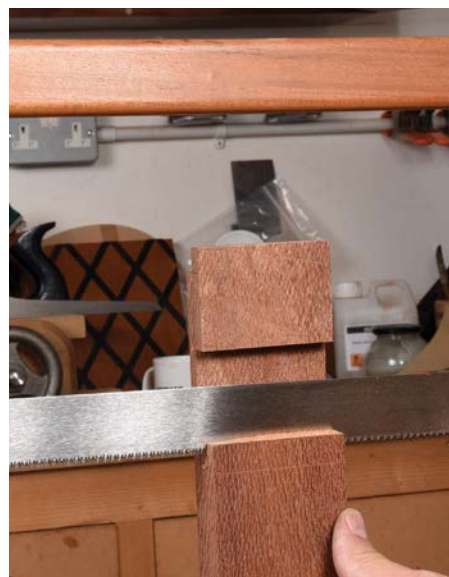
Mark two

Not all of your cut lines can be marked out from the outset. The channels for the lips, for example, can only be made after the tables have been cut if you adopt the thirds rule and keep all the different elements the same thickness. Sawing the waste out for the channel also represents a challenge. A frame saw worked well

on this occasion but there's no substitute for planning your joinery to suit your tools in the first place. Increasing the width of the tables would have allowed me to drop in a small dovetail saw. In hindsight I think I could also have made this deep cheek cut to the full depth of the channel in line with the face of the table and made thicker lips.



You'll have to gauge up twice so make sure you have a gauge that can get into tight spaces



You don't have to use a frame saw to cut the channel but it's quicker if you do



Outline the waste for the mating part from the first half of the joint to avoid any mistakes

Closing the gap



Cut partway through the joint line



Remove the waste with a chisel



Drive the wedge in to complete the joint

To fine tune the joint assemble the components with a temporary peg or with a sash clamp. Run a saw partway down the shoulder lines and take the joint apart. You should now have a small amount of waste that can be removed with a chisel to

the thickness of the kerf. You're now free to shoot the ends of the lips to match. When you're happy with the fit add glue if you wish (I did) and drive the wedge in without glue, also if you wish (I did).

About wedges

There are two main things to bear in mind when making wedges. First, because wood consists of a tubular cell structure it can resist great compression loads along the direction of the grain without the fibres being destroyed. So rather than search in the bin for a wedge shaped offcut select your wedges with the straightest grain possible just as if you were choosing timber for a set of chair legs. The second point and probably the more important of the two is to only select dry wood and here's why. Resistance to compression perpendicular to the grain is less than that previously mentioned and because wedges are typically driven into the joint close to right angles to the grain of the mating parts they are exposed to lateral compression. As the wood dries it shrinks and as shrinking under compression damages the cell structure the wedges can no longer do their job.



Chamfer the tip of the wedge to keep it on track

Shaping up

To replicate the chair back component I decided to shape the joint and started with a single curve using one of Sterling Tool Works stainless steel French curves as a template. Not having access to a shave horse in the

workshop I held onto as much of the board as possible while using a succession of rasp, spoke shave and scraper to round things off before applying a little shellac. The overall result was quite satisfying.



French curves are great tools to have around the workshop for all manner of impromptu prototyping



Leave as much material in tact as you can while shaping



A coarse rasp removes material quickly and doesn't need sharpening



For a consistent profile try shaped scrapers

Think inside the box

All that cross grain planing and shooting while making the joint resulted in a lot of tear-out along the edge of my knife marks. There are ways to avoid this of course, such as planing from both directions or using a splch block, but as I knew this material was destined for the scrap pile I focussed my

attention on creating a tight joint in the middle of the block. It worked and was a good exercise in levelling areas that aren't visible until it's too late. So would I consider using this joint in future? Sure. Would I do it differently? Absolutely and that's half the fun.



Lots of tear-out on the outer edges



Nice tight edges on the inside

2 for 1 marking gauge

You can convert a cheap wooden marking gauge to mark a line at a consistent distance from a curved edge by gluing a couple of half round blocks of hardwood to the back side of the headstock and threading it onto the other end of the beam. The two bars and pin are now fixed in a triangulation point, an Isosceles triangle to be precise, so you need to ensure the blocks maintain constant contact with the edge of the workpiece. It works on concave and convex curves of a single radius.

You can expect a slight deviation when following small ovals, ellipses or other complex shapes but for the most part the difference is hard to spot. *F&C*



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I'm sorry, I haven't a clue

Geoffrey Laycock looks at common problems with user manuals and offers advice on what to look for when buying new kit



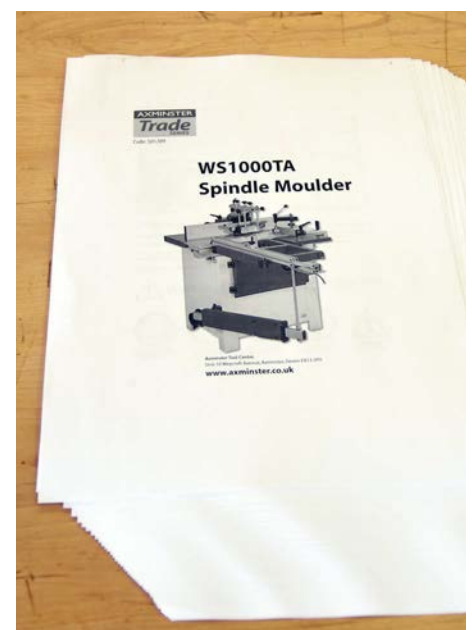
PHOTOGRAPH BY SAHR ALAM, SHUTTERSTOCK

One of our readers, Philip Seers, recently wrote in raising a very valid and important point about machinery and user manuals. His recent experience buying a Scheppach planer/thicknesser, SIP tablesaw and Hammer bandsaw was of user manuals which he described as “appallingly bad, with absurd and unclear English, incomplete details and poor illustrations”. All three manufacturers involved are obviously well-known names and all three machines would be imported, one or two from within the EU and one probably imported by the distributor direct from the manufacturing origin, which is almost certainly China.

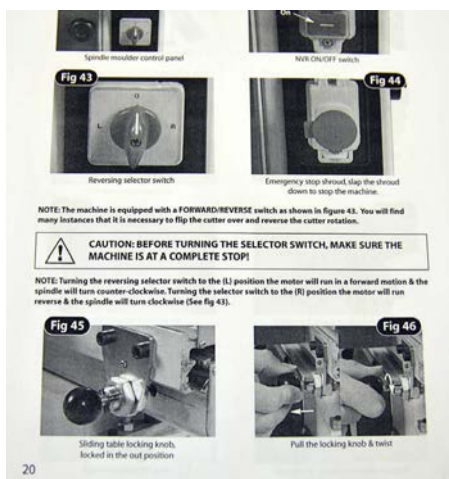
My experience sadly mirrors that of Philip. It is not all bad news though and at least two significant suppliers of woodworking machinery in the UK, Axminster Tools and Record Power, have, over the last few years, put significant effort into producing well written, clear and ‘useful’ manuals. In both cases you can find the manuals on their websites so reference is assured even if you lose your hard copy. I find that some manufacturers that have

well-written manuals on the technical operation of machines and power tools often then fail to provide practical advice on the scope of use, technique and tips to get the most from that item. One of the most expensive in the power tool market, Festool, is guilty of this, others are also lacking.

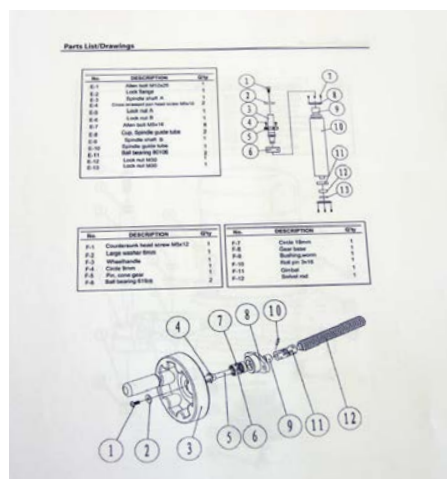
Investigating Philip’s complaint, the first thing I did was to look at the website of each supplier involved and look for the machine and manual bought by him. In each case there was no provision for referring to a manual, so I could not look to see just how good or bad they were but I’ve seen plenty of examples over the years. I have read incomplete, unsafe and sometimes amusing inclusions. My favourite – bear with me as this involves a motorcycle – was for a 250cc Aprilia. Some years ago I regularly rode new demonstrator bikes for a local dealer to ‘run them in’. I always went through the manual to check what was required and this one included the phrase, ‘WARNING – Hot Exhaust – do not dry children or small animals on exhaust!’ Mmmm I think I know what they really intended.



The manual for this spindle moulder from Axminster's Trade range may be 44 pages long but the content is thorough...



... using photographs and clear safety warnings



Sourcing spare parts in the future should be relatively straightforward thanks to clear diagrams



In many cases the Axminster site will also link you to the relevant HSE information sheet for that machine. Top marks Axminster



Record Power operate a similar system although not every machine is covered. Look for a 'Downloads' button on the product page...



... select the document and either download or print



In this Festool manual one might expect the annotations on the exploded diagrams to link with similarly labelled bullet points. They don't

What does it mean?

Philip did supply a copy of part of the manual for the Scheppach planer/thicknesser and his assertion of absurd and unclear English was fully justified and the information given was also incomplete. Just one extract from the section on blade changing should make the point:

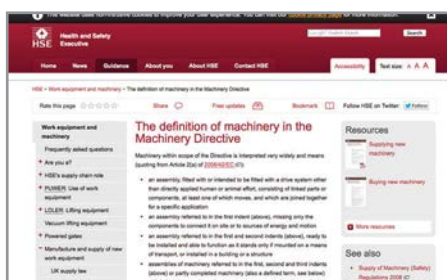
"Warning! The details of blade fastening, blade projection length, blade thickness, should be kept for a minimum during warm up spin and optimally for the starting of the blade attachment screw." Anyone understand that? The remainder is similarly incomprehensible.

Legal requirements



Admittedly the HSE website may not be the most dynamic website but for manufacturers and suppliers the information is there and it's free

So what should we expect from user manuals and are there any legal duties that should ensure this? The first surprise may be that as far back as 1975 duties were imposed by the Health and Safety at Work, etc. Act of 1974 on any person who "designs, manufactures, imports or supplies" any article for use at work. These duties include ensuring that persons are provided with adequate information about the use for which the article was designed and any necessary conditions to ensure that



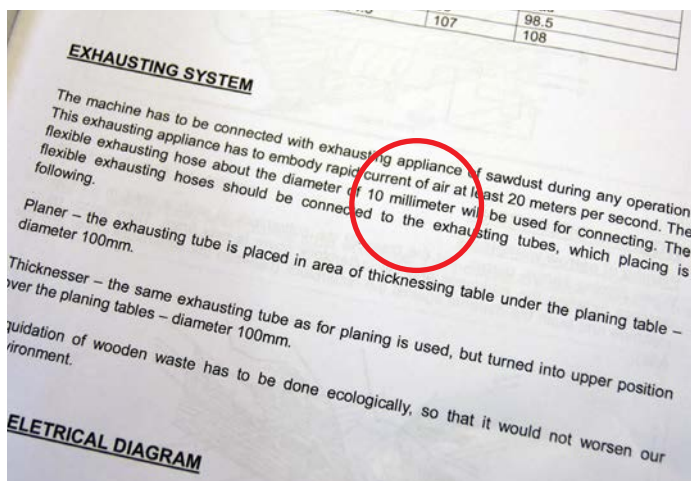
Download all 31 sections if you dare!

it will be safe and without risks to health at all times. Very much paraphrased, this basically means providing adequate and suitable instructions for use, and 'article' means just about anything whether a small hand tool or the largest woodworking machine you can find. This legislation also places a duty to ensure revisions in information are supplied.

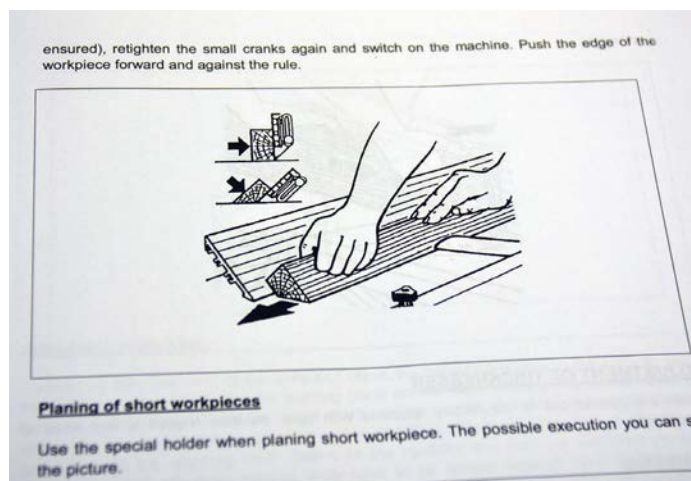
There are other EU originating regulations in force in the UK which add increasing detail to what is required, some, for example, placing stringent duties on employers to provide suitable and sufficient information to employees – not always easy when starting with badly written user manuals and technical support!

The Machinery Directive 2006/42/EC is the primary director of what is required for the supply of machinery and applies to machinery moved from one EU country to another EU country plus import of machinery to any EU country. To preserve sanity I suggest not trying to go through it unless you have a serious insomnia problem. Let's paraphrase once more to give the general idea as regarding 'Information' there are 31 sections!

Essentially the Machinery Directive says that safe use of machinery depends on a combination of design and construction measures taken by the manufacturer and protective measures taken by the user – providing the necessary information and instructions to users is an essential and integral part of the design of machinery. A machine should be designed to make it as safe as possible and user instructions should allow the user to operate it as safely as possible. Instructions must be supplied in paper form as it cannot be assumed that everyone has access to the internet BUT the Directive also says it is useful to have instructions in electronic form so instructions can be recovered or updated. So three well-known suppliers in the UK fail on that point.



10mm is quite clearly a typo but the rest of the text doesn't exactly fill the reader with confidence

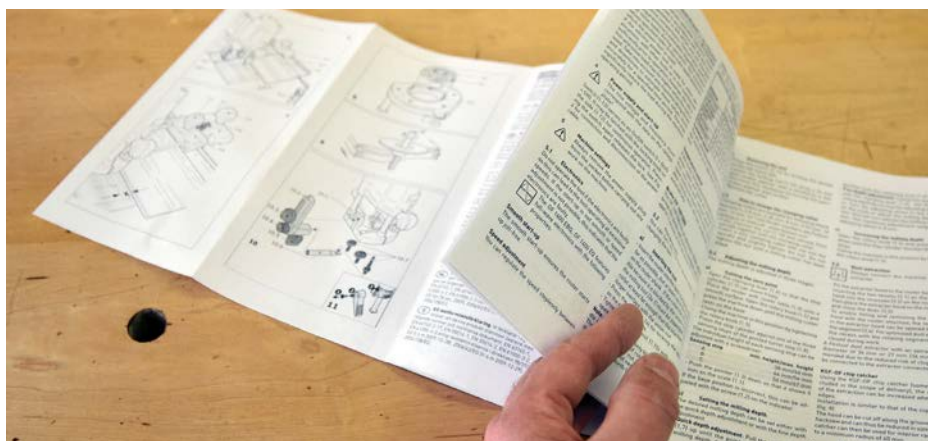


Some images are just promoting dangerous practices

Where the original instructions were not in the end user language, the supplied translation must be accompanied by the version in the language of origin, so the user can check if they believe there is doubt in the translation. There are many details of what must be included and just one example is: "The contents of the instructions must cover not only the intended use of the machinery but also take into account any reasonably foreseeable misuse thereof." Where the machinery is intended for non-professional use the wording and layout must be adapted, for example avoiding the use of specialist technical terminology.

Philip mentions poor illustrations and yes, the Directive covers this aspect with: "Clear and simple drawings, diagrams, graphs and tables are usually preferable to long written explanations. But the necessary written explanations should be placed adjacent to the illustrations to which they refer." One of my pet hates, which is a direct contravention of this requirement, features so often with power tools – the diagrams are placed at the front of the manual and you have to constantly reference back and forth to the text, so annoying.

We could write pages on what is required, starting with assembly, installation and connection, through operator training, residual risks, emergency procedures, methods of unblocking, adjustment, maintenance and spare parts. It should be quite simple: instructions should be easy to read, comprehensive, accurate, have clear and simple illustrations and so forth. They should



Flipping back and forth to read the manual is not an ideal solution for the end user

be available to download and the supplier should update the electronic versions when necessary so end-users can access the most accurate version. Some companies have taken this on board and try very hard to comply, some others do not and that can compromise the safety of the user.

If looking at machinery in a store, I would ask to look at the user manual and always include this as part of my evaluation of the overall package. When looking online at potential purchases I always investigate availability of manuals for download as they allow a better comparison between the items being looked at. I am currently looking at a new large capacity planer thicknesser and straightaway I ran into this issue. One supplier did not have manuals online and the published

technical specification did not answer some of my questions yet this was a very expensive bit of kit. Another supplier had their in-house developed manuals available which helped me decide that one of their machines was more suitable than the much more expensive one and the bonus was a saving of about £1000. Their loss and partly due to lack of available information; it also stopped me buying one of their bandsaws.

User manuals are important sources of information for professional users and even more so for the non-professional. There is no adequate substitute for correct training but user manuals can help to fill that gap. There is of course a need for users to read them and not follow the very common and what I call the 'Arfix Kit Syndrome'.

About the author

Geoffrey Laycock was one of HM Inspectors of the Health and Safety Executive and latterly a consultant to industry for over 30 years. He has written extensively on machinery safety including the Machinery Directive and acted as consultant editor on this and other subjects for Croner Publications who produce in-depth guides for business on safety and health law. Geoffrey has been a regular contributor to *Furniture & Cabinetmaking* for a number of years.

The Airfix Kit Syndrome

You open the box, start gluing the bits of your Supermarine Spitfire together and eventually you try to get the pilot into the cockpit but he won't fit. You finally unfold the instruction sheet which says: 'No 1, glue pilot into seat then glue seat into right side fuselage'. It is always of value reading before doing. (Other plastic assembly kits are also available!)



Fortunately the constructor of this Spitfire read the instructions first

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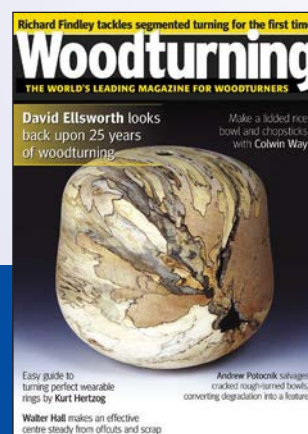
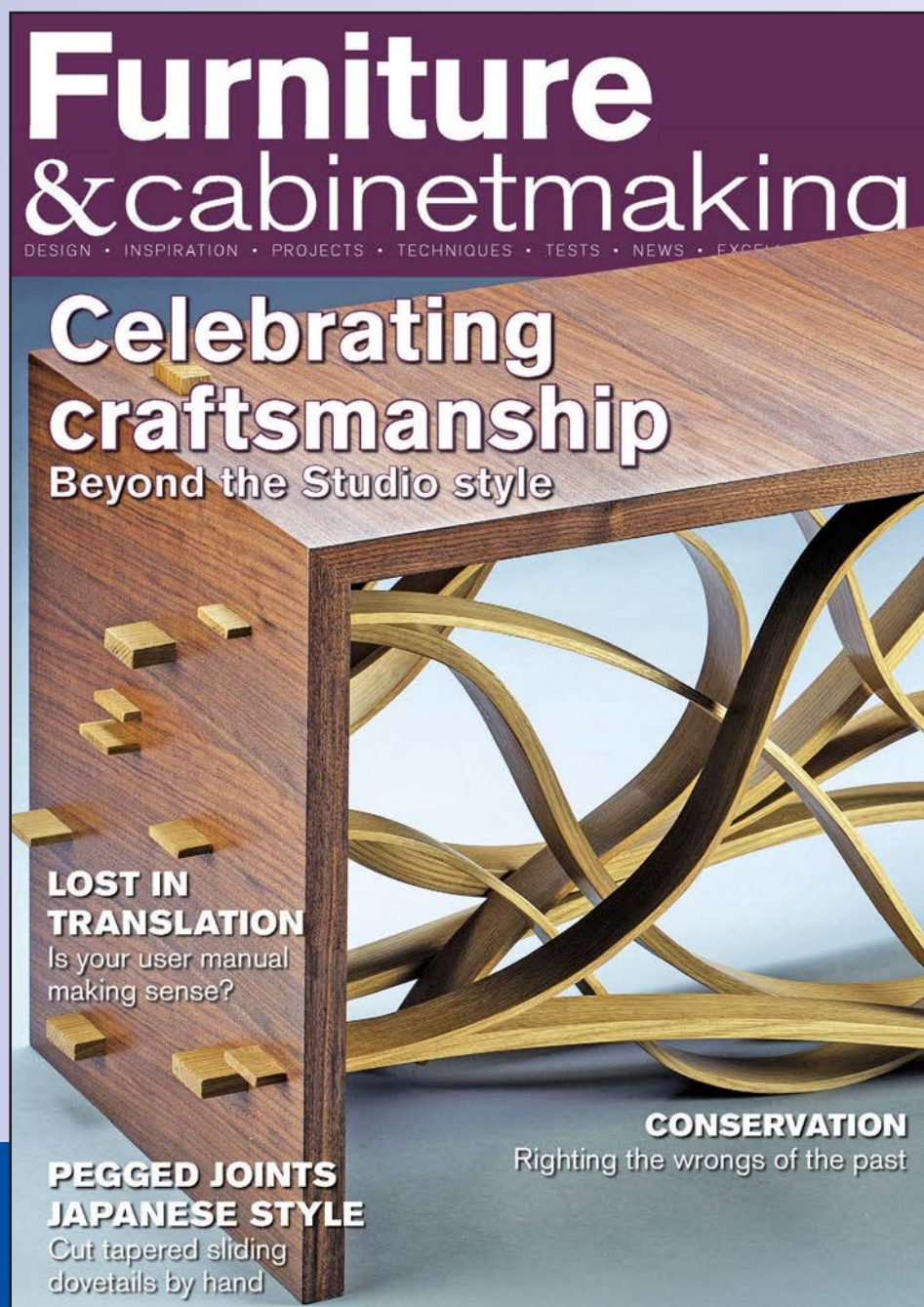
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Forsa 4.0 - P2	Professional	Inc Professional STC + TWE + TLE + Scorer	6.5 / 1.0 / 415v	107 mm x 1.6 m	£3,000.00	£3,600.00
Forsa 4.1 - P2	Professional	Inc Professional STC + TWE + TLE + Scorer	6.5 / 1.0 / 415v	107 mm x 2.1 m	£3,500.00	£4,200.00
Forsa 8.0 - P3	Professional	As Illustrated above	6.5 / 1.0 / 415v	107 mm x 2.6 m	£4,650.00	£5,580.00
Forsa 9.0 - P3	Professional	As Illustrated above	6.5 / 1.0 / 415v	107 mm x 3.2 m	£4,895.00	£5,874.00

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The art of French polishing – part 2

Patrice Lejeune and Luke Addington
conclude their series on French polishing



PHOTOGRAPHS BY LUKE ADDINGTON

In the last article (*F&C issue 246*) we gave you tips for buying materials and preparing them for French polishing. Now we can delve into the intricacies of the actual French polishing process.

Pore filling

Pore filling is the most important part of the process. The state of the surface will be reflected in the final quality of the polish. The goal is to have a smooth, satin surface at the end of filling. This allows you to have a thinner layer of shellac, which enhances the depth and reflectivity of the polish.

Our favourite traditional pore filling method uses fine pumice, shellac and alcohol. Pumice has multiple advantages compared to other pore filling materials. As an abrasive it will continue to sand and level your surface, but as it is worked it becomes finer. As a porous material, the grinding action of the pad, filled with alcohol and a drop of shellac, creates a mastic of stone and wood particles that binds as a conglomerate inside the pore. Knowing this, we strongly advocate against the many sources advising you to oil the wood (especially with mineral oil) before pore filling. We believe this practice does not allow the mastic to bind properly inside the pores, which leads to many problems over time. Two classic examples are white dots appearing in the pores and discolouration or darkening of the wood.



A perfectly pore filled surface. Notice the satin sheen and even appearance



White pores appear over time as a result of improper poor filling



Muslin pouch used to dust pumice across the surface

To distribute the pumice evenly across the surface of the board, we like to use a pouch of muslin fabric filled with pumice to lightly dust the piece. If you can see the pumice there is too much. Open your pore filling pad and add only a drop or two of shellac. Excess shellac will turn the mastic into a gunk that is almost impossible to work into the pores. Then, one teaspoon at a time, add alcohol to slowly saturate your pad. Too much alcohol can pull the mastic out of the pores. You know you have enough when a light streak of alcohol is left on the surface of your board. With great downward pressure, begin rubbing the pad against the surface in large circles. Your intention is to pack the mastic all the way down to the bottom of the pores. Alternate your patterns from large to tight circles, figure eights, horizontally, vertically, clockwise, anti-clockwise, etc. to be sure to fill the pores from every angle and create a truly flat surface. As you work, insist on the corners, edges, then middle. This progression will help ensure the entire surface of the board is evenly pore filled. Spend about one minute at a time working on a piece (about one square foot in size), then switch to another. Carry on, switching back and forth between pieces, for about half an hour.

It is counterproductive to spend too much time on a piece at once. It is better to spend a small amount of time on each piece and continue cycling through your table of pieces. If you have only one piece to polish spend a minute working on the surface then let it rest for 15 minutes before working it again. When you first start polishing, it is a good idea to have scrap boards around your piece to practise the rhythm of rotating from one piece to another. When you get back to the first piece in your cycle, change the movement pattern of your pad. For example, if you completed a full pass on each piece using a large circular motion, use a figure of eight on your next pass around, followed by small tight circles, etc. Work on the surface until you feel like you are not filling anymore, then let the piece dry overnight and in the morning check the pores. The mastic will most likely have sunk deeper into the pore. Then you can start filling again. You can always take a break at anytime. There is no such thing as stopping too early but you can quit too late. Patrick

Edwards' rule is, "Not too much, not too fast. And never polish under the full moon."

As you work, mastic may build up along the edges of your piece if you are not careful. Develop the habit of wiping the edges to remove any unwanted excess materials. The more you work, the smaller the particles of stone and wood become, filling even the slightest hole, while finely polishing the surface. This gives it a smooth, silky, satin surface at the end of pore filling.

If you are pore filling a marquetry panel it is important to remember that you will be working with pores of different depths. Areas with deep pores will need more attention than others. When working on marquetry panels with great contrast in colours you have to be very careful not to transfer too much colour from one area to another. For example, an ebony background will tend to transfer black dust into the pores of the veneer around it. Try to focus on small, like-coloured areas to keep the natural tone as true as possible. Do not hesitate to move your web or replace it to minimise the transfer of colours.

While you are working, you need to periodically check the tackiness and moisture level of the pad. Unlike some polishers, we

do not wear gloves to allow us to pay more attention to our senses and feel the state of our pad. Touch the bottom of the pad to the palm of your testing hand. Close your hand to feel your palm with your fingers to assess the tackiness. It should feel like there is almost no stickiness. If there is no tackiness, add a drop of shellac. If your pad is no longer leaving behind a streak of moisture, add a teaspoon of alcohol. Remember to always fill your pad from the inside, adding materials to the core.

To assess your progress, bring your eye line parallel to the board and check the surface with the raking light. Resist the temptation to leave pores only partially filled, the extra work is worth the reward. Your goal is to make the surface as perfect as possible. If you see any holes or asperity it means the pores in that area have not been totally filled. Work on these pores a few times throughout the day to gradually fill them up. Skipping this step will leave holes in the finish or necessitate a thicker layer of shellac to compensate for this lack of pore filling, leading to a lower quality final surface.

To assure success, let the board cure for a week to check that you are really done with pore filling before beginning polishing.



An example of ebony dust being transferred to the pores around it. Some transfer is unavoidable but careful attention can reduce the amount greatly

French polishing (*verniss au tampon*)

If you want to confuse French cabinetmakers, ask them to execute a 'French polish'. You could, however, ask them for *verniss au tampon*. It is good to think of it this way because the translation, 'varnish with a pad', is exactly what you are doing.

For a new pad the first thing you need to do is load it with shellac and alcohol. Add a teaspoon or a little less shellac to the inside of the pad, then add about a teaspoon of alcohol at a time until the proper level of wetness has been achieved. The moisture should feel like a cat's tongue or a kiss. It should feel moist but not necessarily like it would leave moisture behind. It should be as though the pad is perspiring, just barely sweating the materials out of the pad. When you tap the pad in your testing hand you should feel the evaporation of the materials. If your hand stays wet and sticky then you have too much material. In that case, press the pad hard on your clean paper work surface to remove excess moisture, or have a scrap board to brush off extra material. If you polish with a pad that is too wet, it can create multiple problems such as streaks, orange peel, gumminess or ridges. It can even tear off the surface layer of shellac.

The first thing to do after pore filling is to seal the board with shellac. The surface must not be oiled at this point. Just like with the pore filling pad, develop a rhythm of hopping from one piece to another, changing your pattern each time you complete a cycle (circle, figure eight, etc.). You should glide across the surface with your pad with little or no downward pressure. Work on the surface until it just starts to grab (30 seconds or so per square foot) and then move on to the next piece. If you work on one surface too much, it will have the same effect as working too wet (streaks, tearing, etc.). Let a piece rest a few minutes before making another pass. Move your outer web around as needed to track the shellac as you go. This is called cleaning your web. When there is a white spot on the bottom of your pad, move the web to bring another area saturated with shellac into contact with the board. This helps prevent a dry ring of shellac from developing and scratching or burning the surface. Using only one spot on your web will also encourage adding too much material.

The surface is totally sealed when the sheen is even. When you feel that your pad starts grabbing (even on a dry piece), you will know it is time to add oil. This step can be done immediately. You do not have to wait for the surface to cure. We like to sprinkle the mineral oil onto the surface with a salt shaker, and then use a clean finger to smear the oil over the sealed area. Next, use wide circles with your pad to further distribute the oil. Do not put oil on the pad as your intention is to lubricate the surface and not soak your pad. An oil soaked pad will become dirty and unable to disperse moisture evenly. Just add enough oil to lightly cover the surface. If it starts to grab while you are working, add a little more. When it grabs it may also be an indicator that the piece needs to rest. The



Using an overhead light to check the surfaces of the panels

difference is slight and only experience can tell you when you need to add oil or move on. As a baseline, it is better to move on to avoid working with too much oil. Let the piece rest for an hour and come back to test it again. You may need to add oil or quit for the day. If you do decide to let your surface cure overnight, when you come back to it in the morning, wipe the surface clean with a dry cloth.

Three sessions can easily be accomplished in a day. One session in the morning, one in the afternoon and one in the evening is a conservative approach. Do not work too much or too quickly, or you may damage the surface. You can come back to the surface sooner but first you need to develop your sensations and feel what the surface can take.

As you start working with the oil, you will receive instant feedback from 'the ghost' (also called 'flash' or 'the cloud'). This is the fume of alcohol leaving the surface and going through the layer of oil. It gives you information on the condition of your pad and your work environment. If the flash goes away quickly, then it means you are depositing the right amount of materials. If there is no ghost, it means your pad is too dry and you are not

depositing any material. If it lingers, it means the pad is too wet and your surface might still be active (wet) when you pass it again, thus marking the surface. If it is cold or humid in the workshop, the cloud will evaporate more slowly, so adjust your pad's moisture accordingly. Avoid passing over the tail of the ghost if it is still active as you may scar the shellac.

As with the pore filling, focus more on the corners, then the edges, and finally the middle. When polishing the edges of a panel at the same time as the face, wipe the edges often to avoid a build-up of materials that can cause a shellac burr. When the pad glides less easily, move on to another piece or let it dry for an hour or even come back the next day for another session.

As a rule, you should end each session of polishing with a clean web. You know the web is clean when you can no longer see any shellac on the web and can feel almost no stickiness. Try to develop this good habit before quitting. It will also help you avoid leaving rings of shellac in your web.



Using raking light to check a nicely polished surface



Above and right: A French polish made as perfectly as possible!

A finished French polish has a feeling of great depth as well as thinness. Stop before you develop an impression of thickness rather than depth. A thick French polish will look more like plastic and depreciate the hard work and effort you invested. The surface should be even and highly reflective. Look at the reflection of your hand in the surface, the less deformation, the flatter and truer your surface is. With experience, you will know when to stop when you believe the surface

cannot get any better but could get worse. Learn to trust your judgement and feelings.

Once you develop your sensitivities, you can adjust the timing to optimise your polishing. The timing and quantities of materials provided in this article are deliberately conservative, to allow room for the development of your own awareness, feelings and sensations. As you become more comfortable, feel free to experiment and, with experience, you will naturally adjust these parameters.

A handmade French polish will always have imperfections. Swirl marks and flakes of dust, which are signs of hand polishing, will appear in the final surface. Close to perfection is as good as it gets and the imperfections show the human hand behind the work. A French polish is made as perfectly as possible.

To ensure success, let your panels cure for a week before burnishing. This will give you time to observe the surfaces and judge whether they need further polishing.

Burnishing

Burnishing is the final step of the process. In French it is called *éclaircissage* and it serves two purposes: to heighten the glossiness and to remove the excess oil at the end of polishing. One of the reasons you make sure your web is clean and quite dry at the end of the polishing sessions is so the pad will be ready for burnishing. For this step, we will only use a very small amount of alcohol. As an option, you can keep a separate clean web only for burnishing. Following the grain of the wood or the background of the marquetry, move the pad in full length, fast strokes. The dryer the pad, the more you press to expel the remaining alcohol. This flashes the top layer of the shellac, smoothing it and burnishing it. The use of alcohol is necessary but needs to be controlled. There is very little difference between burnishing and burning the surface. Burning is when you melt or tear the shellac in one spot. To avoid streaks keep the pad clean and quite dry.

Since burnishing until all the oil is removed can be quite dangerous for the health of your polish, we recommend using popote, such as Super Nikco. Shake the bottle to mix the compound. Take a small wad of mèche or a soft cloth and place it on the mouth of the bottle. Tip the bottle over and back. Then rub the surface of your polish with the mèche in a circular motion. It should feel slightly slippery. Rub until the compound is almost gone. Then use a clean mèche to remove any excess residue. Leave the piece overnight to see if any oil comes to the surface. If it does, clean it again with popote, otherwise you are done. Never apply Nikco directly to the surface of the board as it is slightly acidic and could leave a mark. It is a good policy to wait a couple of days after burnishing to give time for any remaining oil to migrate through the shellac and to the surface. This can happen if you build your polish too thick and too fast. If this happens simply rub the surface with popote.

Practise, practise, practise

In France, French polish, like marquetry, joinery, upholstery, etc., is a trade, a job that the professional *vernisseur* (French polisher) exercises full time. Needless to say, French polish requires several years to develop the skills and sensations to quickly react to any variable that one may encounter. In the French *ateliers* (workshops) the cabinetmakers may know how to do fair finishing or marquetry, but to achieve the highest quality, they will request the help of a specialist.

If you want to be a very good French polisher you will need to practise, practise, practise. As we said earlier, if you want to practise and you only have one small piece to polish, use a couple of small scrap boards to work on. This way you do not have the temptation to work too long on one panel. You will learn to develop the contemplative rhythm required to cycle from one piece to

another and cultivate your senses in the best conditions. If you decide to make changes to this proposed process, only change one thing at a time and take notes as you go. Work on pieces with both deep and shallow pores to learn the differences in pore filling. Try to practise throughout the week. You can take pieces that have already been polished and repeat the polishing process (starting at the point where you add oil) without worrying about the thickness of the surface, just to develop your senses for how the pad should feel. Finally, never give up! If your first polish is not successful, keep trying and practising. Rome was not polished in a day!

Patrick Edwards, in his constantly cheerful disposition, likes to say: "If you polish as a professional every day for 10 years, then you will begin to understand the correct questions to ask."

The authors

Patrice Lejeune is a professional furniture and marquetry maker and restorer working in San Diego, California. He is a partner of Antique Refinishers Inc. and teacher at The American School of French Marquetry.

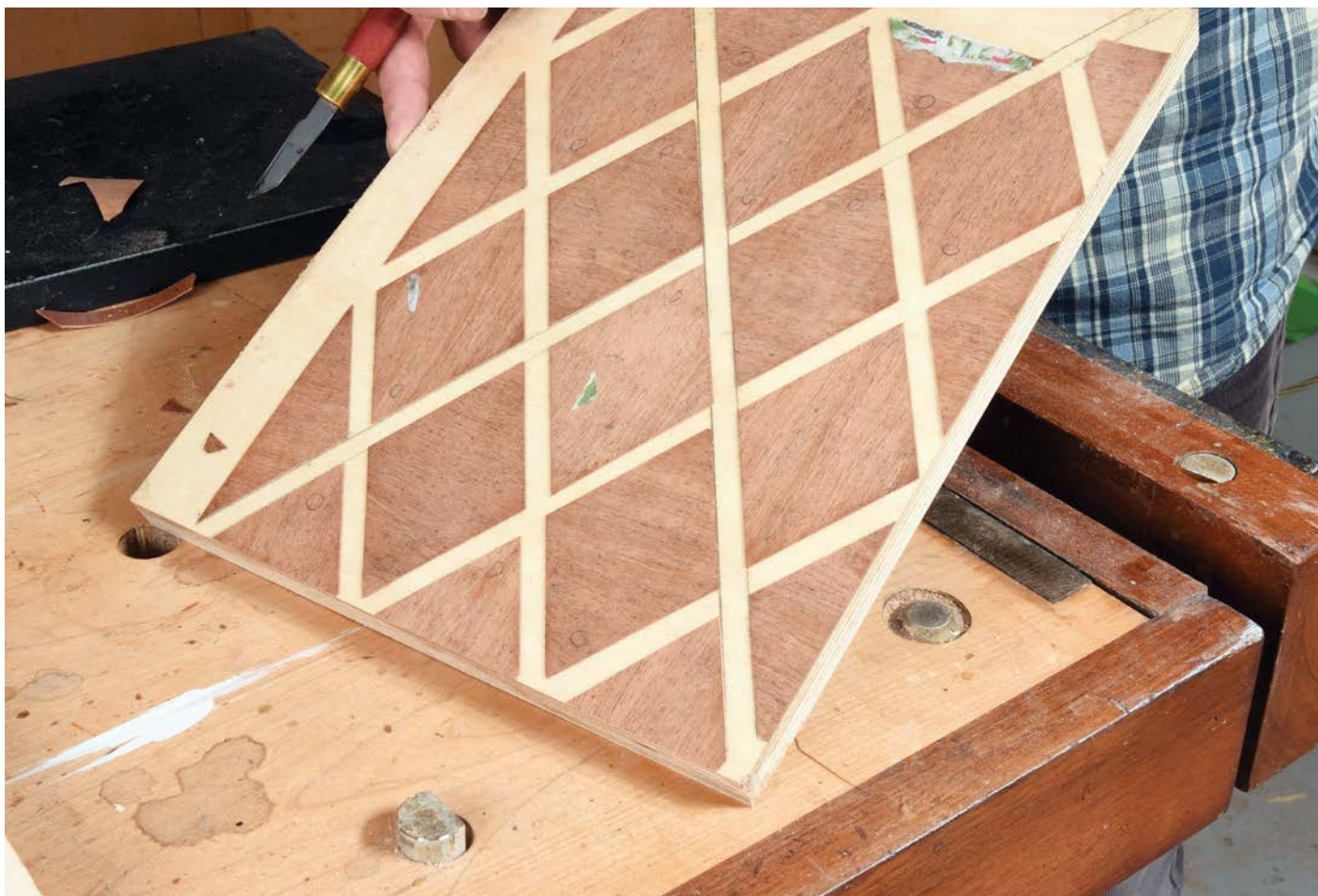
A graduate from the École Boulle in Paris with majors in furniture making and design and minors in marquetry and finishing, he has been practising for 20 years. His work can be found online at AntiqueRefinishersInc.com and PatriceLejeune.com.

Luke Addington is a professional furniture maker, teacher and marqueteur working in Tucson, Arizona. He owns and operates Addington Furniture where he recreates 17th–19th-century furniture. He is a graduate of The American School of French Marquetry. His work can be found online at AddingtonFurniture.com F&C



Cutting corners

Derek Jones takes a short cut approach to hand veneering that'll save you a packet



PHOTOGRAPHS BY DEREK JONES/SCMC

We spend half our time each month steering readers towards more traditional ways of working, the reason being that it will often be the most accessible and sometimes the most rewarding way of going about things. There are of course numerous modern alternatives to tackle the same problem and for me it's the blend of both the old and the new that invariably gets used. Dig deep into the history books and you'll generally find that the best modern techniques will have been adapted from those from the past, it's the natural evolution of a process and I know of very few creative people that stay in one mode of work permanently. This technique for laying up veneer is one such method. It came from the workshop of our profiled artist in *F&C* issue 245, antique furniture restorer John Hartnett. It also happens to be my first real foray into working with modern 0.7mm thick veneers. Before that if I wanted a piece of veneer I had to search among a pile of envelopes stuffed full of reclaimed fragments of period specimens a great deal thicker than a measly 0.7mm.

Thermo-logically speaking

Hide, or more accurately put, protein glues require two things to make them work; heat and moisture. On their own either of these two elements will affect the properties of the glue and nearly always to its detriment. Equally, having too much of one and not enough of the other will result in a similar outcome. But it's not just protein glues that succumb to this treatment. White glue, or PVA as we like to call it, will also react to a combination of heat and moisture. The effects if brought about quickly and simultaneously can be used to create your own iron-on veneer.

Thin on the ground

For reasons that should become obvious select an interior grade of PVA and not a waterproof variety that's intended for external use. Alternatively use a pre-mixed bottled hide glue. Put a quantity of the glue in a jar and add approximately the same amount of

water to a ratio of 50/50. Keep the lid to the jar and have a jug or separate vessel of clean water from the tap on standby. Give the mixture a good stir and select a clean brush that won't shed hairs the moment you show it a wet surface. I've found that buying cheap paintbrushes is a false economy even for paint stripping.



Use water-based interior grade PVA or hide glue for your adhesive



Start off with a 50/50 mix of glue and water

Real liquid hide glue

You can use this technique if you use hot hide glue as well. Just make a slightly thinner batch of glue and add urea to the ratio of between 10 and 40% to keep it liquid at room temperature and therefore prevent it from gelling as it cools in the jar. Split the water content of the glue mixture to incorporate around 30% strong beer to enhance pore penetration.



Urea can be used to produce a hide glue that remains liquid at room temperature

Cut and paste

It's easier to work with large pieces of veneer so start with cutting a leaf or two of veneer that will cover all the separate pieces you require. If you are working with burr veneer there's no harm in wetting it on both sides and placing the individual leaves between some moist newsprint sandwiched between two flat boards under sufficient pressure to keep the pack flat. Over night should do the trick. If you are using light timbers then substitute newsprint for either

brown paper or white packing paper as the ink can stain the veneer. This is typically done when hammer veneering with hide glue to make the material more pliable and release some of the tension within the fibres. It's not always necessary if you are using straight grain material.

Prepare a pasting board by laying down some paper and spraying it with water. Then spray one side of the veneer with water and place it wet side down onto the

wet paper. The veneer will want to curl up along the length of the grain so apply some tape to the ends and wrap it around the pasteboard. Immediately apply a liberal coat of your thinned down glue. The veneer should start to flatten down, maybe not completely but flat enough to prevent it from curling further or splitting. What you're looking to do here is flood the pores with glue so you can afford to be a little firm with your brush technique.



Wet the face side of the veneer with water



Apply the first thinned coat of glue to the back side of the veneer



Cut your components oversize from the glued-up leaf as you need them

Rinse and repeat

When you have an even covering rinse the brush in the pot of water and allow the glue to dry on the veneer. If your intended substrate is to hand you can apply a coat of the glue to that surface at the same time. Now add a little more glue to the mixture to achieve something like a 3:1 ratio and recoat the veneer and substrate. The second coat should dry a lot quicker. If the surface has attracted dust particles pick them off as you go or remove them later with some abrasive paper when it's dry. Inevitably the veneer will stick to the paper but it's not a problem as they can be separated quite easily with a knife. When the glue has dried

the veneer can be stored in a dry condition indefinitely. In this state you can recut the leaves to suit the finished size. I typically find three coats of adhesive on both surfaces is sufficient. Be prepared to experiment, however, as not all glues react the same way. It's highly likely if you're using PVA that you will see evidence of black spotting under the glue as it dries. Minute iron particles are the likely cause deposited into the veneer during the cutting process in the factory. It's quite normal and probably happens when you use PVA to fix veneer in a press but of course you never see it. It shouldn't show through to the face side.

Heat treatment

To stick the veneer to your chosen substrate you'll need those two magic ingredients I mentioned earlier, heat and moisture.

A domestic iron is a good source of heat and a damp sponge works for the latter. Lightly dampen either the surface of the substrate or the veneer, whichever is most convenient, and position the veneer in place. Apply heat with the iron and gently move it across the surface. You may hear a faint hiss as the water steams on contact with the iron. If you're using hide glue work a cold iron behind the hot one to cool the glue down and cause it to gel. You may have to adjust the amount of moisture applied depending on how long in advance the veneer has been prepared. You can do this by wiping the sponge over the show side of the veneer. The bond is complete as soon as the surface has cooled. If you discover bubbles in the surface just apply heat and maybe a little moisture to the area and repeat the process. Experiment first before attempting to veneer large areas using this technique and ensure that the substrate is flat and free from defects. MDF or ply is a perfect choice.



A light application of water from a damp sponge is sufficient



Apply heat and firm pressure with a domestic iron

Edge trimming

Just like shop bought iron-on veneer you can pretty much trim the workpiece as you go. Press a block of scrap material on the face of the freshly laid veneer and gently score it from below with a craft knife to remove the waste. A cabinet scraper

or better still a little scraper plane will trim the veneer flush with the face of the board. Don't try and do it with a chisel or block plane, you're bound to hit a patch of cranky grain and tear the veneer from the board.



Make a series of light scores to remove excess rather than one heavy cut



A scraper plane can level and square the corners of the veneer with less risk of tear-out



Veritas scraper plane

Overlay jointing

You can use the principles of hammer veneering to lay sections of veneer together. Iron the first piece to the substrate leaving a small section loose at the joint end, 5 or 10mm should be fine. Lay the second piece of veneer to be joined so it overlaps the loose end of the first piece. Iron it into place moving away from the joint so you have two loose ends. Cut through both pieces of veneer at the same time with a craft knife, peel away the waste and iron

the loose ends into position. This works in any direction and allows you to work with oversized sections. A good way of checking if your veneer has stuck is to wipe the area over with meths. It won't stay wet as long as water will but will cause any loose patches to bubble up slightly. This is a good initial test to determine whether your glue mix has been a success. If not it's probably time to apply another coat.



Lay the second piece directly over the first piece and cut through them at the same time to make the joint



Peel away the offcut from beneath and iron the two edges down



Test with meths to gauge the strength of your glue layer

Quick fire samples

One of the advantages of this cut and paste technique is being able to lay up sample boards very quickly. You quite literally cut and paste as you go without the need of a press or vacuum bag. This sample board was cut, laid and finished, one process after the other without stopping. Having a repeat pattern and a template speeds things up but even random shapes are quick to do.



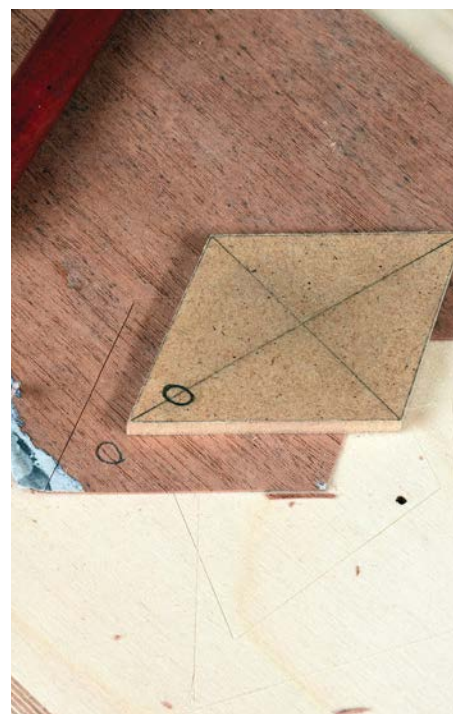
The finished sample board laid and polished in just a couple of hours

Create a template

Use geometry and not measurements to lay out a template, it's quicker and more accurate. MDF is a good choice for a small one-off design but consider something a little more robust for large or repeat projects. For continuity of colour and appearance when the veneer is polished it helps to mark the template and make sure it is always laid on the veneer in the same direction. Transfer the mark onto the veneer piece so you can orientate each piece on the board accordingly. For this pattern I laid a couple of diagonal lines on my board and worked from the centre outwards, the lines are only a rough guide. I had decided that the infill sections would be 8mm wide so laid the first two diamonds over the line by about 1mm as the shapes distort slightly while they're being stuck down. Be careful not to touch the iron onto the glued surface of the substrate or swamp it with water. This is more of a problem when using hide glue as the iron will pick up glue and then stick to the next object it touches. Try to keep the iron moving all the time, in a small area work in tiny circles.



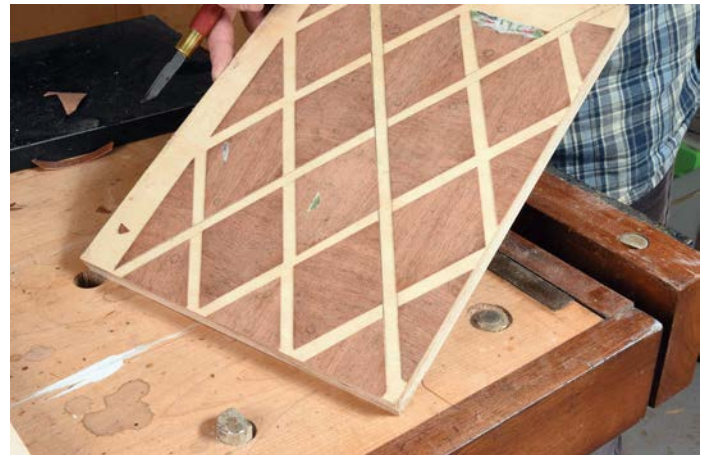
For a repeat pattern consider making a template that's oversize



Make a note of the direction of the grain to ensure continuity of colour when finish is applied



Set the shape slightly over the layout lines

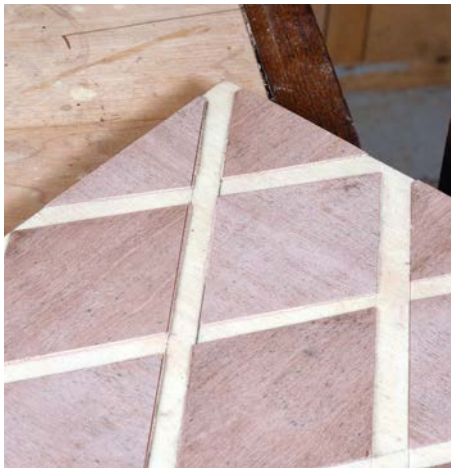


Complete the background pattern first before trimming

Trim to fit

With all the diamonds stuck down I then took a steel ruler and working on one edge at a time cut the edge of the diamonds back to my original layout line. The pre-prepared section of inlay was

then placed firm against the ledge to gauge the opposite side of the groove. Use the inlay as a marker and not a straight edge. The waste can be peeled away with a sharp chisel.



Create a straight edge to align all the points of the diamonds along one line



Use a second template or the inlay material to mark up the opposite edge of the groove



Trim away any excess material

Quick repairs

Repairs are easy to make using the overlay technique if you inadvertently lose a corner. Keep a small supply of leftover veneer. Patch in a piece oversize and then trim it back.



Carry out any repairs with offcuts of veneer

Pre-finish if you can

The veneer is quite vulnerable at this stage until the infill sections are laid and the panel is housed in a frame. Levelling has to be done carefully. I found that wrapping abrasive around a flat block and sanding with the fold perpendicular to my stroke the most effective method. Use anything coarser than 180 grit and you might be pushing your luck, remember you only have 0.7mm of veneer to

play with and the scratch pattern from each grade of abrasive has to be removed before moving onto the next.

Now is also a good opportunity to carry out any finishing. I used a brush to achieve a good even covering of shellac before finishing with a rubber, French polish style, and wax. Any excess was scraped away from the grooves so as not to interfere with gluing later.



Adopt a linear approach to sanding



Take the opportunity to pre-finish where you can

Raised inlay

The strip of bog oak used for the inlay was repeatedly re-sawn and planed flat on one face after the diamond pattern had been trimmed back to fit. It's thicker than the veneer by 2mm so effectively raised from the surface of the board. I laid long strips first in one direction and then cut the

short sections in between to complete the pattern. It was possible to lay the entire board up dry shooting the identical mitres on the edge of a shooting board with a small mitre plane, a block plane would work just as well. The infills were glued into the grooves at the same time and a

flat board placed on top with clamps for pressure while the glue dried. Had I chosen a material the same thickness as the veneer I would have laid it in the same way as the diamonds and finished the board at the end. The excess glue was easy to remove from the polished surface of the diamonds.



Use a shooting board and plane to achieve good clean mitres



If the infills stay put without glue it's a good sign



Use a wide block to sand the raised infills so you don't damage the polished background



A soft beeswax polish combined with a little black sawdust from sanding is a no-nonsense finish for dark timbers like bog oak



Use a brush when the wax has dried and buff to a shine

Pros and cons

I'm not suggesting for a minute that this cut and paste technique is better than conventional hammer veneering or veneering in a press or vacuum bag but it does have some advantages; the main one being that you don't need any special equipment to do it. The results are instant and repairs or adjustments happen in real time as you work so there's no waiting for glue to go off once the initial pasting has been done. As hand veneering goes it's also very clean and you can make as much or as little as you require without having to buy

a roll of iron-on veneer from a supplier that may not be a good match for the rest of your project. As for the down side, you might find that 0.7mm thick is a little delicate for edges and although I prefer to use thicker veneers whenever I can they don't work as well with this method; the pre-gluing tends to cause the veneer to warp and the amount of heat required to lay them flat consistently is hard to achieve with a domestic iron. That said it's a fun way to experiment with surface patterns and ideal for mock-ups and sample boards. *F&C*

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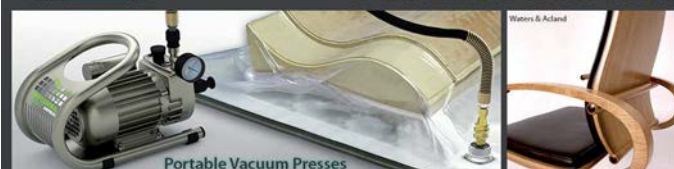
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Our correspondent: Roman holiday

Woodworker David Bradley is overwhelmed with inspiration on a trip to Italy

I love to travel. Honestly, it's something I don't do enough of. Whether purposely or not, after each trip I usually find something simple that I adopt when I get back home. Sometimes it's a specific food or a beverage

Over the years, *F&C* has acquired readers from all four points on the compass and since going digital in 2013, that trend has increased. You can find us anywhere in the world with a link to the web. As the content of the magazine is a true reflection of our readership, we've decided to introduce a new style of article that will take us on a workshop tour of the globe. Our reporter this month is David Bradley, an American craftsman who makes instruments, tools, lighting and metalwork. Here he tells us how his travels around Rome and Brinidisi got him thinking about craftsmanship and legacy.

(I'll likely be resurrecting my espresso maker after this trip), a way to prepare a meal or simply a different perspective on the world. There is always some way that travel changes things. My latest travels were to Italy, first to Rome, then the seaside town of Brindisi.

Ancient Rome

What can be said about the marvels of Rome that hasn't already been expressed? Its architecture, proportions, styles and building techniques have been studied and analysed for lifetimes and generations. However, there are small nuances that just need to be experienced in person as well. The enveloping smell of jasmine flowers in certain alleyways. The clink of coffee cups and spoons. The cobblestone streets.

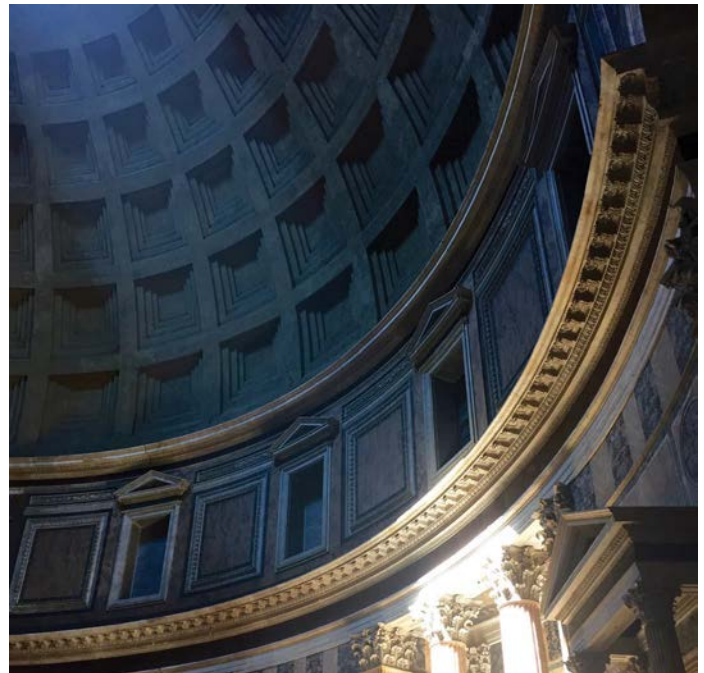
Then there are the buildings! The Colosseum and the Pantheon, just to name a couple of the more well-known examples, were built almost 2000 years ago, each started in the first century AD. The Colosseum is said to be the largest amphitheatre ever built, capable

of holding crowds of up to 80000. Just as impressive, the Pantheon boasts the largest unreinforced concrete dome ever built at 43.3m in height and diameter. It astounds me that these were built. Period. It literally took an empire to create these structures and just the scale alone makes one's head spin.

The city is full of buildings like this. How did the Romans do it? What tools and technology did they use or even develop in the process? How many thousands of people did it take? What were each of their roles? Did they take pride in their work? Was it a job that put food on the table? Unfortunately for many, it was forced labour. How many died during the construction? What was it like to work on a project that you might not see completed in your lifetime? As a hobbyist woodworker, metalsmith and all-round maker of things, a walk around the city brings up a flood of observations and questions such as these. I am tempted to do some research now that I've seen these places first hand, but my true interests lie mostly in getting my hands dirty.



One of Rome's most famous sights, the Colosseum was built around AD 80



The Pantheon's dome is one of the architectural marvels of Rome

Inspiration in the every day

Beside the major works, I find the everyday objects, things that are meant to be used and touched, just as interesting. Maybe it's because they are more accessible, like a simple door to an apartment. Did the maker

pick the knotty piece to bookmatch for the centre panel, or was it just what was available? I noticed many such doors, each with a story to tell. The metalwork also conjures questions about their origins. From simple

grates over a few windows in Brindisi, to small doorknockers, to more elaborate works... what were the shops like in which they were created? What were the working conditions? Did they create tooling and fixtures?



Ornamental doorway



Bookmatched knots



An elaborate doorknocker



Ironwork detail seen in Brindisi

Legacy

What is my real takeaway from this trip to such awe-inspiring places? Lots of pictures, yes. Inspiration, for sure. A bigger belly from all the good food? I'll never tell. After looking at works of varying age, from ancient to a few decades old, one term that keeps coming to mind is 'legacy'. So much of the history in these places makes me think of the craftsmen that came before. I build primarily for my own enjoyment, but I sometimes wonder what will become of the things I've created. Just as I have looked at the work of artisans of the past, what will people think of my creations after I'm gone and what observations and questions will they have? Will they be valued enough to be passed on to future generations? Only time will tell for sure.

One thing I do know, is this will be added to the things that I think about as I'm spending time in my workshop. It's a reminder to slow down and put out the finest

work possible, but also that we have limited time here, so we should use it wisely and then perhaps through our creations, our influence will last just a little bit longer than we do. *F&C*



The Baroque-style Trevi Fountain

David Bradley

David Bradley has always been fascinated by how things work and how they are made. He has spent years working in a manufacturing environment where he has used 2D and 3D CAD, CNC programming and robotics programming. More recently he has become fascinated with how things were made prior to modern technology and equipment. Artisans were able to create works with such beauty and detail. Works that were unique and individual, almost with their own soul, something that he feels is lacking in many products today. He has been exploring many different aspects of craftsmanship himself, hands on, and self-taught most of the time. He is currently based in eastern Pennsylvania and Brooklyn.

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CMT part no:694.001.30

The CMT 694.001 set is a 3 part cutter for adjustable grooving using reversible disposable tungsten knives. These tools are the ideal for creating precision slots and grooves on material from 4mm up to 15mm deep. The set uses spur cutters on the side in order to give a sheer cut and minimise break out. *Special Offer is for 30mm bore only*

CMT part no:694.020.30

These cutter heads have been designed for using standard Euro limiter cutters and also integrate reversible tungsten knives on both edge and top to give a superb finish when rebating on top or bottom of the block. *Special Offer is for 30mm bore only*

CMT part no:694.018.30

These new adjustable chamfer cutter heads carry out precise cuts, accurate bevels and joints on wooden boards and solid timber. For use on your spindle moulder machines, *Special Offer is for 30mm bore only*

CMT Roundover Router Bit Set



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CMT's Roundover Sets give you the maximum flexibility for all of your projects by putting the most requested diameters in one package. Available in 12,7mm and 6,35mm shanks. Roundover radii are 6,35mm, 9,5mm and 12,7mm. These versatile bits are always in demand - the simple clean lines of a smooth roundover

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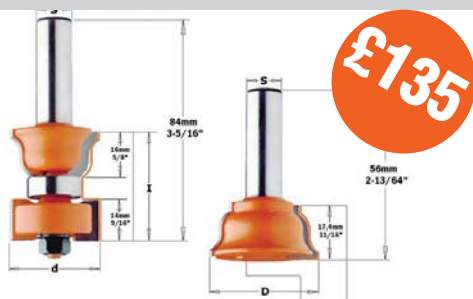


£135

CMT part no:800.624.11

These new bit sets are excellent for producing adjustable tongue and groove joints with a bevel, in order to eliminate the panel rattle that may come up with the production of standards cabinets. Cut precise grooves into your plywood veneered panels and make perfect rattle-free fits. *To be used on table-mounted routers. Avoid using these bits in hand-held power tools.*

CMT 955.801 Window Sash Set

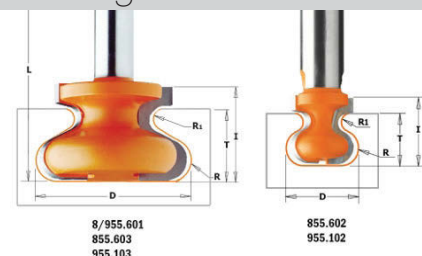


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CMT part no:955.801.11

CMT designed this set so you can create window sashes that are as beautiful as they are functional. As an additional feature, the CMT window sash set will also mill perfectly joining 35 mm rail and stile parts for custom made doors.

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Tapered sliding dovetails, by hand

Canadian woodworker Charles Mak shares his method for cutting this seemingly complicated joint with the most basic of hand tools



PHOTOGRAPHS BY CHARLES MAK

Charles Mak is a woodworking author, tipster and teacher. He takes advantage of both power and hand tools in his projects. Email: thecanadianwoodworker@gmail.com

Also known as a through housed dovetail joint, a sliding dovetail joint is a strong, mechanically locking way of joining boards cross-grain. We can find many examples of it in furniture construction, such as drawer dividers, bookcase shelves, legs on a tripod or a pedestal table and even breadboard ends on a table top. Sliding dovetailed keys are a little known but elegant way of keeping doors flat. It's a joint that's perfectly suited to machine woodworking or smaller power tools, such as a router. However, for a small number of joints working by hand may prove quicker.

Hand cutting this interlocking joint seems daunting, but as you'll see, it requires no more tools or skills than those needed for cutting a through dovetail joint. The secret to success is meticulous marking out, sharp tools and a mirror trick.

A sliding dovetail joint can be straight (through housing), shouldered (stopped housing) or tapered (tapered housing). In a tapered dovetail, the lower cheek of the dovetail tongue is tapered along its length so the tongue at the back is thinner than at the front. The housing is a reverse image of the tongue. A tapered sliding dovetail may require a little more effort to cut, but this will be repaid when it's time to assemble the joint. Tight fitting joints are what we strive for in good cabinetwork but a long tight joint can bind up before it's in place making pre-assembly awkward and final assembly with glue impossible. A good tapered sliding dovetail will lock into place just before it reaches the limit of travel.

Plan for shrinkage

Even though the components are joined cross grain the direction of any seasonal movement will be the same, typically front to back. To ensure the front face of your components remain flush just apply glue to the front quarter of the housing allowing the back three quarters to expand and contract within the housing. Any movement should now only show at the back of the cabinet or worktop.



A tight joint will hold the parts together, glue keeps them aligned at one end

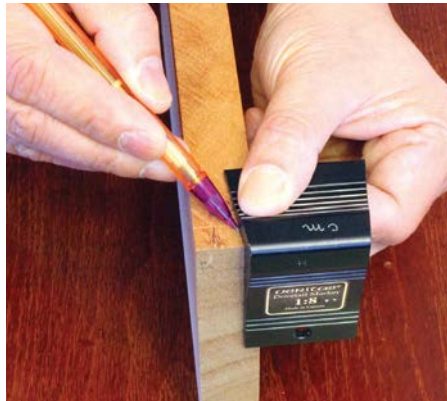
Joinery for the rack

I used mahogany from the scrap bin to build a rack with a dovetailed shelf and prepared the stock reasonably thick as the proportions on sliding dovetail joinery are not suitable for thin stock. I cut all the pieces to final sizes, but you can cut the tail board slightly over-length and cut it to length after final fitting.

Instead of a dovetail joint, I chose a single rebate joint for the carcass, because I liked how the ends of all the horizontal pieces lined up in a straight line on the sides. I made the rebates with a skew rebate plane. For the rebating, I set the width of cut to the thickness of the stock and the depth to about half of the thickness.

Marking the tail board

If you're a 'tails first' dovetailer for the majority of your work like me, you're used to cutting your pins to fit your tails. A 'pins first' dovetailer will do the opposite. This is one of those occasions where for no reason that I can think of I change allegiance and cut



On the edge, mark out the slopes using a dovetail marker or a sliding bevel



Connect the tail points on the top edges to lay out the taper lines on the endgrain

the tapered pin first although this will nearly always be referred to as the dovetail.

In the first layout step, I set the marking gauge to the same depth of the rebate and scribe the shoulder lines around the tail end. I laid out the tail slopes on both edges and then marked out the taper lines on the end grain. Do the same marking out for the tail on

the other end of the board. A marking knife can sometimes track the direction of the grain so I prefer to use a fine mechanical pencil. Even if the lead breaks the replacement tip will be of the same size unlike a captive lead pencil that changes thickness while in use. A uniform line thickness will help with your sawing later.

Cutting the tapered tails

Some woodworkers cut the dovetail tongues or keys with a dovetail plane, or just with a chisel and an angled block. A fine-tooth saw, a pair of well-honed chisels and a small mirror (yes, a mirror) are my tools of choice.



Make the angled cuts on the slope lines, stopping at the gauge line

Cutting a tapered tail is like cutting an angled tenon. After cramping the workpiece in the vice, sight along two layout lines (the taper line running along on the endgrain and the tail slope on the near edge). Angle your saw, and proceed to cut with the heel of the saw down and the toe in the air down on the first slope line, stopping just short



The shallow guide kerfs are no deeper than the saw teeth



Given the tendency to arc the bottom of the kerf, I made a few more saw strokes in the middle part to remove that high bit

of the shoulder line. Repeat the same procedure on the other three slope lines so you have two sets of kerfs on either side of the dovetail that don't quite meet in the middle.

Next, guided by the angled cuts on the ends, make a guide kerf on the endgrain along the taper lines. Then, tilt the rip saw on the guide kerf and, looking at the tail slope (you can think of these as mortise cheeks) saw down the taper line, stopping at the shoulder line. I have a way to make the angled cuts freehand without any guide blocks: place a mirror at the far end of the board so you can check your sawing against the slope and adjust your angle of sawing on the fly. You'll be amazed how well you can tilt and cut precisely with the help of a mirror.

After all the other taper cuts are done, it is time to cut off the waste on the face grain. First, cut a knife wall at the shoulder line, which serves as a square fence to guide the vertical sawing. To form a knife wall, you can make a series of shallow passes with a



Pare away any saw waste on the cheek

sharp chisel on the waste side of the shoulder line or use a knife to slice cut at the bottom of the gauge line.

To avoid overcutting, I put large and small X's on the face grain to remind me where to make the shallow saw cuts. After sawing away the waste, I used a paring chisel to clean up the tongues.

Marking the housing board



Position the dovetail against the adjacent board and transfer the narrow tongue base to the edge of the board

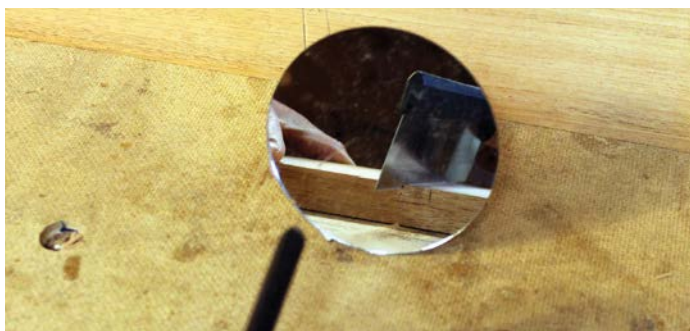
The tapered housing on the tail board is an exact reverse image of the dovetail tongue. To transfer the profile, clamp the narrow dovetail end in position to the inside face of the adjacent board. With a square and a marking knife, transfer the width of the tongue with two marks on the inside edge of the adjacent board to locate the narrow part of the dovetail tongue. Do the same with the wide end of the tongue on the

front face of the board and use a marking gauge to set the depth of the housing. Repeat these steps on the other end of the housing board to transfer the pattern of the wider dovetail tongue. If you are using a knife to complete the layout make shallow cuts as this will be the front face of your project. It may not be practical to plane the entire face of the piece to remove the knife marks. You are now ready to scribe the taper lines on the housing board across the width of the board. Do the same marking out on the other pin board. Don't be tempted to use the first housing board to transfer the layout to the second. Remember your dovetail tongues have been cut by hand so they will not be identical.



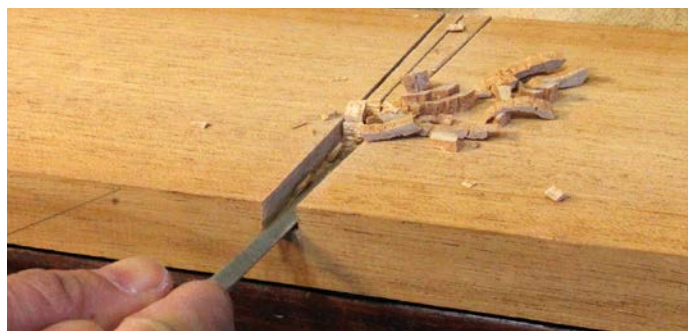
Scribe the taper lines and make knife walls to guide the sawing

Cutting the tapered housing



As I saw, my focus is on the mirror, maintaining or adjusting the tilt of the saw

As before, cut knife walls on the taper lines as a saw guide. Follow the housing slope marked on the edge and saw down on the waste sides of both taper lines. I used the mirror trick again to guide my sawing. My mirror trick is superior to using a fixed angled block as it can be used on any angle of sawing.



I also saw a middle kerf to quicken the removal of bulk waste

After sawing, chisel away the bulk waste, working from both ends to create a dovetailed housing. A router plane is the best tool to level the depth and clean the bottom quickly, although careful paring with a chisel or two does the job, just as well.

Dry fitting

In the fitting step, I made graphite marks on both sides of the dovetail tongue before tapping the joint together. I then removed the high spots in the housing with a chisel and a shoulder plane for those on the tongue.

If you over-cut the joint and find it's too loose, glue a piece of veneer along the edge of the tongue. When the glue has fully dried, carefully pare or plane the new joint to fit.



Secure the work piece to your bench and use a chisel to adjust the walls of the housing

Final assembly

I broke down the dry fitting of this project into two steps. First, the rack without the dovetailed shelf, allowing me to check the squareness of the carcass and fix any problems with the top and bottom rebates. Then I installed the dovetailed shelf. This two-step approach avoids damaging either the tapered dovetail or the rebates and gives me a chance to correct any errors.

There you have it. You can cut a sliding dovetail neatly without a guide block, a hard-to-find dovetail plane, or the use of a noisy and complex router set-up. *F&C*



Apply glue only to the front end of the dovetail joint



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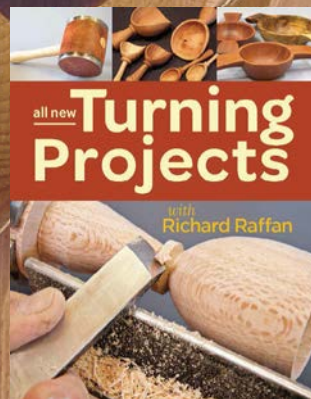
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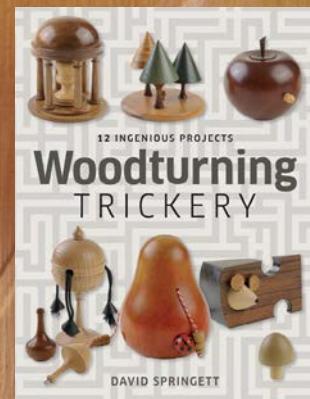
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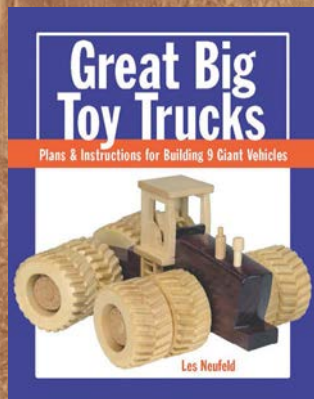
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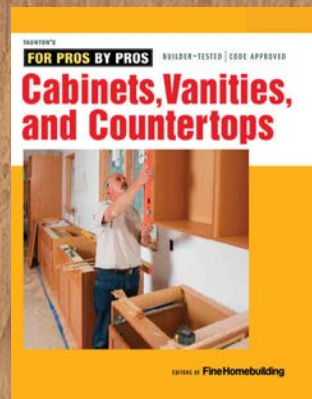
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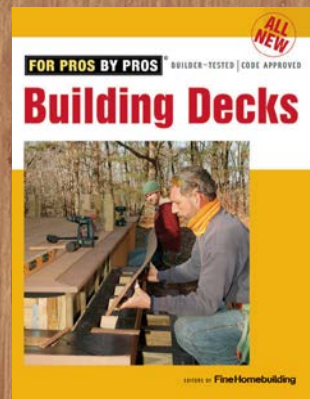
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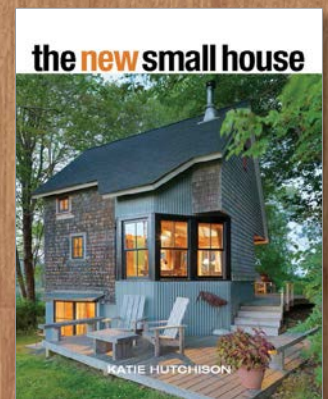
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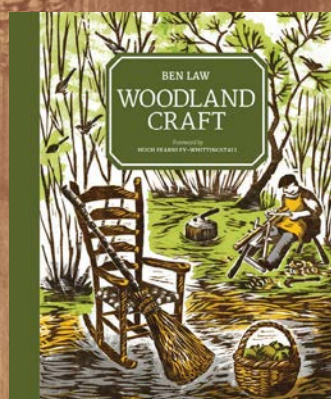
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Coming up short

Franciszek de Sage examines a 17th-century chest on a stand and looks beneath the surface to understand what happens to our furniture after it's made

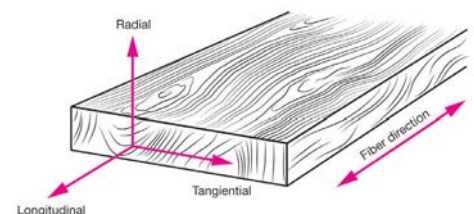


There is a common understanding that wooden furniture physically responds to the changes in the surrounding environment. We have all had the experience of close-fitting cabinet doors or drawers sticking when the relative humidity rises, but then the problem clears up when the humidity drops. It is all related to two properties of wood. The first being that it is an anisotropic material, meaning it demonstrates different physical qualities depending on the orientation (in contrast, clay is an isotropic material). The second is that it is hygroscopic, meaning there is a chemical attraction between wood and water. As a result of these properties a piece of timber will become narrower or wider across the grain as a response to variations in humidity, but it will not significantly change in length.

In this article I will try to explain why that is happening and the significance from the perspective of a conservator: firstly, by drawing on the scientific background and laws of physics and then by applying these principles through the repair and conservation of a 17th-century chest on a stand.

Both furniture makers and restorers have to deal with shrinkage but they have often struggled, especially in the past, to understand the causes of shrinkage and to develop the methods to remedy this condition. The techniques used in this project will allow me to explain some of the issues that were resolved when the piece was originally made and those that were necessary to mitigate further degradation.

Wood and water



The longitudinal character of the wood structure

Let's start by looking at wood at the microscopic level. The majority of the wood is composed of longitudinal cells which are orientated parallel to the tree stem. The shape of the fully developed wood cell, in a living tree, is permanent

and there will never be any changes in the cell type or dimension or in the thickness of the cell walls (Hoadley, 2000). Wood is a hygroscopic material in the sense that there is a chemical attraction between the cellulose in the cell walls and the water from the air. Cellulose is the main material of the wood cell walls. It is chemically defined as $(C_6H_{10}O_5)_n$. The long chains of the cellulose in the cell walls are nearly parallel to the cell's axis. As a result of that

longitudinal character of the cell, when timber reacts to moisture variation – relative humidity (RH) – by taking up or giving off molecular water, it is expanding or contracting across the grain, but not along the grain (Hoadley, 2000).

Each kind of wood has a specific fibre saturation point, where cell cavities are emptied of water (it is called free water and is lost in the process of drying wood). In this state the cells are in the weakest condition

and it is only when water leaves the cell walls that the wood begins to shrink and increase in strength (Mazzanti, 2010). The water remaining in the cell walls is called bound water. It is in molecular form and is held within the cells by physical force of attraction. When wood reaches the level of balance with RH the amount of bound water in the cell walls is called equilibrium moisture content (EMC), which means it is neither losing nor gaining water (Rivers and Umney, 2003).

So what does it really do?

Although shrinkage in chairs and settees associated with loose joints can be a serious issue, in general it is less problematic than in carcass construction. Let's have a look now at how the theory relates to a real case. I will use as my example a 17th-century chest on a stand. On both sides of the chest there are several vertical splits running along the grain direction. The pattern of the splits is repetitive – one in the middle of the board, running from top to bottom, surrounded by minor ones. The sides of the chest, made of 8mm oak boards with the grain running vertically, are nailed around all edges to the carcass frame. In previous repairs longitudinal splits, running from top to bottom, on both sides were filled with oak slivers – matching the grain direction of the side boards. Presumably used as a solution to warpage in the side boards, they were nailed into battens – set cross-wise – inside the carcass.

In this case we are dealing not only with an inherent problem caused by the way the piece was constructed but also with the damage caused by the previous restoration. The damage in the side boards happened in two stages. The split in the centre was prior to the smaller ones. The first ones are an example of the inherent vice that was established with poor design and building techniques as well as not taking into consideration the anisotropic character of the wood. The second group of splits is the result of poor renovation attempts, showing no understanding of the wood's structure and characteristics.

In increasing RH, the sides of the chest were trying to swell (the amount of the bound water in the wood cells was rising until they reached EMC), but as the boards were tightly fixed with nails to the carcass construction movement was restrained, effectively exerting the equivalent of compression stress across the grain. Restrained, there was no apparent movement or change in the width of the side, but expansion still took place within the wood, on a microscopic level, as cellulose in the cell walls was absorbing molecular water. The swelling pressure is a great force exerted by wood, suffice it to say that it has been used since ancient times to split rocks (Mazzanti, 2010). The wood cells deform only slightly, but the cumulative effect is significant and, most importantly, irreversible. This is referred to as the compression set shrinkage (CSS). When the humidity

declined, the board attempted to shrink (the wood cells are losing bound water until they reach EMC), but because of the permanent damage to the cell structure as a result of CSS, the overall size of the board was smaller than the original (Podmaniczky, 2014). Because it was still restrained by the carcass construction, the result was that the side board split in the centre.

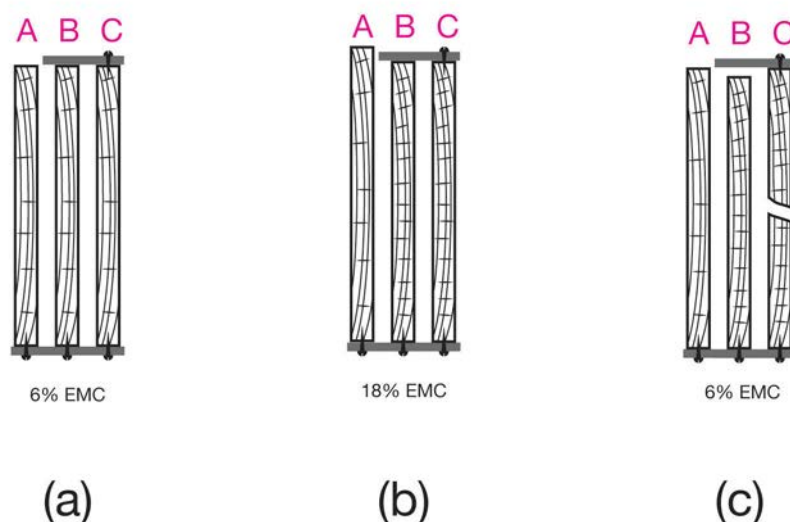
The splits around the big central one were the result of a poor understanding of the causes of the prior splits and the poor quality of the restoration. The restorer filled the split with a sliver of hard oak and nailed an internal cross grain batten on the back of the side board, precluding movement of the wood even further. In the fluctuating environment, the process of the compression set shrinkage has repeated causing new splits around the initial ones.

Hoadley (1995) in the *Chemical and physical properties of wood* (proceedings of the Symposium on *The structural conservation of panel paintings*) provided a great theoretical example on CSS. The diagram below illustrates the CSS process. In the first stage (a, left) there are three samples, tangentially cut and equilibrated at 6% EMC, each one subjected to different restrain conditions: A is free to move, B is free to shrink but restrained from swelling, C is completely prevented from moving. In the second stage (b, centre) RH rises and EMC goes up to 18%. All the specimens



The side of the chest after removing the previous oak sliver from the big centre split

should swell, sample A swells, but both B and C cannot swell and are compressed. In the final stage (c, right) when their EMC is brought back to the beginning (6%), sample A shrinks to the original dimension, B shrinks causing a loss of dimension and C cannot shrink, therefore a tension state is induced that can cause the crack of the sample.



The compression set shrinkage process

Solution

The CSS is a mechanical phenomenon that is produced by compressive stresses in wood when it is, at the same time, subjected to variations of the RH of the air and restrained deformations. These compressive stresses produce evident consequences of loss of dimension, deformations and splits. Over the years restorers struggled to understand the causes of splitting and so failed to develop effective restoration methods. Solutions used in the past, such as butterfly keys, long dowels or hardware,

were unpredictable and potentially damaging for the furniture.

When it came to the restoration of the split on the side of the chest, I decided to fill it with new slivers made from 3mm thick oak veneer backed with balsa wood. Balsa is a very soft wood and has a low compression modulus so it didn't add any more stress into the construction. This kind of sandwich construction – balsa veneered with oak – should prevent the piece from suffering in the process of CSS if the side board were to swell again.



Sliver made of balsa veneered with oak

Conservators today tend to accept most of the damage caused by shrinkage. It is both prudent and ethical to tolerate it as an integral feature of furniture. It means that preventive conservation is even more important and, within reason, furniture can be maintained in a relatively safe state unless subjected to environmental extremes. The ideal environment for furniture is 18°C and 50% RH (Podmaniczky, 2014). Environmental fluctuations don't need to result in damage to furniture. Before central heating became a common thing, most furniture survived seasonal changes relatively well, mainly because they happened gradually over a period of time. Avoiding radical swings in temperature and humidity allows the wood to accommodate to the changes and reduces the risk of damaging furniture. *F&C*



Looking at the slivers from inside showing the balsa wood

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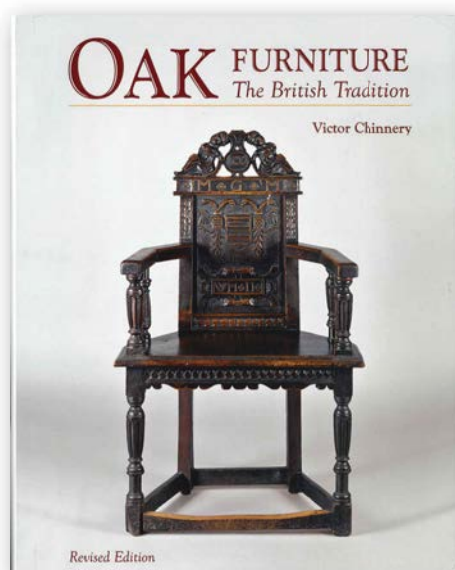
Workshop library

We review three books, *Oak Furniture: The British Tradition*, *Making Heirloom Boxes* and *Carving Spoons*

BOOKS

Oak Furniture: The British Tradition

by Victor Chinnery



Historic oak furniture is ubiquitous to the British Isles, a comforting, and sometimes comfortable, backdrop still found in churches, National Trust properties and real ale pubs throughout the land, as well as across the pond in New England. The so-called 'brown furniture' encompasses a huge expanse in both time and styles from Elizabethan boarded chests to Welsh dressers, joined stools and everything in between.

Such a huge subject demands an impressive book and in *Oak Furniture: The British Tradition* Victor Chinnery has written the seminal reference work on the subject. There have been several reprints over the years since it was first published in 1979, the last one being in 2002, so this latest, revised incarnation is an overdue and most welcome edition. With the current resurgence in interest in these forms of furniture the timing of this release is apposite and enables the interested woodworker to broaden and deepen their knowledge and understanding of the subject.

Victor Chinnery (1941–2011) worked as a consultant for auction houses and numerous prestigious organisations as well as lecturing to students at John Makepeace's school. His enthusiasm, commitment and knowledge of the subject is evident throughout this book. Most recently Peter Follansbee dedicated *Make a Joint Stool from a Tree* to Chinnery and *Oak Furniture* is also referenced in Christopher Schwarz's *The Anarchist's Design Book*. No doubt this is an influential volume which deserves the reputation it has garnered over the years.

The revised edition has enjoyed a considerable makeover since the 1970s. The 2016 release has been beefed-up and is now a 30 x 25cm heavyweight, while the layout has been updated with larger images being integrated into the text, rather than included as plates. There are a vast number of photographs both in black and white and colour which are sharp and show the furniture detail clearly. The colour images are larger and have improved colour balance compared to the brash technicolour tones of the 70s original. The image to

text ratio is appropriate and the written content is highly readable with fascinating observations and insights.

The information is presented in four weighty chapters divided into sections on Historical Context, Practical Context, Form and Language and lastly Stylistic Themes. There are also various appendices, including extracts from Randle Holme, Probate Inventories of Provincial Woodworkers and The Private and Public Collector, for the woodworking history buffs.

Perhaps the best feature of the revised edition is the addition of a Pictorial Index. This section is a stroke of genius. It contains a larger than thumbnail photograph of each image in the book labelled by date and page number and ordered by furniture type. In practical terms this facilitates the use of the book as a reference source, as well as providing an at-a-glance overview of the evolution of styles and common attributes of each furniture type. The sheer scope of the images in this book should provide inspiration for woodworkers of all levels and interests.

Knowledge and understanding of historic furniture is useful whether you are a confirmed historical woodworker or a progressive modern. A book such as this helps to train your eye in terms of form and function, and can inspire and inform your own work. Unsuspecting chipboard bookcases beware – it is likely that many a woodworker's library deserves some serious weight to be added to its shelves.

Susan Chillcott

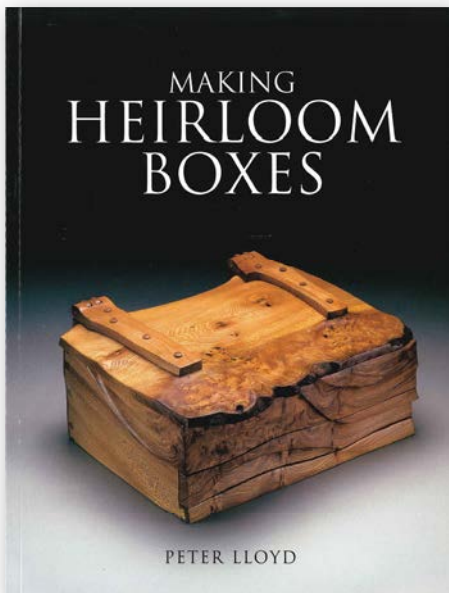
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552 pages £48.75



Making Heirloom Boxes

by Peter Lloyd

Box making is a popular pastime, and can provide welcome respite from working on larger casework. In *Making Heirloom Boxes* Peter Lloyd shows how to make 11 striking box designs, including a writing slope, a stationery box and the ever popular jewellery box. Peter's designs are distinctive, with an emphasis on building the box out of a single length of timber, the use of organic curves to soften rectilinear designs and the fabrication of wooden hinges. The instructions for each box are clear and easily followed, although



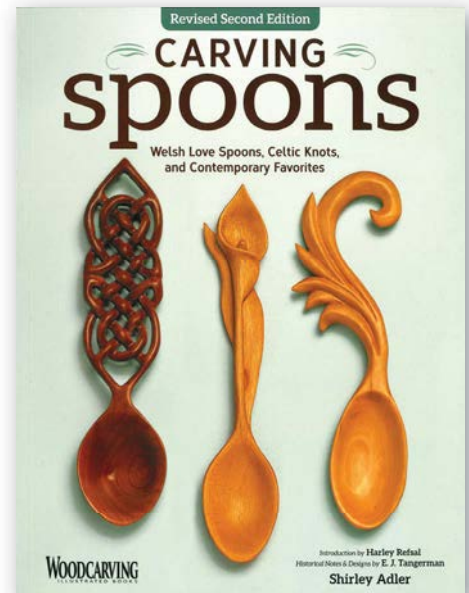
suited to someone who already has some knife skills experience. It is also worth noting that this is not a book for green wood carving.

As well as providing contemporary spoon patterns for beginner, intermediate and advanced projects you will find some interesting illustrations in the history section at the beginning of the book. There is a page dedicated to historic, decorative styles of love spoon from all over Wales and another showing styles from around the world.

This book is a great choice if you want to make traditional style Welsh love spoons using modern day workshop methods.

Tricia Pearson

Published by Fox Chapel Publishing
ISBN: 9781565238503
88 pages £10.99



some of the photographs of specific operations could do with being larger and better lit. That being said, the book as a whole is attractive, and the 'beauty pageant' photos of each completed box are detailed and inspiring. The construction methods use a mixture of hand and machine techniques, which may not suit hand tool purists, but no exotic equipment is used, and it would be very possible to adapt the designs for a greater or lesser focus on handwork depending on the reader's preferences. The author also offers some unconventional techniques for building boxes. All in all this book offers plenty of inspiration for box makers.

Kieran Binnie

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Carving Spoons

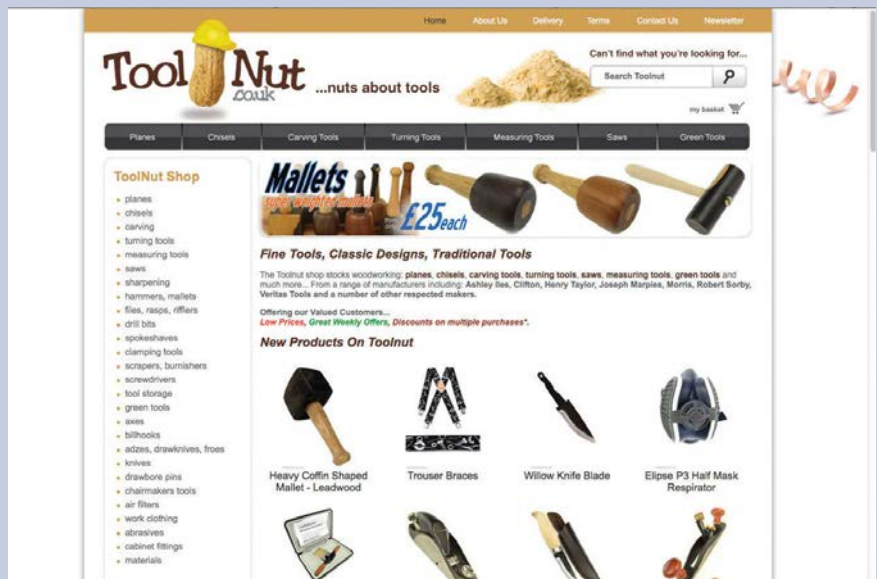
by Shirley Adler

The revised second edition of *Carving Spoons* by Shirley Adler is packed full of colour photographs and illustrations. In fact the imagery is a major factor in this soft bound book. *Carving Spoons* is not a weighty tome, at just 88 pages it is a light book that looks mainly at the decorative, sentimental type of spoon such as the Welsh love spoon. The author provides spoon patterns with carving designs, step-by-step guides, carving tips and help with tool selection and sharpening. The book doesn't go into any great depth in any of these subjects but gives the reader just enough information to get started.

The two main projects covered, carving your first spoon and carving a Welsh love spoon, are provided in a step-by-step illustrated guide format. Also included is a useful model-making tutorial for more intricate spoons. But, beginners beware, what this book doesn't cover is knife skills. So with this in mind, it might be more

Website of the month

Toolnut



Toolnut is a family-run business specialising in fine tools, including traditional tools, hand tools based on classic designs and hand tools with a modern twist. The company was formed in 2007 as an offshoot of Old Tools (www.oldtools.co.uk), which specialises in selling antique and second-hand tools. The Toolnut website is incredibly easy to navigate; as well as a search facility, you can search for tools under seven tabs at the top of the page where tools are divided into Planes, Chisels, Carving Tools, Turning Tools, Measuring Tools, Saws and Green Tools. There is also a long list of sub-categories along the side of the page. Once you select a product, you are presented with a

large, clear photo of the item alongside a concise description and all the essential dimensions. Rather than stocking cheap, throwaway tools, Toolnut sells some of the world's finest hand tools which excel in quality and are built to last.

Toolnut is currently using their many years of knowledge to produce an online encyclopaedia of old tools and new tools, called 'Find My Tool' (www.findmytool.co.uk), a project that will be ongoing for many years to come, in an aim to spread knowledge of fine tools along with the vast library of tool photos they have gathered over the past decade.

Website: www.toolnut.co.uk

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Furniture & cabinetmaking

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Houndstooth dovetails

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Paul Schürch

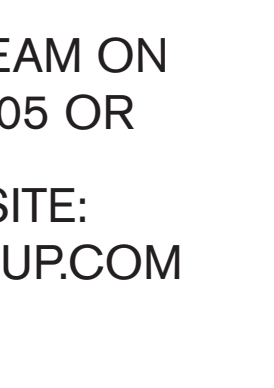
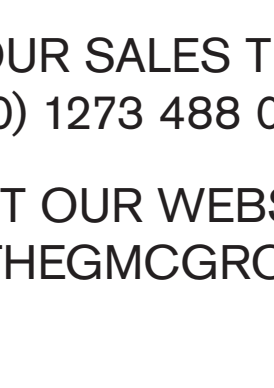
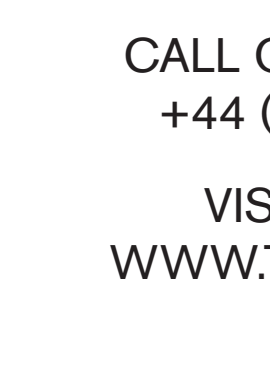
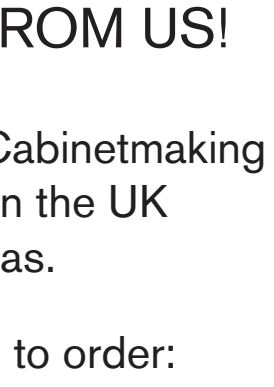
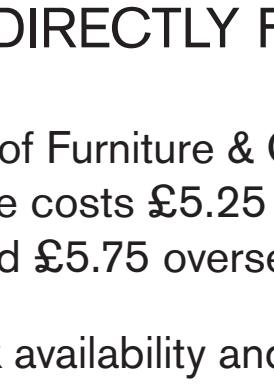
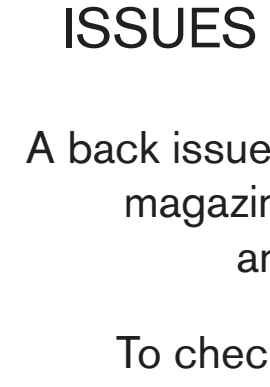
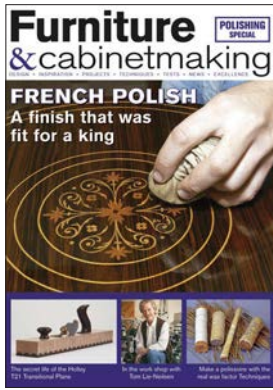


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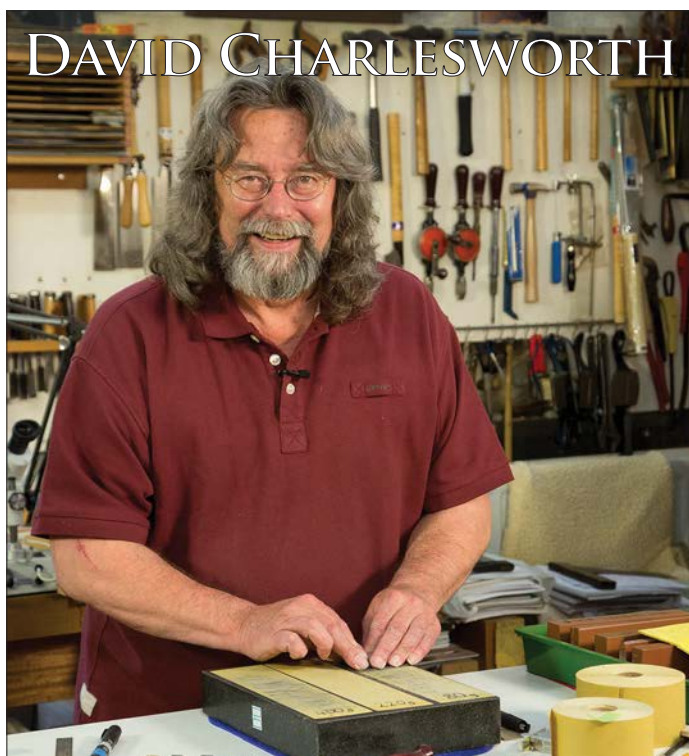


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UNDER THE HAMMER:

Regency drum-top table

This month we look at a lot from Bonhams' Gentleman's Library sale



Brass inlaid burr and pollard oak drum-top table

This large and impressive Regency-era drum-top centre table is made from brass inlaid burr and pollard oak (*Quercus robur*). It was part of Bonhams' recent Gentleman's Library auction in London. The table is thought to be of Irish origin and features an ebonised line inlay and a radially segmented circular top. The top is encompassed by a brass inlaid scrolled foliate and honeysuckle border above a reeded edge. There are eight frieze drawers on a large ribbed and reeded baluster support with a quadripartite base interspersed with carved lion masks. The four legs are ribbed and reeded, terminating in carved lion paw feet and castors. The table measures 133cm wide x 132cm deep x 77cm high.

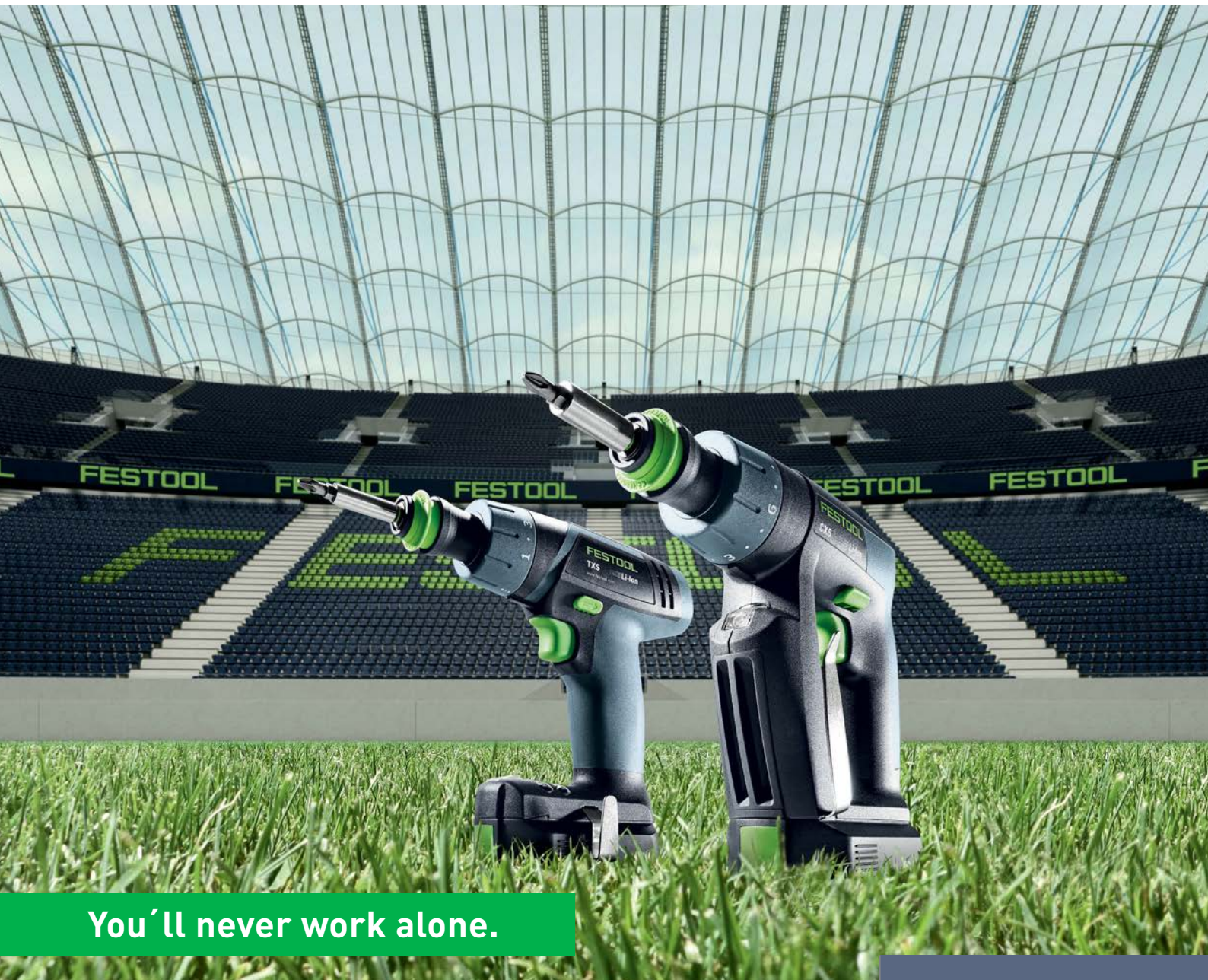
Drum-top tables were popular during the late 18th century and were a common feature in gentlemen's libraries. Many of them featured lockable drawers – three of the drawers on this example remain locked – and some also had central compartments for storing money. Centre tables such as this one were designed to look impressive from all angles, hence the high level of decoration. Instead of inlaid wooden tops, some drum-top tables had leather or marble tops.



The table features carved lion masks and feet

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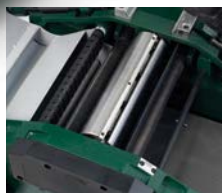
The PT107 is perfectly suited to the discerning woodworker who expects professional and **reliable performance** from a **solid, durable** and **compact machine**. Whilst compact enough for smaller workshops and ideal for serious home or trade users, this machine boasts some impressive industrial features and is exceptionally smooth and accurate in operation. If you are in the market for a good planer thicknesser then check this out at one of our display stockists to fully appreciate the value on offer.

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The Woodworker

"**Top Quality** - This is a very well made machine with full adjustment of both infeed and outfeed tables. This is unusual in a home workshop machine and allows very fine adjustment to eliminate any gouging at the end (snipe)...Results are excellent, chip clearance is good and the changeover from planing to thicknessing is quick and easy."



DesmondW, Online Review

What They Say...

Price valid until 31.08.2016. E&OE.

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